

**CPC****COOPERATIVE PATENT CLASSIFICATION****G01N**

**INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES** ( separating components of materials in general [B01D](#) , [B01J](#) , [B03](#) , [B07](#) ; apparatus fully provided for in a single other subclass, see the relevant subclass e.g. [B01L](#) ; measuring or testing processes other than immunoassay, involving enzymes or micro-organisms [C12M](#) , [C12Q](#) ; investigation of foundation soil in situ [E02D 1/00](#) ; sensing humidity changes for compensating measurements of other variables or for compensating readings of instruments for variations in humidity, see [G01D](#) or the relevant subclass for the variable measured; testing or determining the properties of structures [G01M](#) ; measuring or investigating electric or magnetic properties of materials [G01R](#) ; systems or methods in general, using reception or emission of radiowaves or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation, [G01S](#) ; determining sensivity, graininess, or density of photographic materials [G03C 5/02](#) ; testing component parts of nuclear reactors [G21C 17/00](#) ; { controlling or regulating non-electric variables [G05D](#) ; measuring degree of ionisation of ionised gases, i.e. plasma [H05H 1/0006](#) ; testing electrographic developer properties [G03G 15/0848](#) } )

**NOTE**

In this subclass, the following terms are used with the meanings indicated :

- "investigating" means testing or determining;
- "materials" includes solid, liquid or gaseous media, e.g. the atmosphere.

Attention is drawn to the Notes following the title of class [G01](#) .

Inventions relating to investigating the properties of materials, specially adapted for use in processes covered by subclass [B23K](#) , are classified in group [B23K 31/12](#) .

**Guidance heading:****G01N 1/00****Sampling ; Preparing specimens for investigation****G01N 1/02**

- . Devices for withdrawing samples ( for medical or veterinary purposes [A61](#) ; { sampling of foundation soil [E02D 1/04](#) } ; obtaining samples of soil or well fluids [E21B 49/00](#) ; { collecting or conveying radioactive samples [G01T 7/00](#) , e.g. [G01T 7/02](#) , [G01T 7/08](#) } )

**G01N 1/04**

- .. in the solid state, e.g. by cutting

**G01N 1/06**

- ... providing a thin slice, e.g. microtome

**G01N 1/08**

- ... involving an extracting tool, e.g. core bit

**G01N 1/10**

- .. in the liquid or fluent state { burettes, pipettes [B01L 3/02](#) ; Sampling of ground water [E02D 1/06](#) ; metering by volume of fluids or fluent solid material [G01F 11/00](#) , [G01F 13/00](#) }

**G01N 1/12**

- ... Dippers ; Dredgers

**G01N 1/125**

- .... { adapted for sampling molten metals }

- G01N 1/14 . . . Suction devices, e.g. pumps ; Ejector devices
- G01N 1/1409 . . . . { adapted for sampling molten metals }
- G01N 1/16 . . . with provision for intake at several levels { [G01N 1/2035](#) } ( [G01N 1/12](#) , [G01N 1/14](#) take precedence )
- G01N 1/18 . . . with provision for splitting samples into portions ( [G01N 1/12](#) , [G01N 1/14](#) take precedence; fraction-collection apparatus for chromatography [B01D 15/08](#) )
- G01N 1/20 . . . for flowing or falling materials { [G01N 1/2035](#) } ( [G01N 1/12](#) , [G01N 1/14](#) take precedence )
- G01N 1/2035 . . . . { by deviating part of a fluid stream, e.g. by drawing-off or tapping }
- G01N 1/2042 . . . . . { using a piston actuated by the pressure of the liquid to be sampled }
- G01N 1/22 . . in the gaseous state { ( specially adapted for biological material [G01N 33/497](#) ; measuring breath flow [A61B 5/087](#) ) }
- G01N 1/2202 . . . { involving separation of sample components during sampling }
- G01N 1/2205 . . . . { with filters }
- G01N 1/2208 . . . . { with impactors }
- G01N 1/2211 . . . . { with cyclones }
- G01N 1/2214 . . . . { by sorption }
- G01N 1/2226 . . . { Sampling from a closed space, e.g. food package, head space }
- G01N 1/2247 . . . { Sampling from a flowing stream of gas }
- G01N 1/2252 . . . . { in a vehicle exhaust }
- G01N 1/2258 . . . . { in a stack or chimney }
- G01N 1/2273 . . . { Atmospheric sampling }
- G01N 1/2294 . . . { Sampling soil gases or the like }
- G01N 1/24 . . . Suction devices { ( [G01N 1/22](#) to [G01N 1/2294](#) take precedence ) }
- G01N 1/26 . . . with provision for intake from several spaces
  
- G01N 1/28 . . Preparing specimens for investigation { including physical details of (bio-)chemical methods covered elsewhere, e.g. [G01N 33/50](#) , [C12Q](#) } ( mounting specimens on microscopic slides [G02B 21/34](#) ; means for supporting the objects or the materials to be analysed in electron microscopes [H01J 37/20](#) ; { laboratory gas handling apparatus [B01L 5/00](#) } )
- G01N 1/2806 . . { Means for preparing replicas of specimens, e.g. for microscopical analysis }
- G01N 1/2813 . . { Producing thin layers of samples on a substrate, e.g. smearing, spinning-on ( [G01N 1/30](#) takes precedence ) }
- G01N 1/2853 . . { Shadowing samples }
- G01N 1/286 . . { involving mechanical work, e.g. chopping, disintegrating, compacting, homogenising ( microtomes [G01N 1/06](#) ; pulverising in general [B02C](#) ; mixing in general [B01F](#) ) }
- G01N 1/30 . . Staining ; Impregnating { Fixation; Dehydration; Multistep processes for preparing samples of tissue, cell or nucleic acid material and the like for analysis }
- G01N 1/31 . . . Apparatus therefor
- G01N 1/312 . . . . { for samples mounted on planar substrates }
- G01N 1/32 . . Polishing ; Etching
- G01N 1/34 . . Purifying ; Cleaning { ( processes or apparatus for extracting or separating nucleic acids from biological samples [C12N 15/1003](#) ) }
- G01N 1/36 . . Embedding or analogous mounting of samples

- G01N 1/38 . . Diluting, dispersing or mixing samples
- G01N 1/40 . . Concentrating samples
- G01N 1/4005 . . . { by transferring a selected component through a membrane }
- G01N 1/4022 . . . { by thermal techniques; Phase changes }
- G01N 1/4044 . . . { by chemical techniques; Digestion; Chemical decomposition }
- G01N 1/405 . . . { by adsorption or absorption }
- G01N 1/4055 . . . { by solubility techniques }
- G01N 1/4077 . . . { by other techniques involving separation of suspended solids }
- G01N 1/42 . . Low-temperature sample treatment, e.g. cryofixation
- G01N 1/44 . . Sample treatment involving radiation, e.g. heat

**G01N 3/00** **Investigating strength properties of solid materials by application of mechanical stress ( strain gauges [G01B](#) ; measuring stress in general [G01L](#) )**

**NOTE**

This group covers the stressing of materials not only below but also beyond the elastic limit, e.g. until breaking occurs.

- G01N 3/02 . Details
- G01N 3/04 . . Chucks
- G01N 3/06 . . Special adaptations of indicating or recording means ( indicating or recording means for measuring in general [G01D](#) )
- G01N 3/062 . . . { with mechanical indicating or recording means }
- G01N 3/064 . . . { with hydraulic indicating or recording means }
- G01N 3/066 . . . { with electrical indicating or recording means }
- G01N 3/068 . . . { with optical indicating or recording means }
- G01N 3/08 . by applying steady tensile or compressive forces ( [G01N 3/28](#) takes precedence )
- G01N 3/10 . . generated by pneumatic or hydraulic pressure ( [G01N 3/18](#) takes precedence )
- G01N 3/12 . . . Pressure testing ( testing fluid-tightness [G01M 3/00](#) )
- G01N 3/14 . . generated by dead weight, e.g. pendulum ; generated by springs tension ( [G01N 3/18](#) takes precedence )
- G01N 3/16 . . applied through gearing ( [G01N 3/18](#) takes precedence )
- G01N 3/165 . . . { generated by rotation, i.e. centrifugal force ( for testing structures or apparatus [G01M 19/00C](#) ) }
- G01N 3/18 . . Performing test at high or low temperatures
- G01N 3/20 . by applying steady bending forces ( [G01N 3/26](#) , [G01N 3/28](#) take precedence )
- G01N 3/22 . by applying steady torsional forces ( [G01N 3/26](#) , [G01N 3/28](#) take precedence )
- G01N 3/24 . by applying steady shearing forces ( [G01N 3/26](#) , [G01N 3/28](#) take precedence )
- G01N 3/26 . Investigating twisting or coiling properties
- G01N 3/28 . Investigating ductility, e.g. suitability of sheet metal for deep-drawing or spinning

- G01N 3/30 . . by applying a single impulsive force, e.g. by falling weight
- G01N 3/303 . . . generated only by free-falling weight
- G01N 3/307 . . . generated by a compressed or tensile-stressed spring ; generated by pneumatic or hydraulic means
- G01N 3/31 . . . generated by a rotating fly-wheel
- G01N 3/313 . . . generated by explosives
- G01N 3/317 . . . generated by electromagnetic means
  
- G01N 3/32 . . by applying repeated or pulsating forces ( [generation of such forces in general, see the relevant classes or subclasses, e.g. B06 , G10](#) )
- G01N 3/34 . . . generated by mechanical means, e.g. hammer blows
- G01N 3/342 . . . { for tensile or compressive investigation }
- G01N 3/345 . . . { for bending investigation }
- G01N 3/347 . . . { for torsional investigation }
- G01N 3/36 . . . generated by pneumatic or hydraulic means
- G01N 3/362 . . . { for tensile or compressive investigation }
- G01N 3/365 . . . { for bending investigation }
- G01N 3/367 . . . { for torsional investigation }
- G01N 3/38 . . . generated by electromagnetic means
- G01N 3/382 . . . { for tensile or compressive investigation }
- G01N 3/385 . . . { for bending investigation }
- G01N 3/387 . . . { for torsional investigation }
  
- G01N 3/40 . . Investigating hardness or rebound hardness
- G01N 3/405 . . . { by determining the vibration frequency of a sensing element in contact with the specimen }
- G01N 3/42 . . . by performing impressions under a steady load by indentors, e.g. sphere, pyramid ( [G01N 3/54 takes precedence](#) )
- G01N 3/44 . . . the indentors being put under a minor load and a subsequent major load, i.e. Rockwell system
- G01N 3/46 . . . the indentors performing a scratching movement
- G01N 3/48 . . . by performing impressions under impulsive load by indentors, e.g. falling ball ( [G01N 3/54 takes precedence](#) )
- G01N 3/50 . . . by measuring rolling friction, e.g. by rocking pendulum ( [G01N 3/54 takes precedence](#) )
- G01N 3/52 . . . by measuring extent of rebound of a striking body ( [G01N 3/54 takes precedence](#) )
- G01N 3/54 . . . Performing tests at high or low temperatures
  
- G01N 3/56 . . Investigating resistance to wear or abrasion
- G01N 3/562 . . . { using radioactive tracers }
- G01N 3/565 . . . { of granular or particulate material }
- G01N 3/567 . . . { by submitting the specimen to the action of a fluid or of a fluidised material, e.g. cavitation, jet abrasion ( [G01N 3/565 takes precedence](#) ) }
  
- G01N 3/58 . . Investigating machinability by cutting tools ; Investigating the cutting ability of tools

- G01N 3/60 . Investigating resistance of materials, e.g. refractory materials, to rapid heat changes { ( [thermal testing of structures or apparatus G01M 19/00B](#) ) }
- G01N 3/62 . Manufacturing, calibrating, or repairing devices used in investigations covered by the preceding subgroups
- G01N 5/00** **Analysing materials by weighing, e.g. weighing small particles separated from a gas or liquid ( [G01N 9/00](#) takes precedence; { weighing per se [G01G](#) } )**
- G01N 5/02 . by absorbing or adsorbing components of a material and determining change of weight of the adsorbent, e.g. determining moisture content { [absorption bulbs B01D 53/00](#) }
- G01N 5/025 . . { [for determining moisture content](#) }
- G01N 5/04 . by removing a component, e.g. by evaporation, and weighing the remainder
- G01N 5/045 . . { [for determining moisture content](#) }
- G01N 7/00** **Analysing materials by measuring the pressure or volume of a gas or vapour**
- G01N 7/02 . by absorption, adsorption, or combustion of components and measurement of the change in pressure or volume of the remainder { [absorption bulbs B01D 53/00](#) }
- G01N 7/04 . . by absorption or adsorption alone
- G01N 7/06 . . by combustion alone
- G01N 7/08 . . by combustion followed by absorption or adsorption of the combustion products
- G01N 7/10 . by allowing diffusion of components through a porous wall and measuring a pressure or volume difference
- G01N 7/12 . . the diffusion being followed by combustion or catalytic oxidation
- G01N 7/14 . by allowing the material to emit a gas or vapour, e.g. water vapour, and measuring a pressure or volume difference { [determining urea G01N 33/48742](#) }
- G01N 7/16 . . by heating the material
- G01N 7/18 . . by allowing the material to react
- G01N 7/20 . . . the reaction being fermentation
- G01N 7/22 . . . . of dough
- G01N 9/00** **Investigating density or specific gravity of materials ; Analysing materials by determining density or specific gravity ( [weighing apparatus G01G](#) )**
- G01N 9/002 . { [using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis \( \[G01N 9/34\]\(#\) takes precedence \)](#) }
- G01N 9/02 . by measuring weight of a known volume
- G01N 9/04 . . of fluids
- G01N 9/06 . . . with continuous circulation through a pivotally supported member
- G01N 9/08 . by measuring buoyant force of solid materials by weighing both in air and in a liquid

- G01N 9/10 . by observing bodies wholly or partially immersed in fluid materials
- G01N 9/12 . . by observing the depth of immersion of the bodies, e.g. hydrometers
- G01N 9/14 . . . the body being built into a container
- G01N 9/16 . . . the body being pivoted
- G01N 9/18 . . . Special adaptations for indicating, recording, or control
- G01N 9/20 . . by balancing the weight of the bodies
- G01N 9/22 . . . with continuous circulation of the fluid
  
- G01N 9/24 . by observing the transmission of wave or particle radiation through the material
  
- G01N 9/26 . by measuring pressure differences
- G01N 9/266 . . { for determining gas density }
- G01N 9/28 . . by measuring the blowing pressure of gas bubbles escaping from nozzles at different depths in a liquid
  
- G01N 9/30 . by using centrifugal effects
  
- G01N 9/32 . by using flow properties of fluids, e.g. flow through tubes or apertures
- G01N 9/34 . . by using elements moving through the fluid, e.g. vane
  
- G01N 9/36 . Analysing materials by measuring the density or specific gravity, e.g. determining quantity of moisture ( [methods of measurement in general G01N 9/02 to G01N 9/32](#) )
  
- G01N 11/00 Investigating flow properties of materials, e.g. viscosity, plasticity ; Analysing materials by determining flow properties**
  
- G01N 11/02 . by measuring flow of the material
- G01N 11/04 . . through a restricted passage, e.g. tube, aperture
- G01N 11/06 . . . by timing the outflow of a known quantity
- G01N 11/08 . . . by measuring pressure required to produce a known flow
  
- G01N 11/10 . by moving a body within the material
- G01N 11/105 . . { by detecting the balance position of a float moving in a duct conveying the fluid under test }
- G01N 11/12 . . by measuring rising or falling speed of the body ; by measuring penetration of wedged gauges ( [G01N 11/16 takes precedence](#) )
- G01N 11/14 . . by using rotary bodies, e.g. vane ( [G01N 11/16 takes precedence](#) )
- G01N 11/142 . . . { Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer }
- G01N 11/16 . . by measuring damping effect upon oscillatory body
- G01N 11/162 . . . { Oscillations being torsional, e.g. produced by rotating bodies }
- G01N 11/165 . . . . { Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer }
- G01N 11/167 . . . . { Sample holder oscillates, e.g. rotating crucible }
  
- G01N 13/00 Investigating surface or boundary effects, e.g. wetting power ; Investigating diffusion effects ; Analysing materials by determining surface, boundary, or diffusion effects ( [scanning-probe techniques or apparatus G01Q](#) )**

- G01N 13/02 . Investigating surface tension of liquids
- G01N 13/04 . Investigating osmotic effects
- G01N 15/00** **Investigating characteristics of particles ; Investigating permeability, pore-volume, or surface-area of porous materials ( [identification of micro-organisms C12Q](#) )**
- G01N 15/02 . Investigating particle size or size distribution ( [G01N 15/04](#) , [G01N 15/10](#) take precedence; by measuring osmotic pressure [G01N 7/10](#) ; by filtering [B01D](#) ; by sifting [B07B](#) )
- G01N 15/0205 .. { by optical means, e.g. by light scattering, diffraction, holography or imaging }
- G01N 15/0211 ... { Investigating a scatter or diffraction pattern }
- G01N 15/0227 ... { using imaging, e.g. a projected image of suspension; using holography }
- G01N 15/0255 .. { with mechanical, e.g. inertial, classification, and investigation of sorted collections ( with centrifuges [G01N 15/042](#) ) }
- G01N 15/0266 .. { with electrical classification }
- G01N 15/0272 .. { with screening; with classification by filtering ( [B01D](#) takes precedence ) }
- G01N 15/04 . Investigating sedimentation of particle suspensions
- G01N 15/042 .. { by centrifuging and investigating centrifugates ( centrifuges per se [B04B](#) ) }
- G01N 15/05 .. in blood
- G01N 15/06 . Investigating concentration of particle suspensions ( [G01N 15/04](#) , [G01N 15/10](#) take precedence; by weighing [G01N 5/00](#) )

**NOTE**

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group and its subgroups:

- Investigating or analysing materials;
- by the use of optical means: [G01N 21/00](#) , e.g. [G01N 21/47](#) , [G01N 21/90](#) ;
- by other radiations or by particles: [G01N 23/00](#) , e.g. [G01N 23/02](#) , [G01N 23/201](#) ;
- by measuring impedance: [G01N 27/02](#) , e.g. [G01N 27/06](#) , [G01N 27/22](#) ;
- by electrochemical means: [G01N 27/00](#) , e.g. [G01N 27/26](#) , [G01N 27/56B](#) ;
- by measuring absorption of sonic or ultrasonic vibrations: [G01N 29/00](#) , e.g. [G01N 29/02](#)

- G01N 15/0606 .. { by collecting particles on a support }
- G01N 15/0612 ... { Optical scan of the deposits ( [G01N 15/0625](#) takes precedence ) }
- G01N 15/0618 ... { of the filter type ( [G01N 15/0643](#) takes precedence ) }
- G01N 15/0625 .... { Optical scan of the deposits }
- G01N 15/0631 .... { Separation of liquids, e.g. by absorption, wicking }
- G01N 15/0637 ... { Moving support }
- G01N 15/0643 .... { of the filter type }
- G01N 15/065 .. { using condensation nuclei counters }



- G01N 15/0656 . . { using electric, e.g. electrostatic methods or magnetic methods ( by investigating individual particles [G01N 15/1031](#) , [G01N 15/12](#) ) }
- G01N 15/08 . Investigating permeability, pore-volume, or surface area of porous materials
- G01N 15/0806 . . { Details, e.g. sample holders, mounting samples for testing }
- G01N 15/082 . . { Investigating permeability by forcing a fluid through a sample }
- G01N 15/0826 . . . { and measuring fluid flow rate, i.e. permeation rate or pressure change }
- G01N 15/088 . . { Investigating volume, surface area, size or distribution of pores; Porosimetry }
- G01N 15/0886 . . . { Mercury porosimetry }
- G01N 15/0893 . . . { by measuring weight or volume of sorbed fluid, e.g. B.E.T. method }
- G01N 15/10 . Investigating individual particles
- G01N 15/1012 . . { Calibrating particle analysers; References therefor }
- G01N 15/1031 . . { by measuring electrical or magnetic effects thereof, e.g. onconductivity or capacity ( using nano-scale size effects, other than for sizing or counting, by translocation through nano-pores [G01N 33/48721](#) ; involving the use of Coulter counters [G01N 15/12](#) ) }
- G01N 15/1056 . . { Micro-structural devices for other than electro-optical measurement ( for electro-optical measurement [G01N 15/1484](#) ) }
- G01N 15/12 . . Coulter-counters
- G01N 15/1209 . . . { Details }
- G01N 15/1218 . . . . { concerning the aperture }
- G01N 15/1227 . . . . { Circuits }
- G01N 15/1245 . . . { Devices using more than one aperture }
- G01N 15/14 . . Electro-optical investigation, e.g. flow cytometers
- G01N 15/1404 . . . { Fluid conditioning in flow cytometers, e.g. flow cells; Supply; Control of flow }
- G01N 15/1425 . . . { using an analyser being characterised by its control arrangement }
- G01N 15/1427 . . . . { with the synchronisation of components, a time gate for operation of components, or suppression of particle coincidences }
- G01N 15/1429 . . . { using an analyser being characterised by its signal processing }
- G01N 15/1431 . . . . { the electronics being integrated with the analyser, e.g. hand-held devices for on-site investigation }
- G01N 15/1434 . . . { using an analyser being characterised by its optical arrangement }
- G01N 15/1436 . . . . { the optical arrangement forming an integrated apparatus with the sample container, e.g. a flow cell }
- G01N 15/1456 . . . { without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals }
- G01N 15/1459 . . . . { the analysis being performed on a sample stream }
- G01N 15/1463 . . . . { using image analysis for extracting features of the particle }

#### **NOTE**

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- counting objects disposed at random with size distinction [G06M 11/04](#)



- extraction of features from image for pattern recognition [G06K 9/46](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#)
- image enhancement in general [G06T 5/00](#)
- image analysis in general [G06T 7/00](#) ]

G01N 15/1468      ...      { with spatial resolution of the texture or inner structure of the particle } { Informative Note References listed below indicate CPC places which could also be interest when carrying out a search in respect of the subject matter covered by the preceding group: -counting objects disposed at random with size distinction [G06M 11/04](#) -extraction of features from image for pattern recognition [G06K 9/46](#) -specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#) -image enhancement in general [G06T 5/00](#) -image analysis in general [G06T 7/00](#) }

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- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#)
- image enhancement [G06T 5/00](#)
- image analysis [G06T 7/00](#)

G01N 15/147      ....      { the analysis being performed on a sample stream }

G01N 15/1475      ....      { using image analysis for extracting features of the particle }

G01N 15/1484      ...      { micro-structural devices }

#### **WARNING**

This group is incomplete; see provisionally also groups [G01N 15/14](#) , [G01N 15/1404](#) , [G01N 15/1456](#) and related indexing codes

### **G01N 17/00      Investigating resistance of materials to the weather, to corrosion, or to light**

G01N 17/002      .      { Test chambers }

G01N 17/004      .      { to light }

G01N 17/006      .      { of metals }

G01N 17/008      .      { Monitoring fouling }

G01N 17/02      .      Electrochemical measuring systems for weathering, corrosion or corrosion-protection measurement

G01N 17/04      .      Corrosion probes

G01N 17/043      ..      { Coupons }

G01N 17/046 . . . { Means for supporting or introducing coupons }

**G01N 19/00** **Investigating materials by mechanical methods** ( [G01N 3/00](#) to [G01N 17/00](#) take precedence )

G01N 19/02 . Measuring coefficient of friction between materials { ( testing of tyres [G01M 17/02](#) ; determinations of friction coefficient used in vehicle braking or traction control systems [B60T 8/172](#) ) }

G01N 19/04 . Measuring adhesive force between materials, e.g. of sealing tape, of coating

G01N 19/06 . Investigating by removing material, e.g. spark-testing

G01N 19/08 . Detecting presence of flaws or irregularities ( measuring roughness or irregularity of surfaces [G01B 5/28](#) )

G01N 19/10 . Measuring moisture content, e.g. by measuring change in length of hygroscopic filament ; Hygrometers

**G01N 21/00** **Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible, or ultra-violet light** ( [G01N 3/00](#) to [G01N 19/00](#) take precedence; measuring stress in general [G01L 1/00](#) ; optical elements of measuring instruments [G02B](#) )

#### **NOTE**

This group does not cover the investigation of spectral properties of light per se, or measurements of the properties of materials where spectral properties of light are sensed and primary emphasis is placed on creating, detecting or analysing the spectrum providing that the properties of the materials to be investigated are of minor importance (see also Note (4) after the title of class [G01](#) ). Those subjects are covered by group [G01J 3/00](#) .

G01N 21/01 . Arrangements or apparatus for facilitating the optical investigation

G01N 21/03 . . Cuvette constructions

G01N 21/0303 . . . { Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment ( [G01N 21/031](#) to [G01N 21/15](#) take precedence ) }

G01N 21/031 . . . { Multipass arrangements }

G01N 21/0317 . . . { High pressure cuvettes; ( [G01N 21/0332](#) to [G01N 21/15](#) take precedence ) }

G01N 21/0332 . . . { with temperature control ( control of temperature [G05D 23/00](#) ; cryostats [F17C 3/08](#) ) }

G01N 21/05 . . . Flow-through cuvettes ( [G01N 21/09](#) takes precedence; handling fluid samples [G01N 1/10](#) )

G01N 21/07 . . . Centrifugal type cuvettes ( [G01N 21/09](#) takes precedence; centrifuges per se [B04B](#) )

G01N 21/09 . . . adapted to resist hostile environments or corrosive or abrasive materials

G01N 21/11 . . Filling or emptying of cuvettes

G01N 21/13 . . Moving of cuvettes or solid samples to or from the investigating station { handling materials for automatic analysis [G01N 35/00](#) }

- G01N 21/15 .. Preventing contamination of the components of the optical system or obstruction of the light path
- G01N 21/17 . Systems in which incident light is modified in accordance with the properties of the material investigated ( where the material investigated is optically excited causing a change in wavelength of the incident light [G01N 21/63](#) )
- G01N 21/1702 .. { with opto-acoustic detection, e.g. for gases or analysing solids }
- G01N 21/171 .. { with calorimetric detection, e.g. with thermal lens detection }
- G01N 21/1717 .. { with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance }
- G01N 21/19 .. Dichroism
- G01N 21/21 .. Polarisation-affecting properties ( [G01N 21/19](#) takes precedence )
- G01N 21/211 ... { Ellipsometry ( optical thickness measurement [G01B 11/06](#) ) }
- G01N 21/23 ... Bi-refringence
- G01N 21/25 .. Colour ; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands
- G01N 21/251 ... { Colorimeters; Construction thereof }
- G01N 21/253 .... { for batch operation, i.e. multisample apparatus ( analytical automats [G01N 35/00](#) ) }
- G01N 21/255 ... { Details, e.g. use of specially adapted sources, lighting or optical systems }
- G01N 21/256 ... { Arrangements using two alternating lights and one detector }
- G01N 21/27 ... using photo-electric detection ( [G01N 21/31](#) takes precedence ) { circuits for computing concentration ( logarithmic circuits [G06G 7/24](#) ; photometric circuits in general [G01J](#) ) }
- G01N 21/272 .... { for following a reaction, e.g. for determining photometrically a reaction rate ( photometric cinetic analysis ) }
- G01N 21/274 .... { Calibration, base line adjustment, drift correction }
- G01N 21/276 ..... { with alternation of sample and standard in optical path }
- G01N 21/278 ..... { Constitution of standards }
- G01N 21/29 ... using visual detection ( [G01N 21/31](#) takes precedence )
- G01N 21/293 .... { with colour charts, graduated scales or turrets }
- G01N 21/31 ... Investigating relative effect of material at wavelengths characteristic of specific elements or molecules, e.g. atomic absorption spectrometry { ( [G01N 21/72](#) takes precedence ) }
- G01N 21/3103 .... { Atomic absorption analysis }
- G01N 21/314 .... { with comparison of measurements at specific and non-specific wavelengths ( dual wavelength spectrometry [G01J 3/427](#) ) }
- G01N 21/3151 ..... { using two sources of radiation of different wavelengths ( [G01N 21/33](#) to [G01N 21/39](#) take precedence ) }
- G01N 21/33 .... using ultra-violet light ( [G01N 21/39](#) takes precedence )
- G01N 21/35 .... using infra-red light ( [G01N 21/39](#) takes precedence )
- G01N 21/3504 ..... { for analysing gases, e.g. multigases analysis }
- G01N 21/3518 ..... { Devices using the gas filter correlation method including the radiometric type, i.e. without instrumental source; Devices using gas pressure modulation method }
- G01N 21/3554 ..... { for determining moisture }
- G01N 21/3559 ..... { in sheets, e.g. in paper } { WARNINGNot complete, see also [G01N](#)

		<a href="#">21/3554</a> }
G01N 21/3563	.....	{ for analysing solids; preparation of samples therefor ( <a href="#">sampling or preparing specimen for investigation in general G01N 1/00</a> ) }
G01N 21/3577	.....	{ for analysing liquids, e.g. polluted water }
<b><u>WARNING</u></b>		
Not complete, see also <a href="#">G01N 21/35</a>		
G01N 21/3581	.....	{ using far infrared; using Terahertz radiation }
G01N 21/3586	.....	{ by Terahertz time domain spectroscopy [THz-TDS] }
<b><u>WARNING</u></b>		
Not complete, see also <a href="#">G01N 21/3581</a>		
G01N 21/359	.....	{ using near infra-red light }
G01N 21/37	.....	using pneumatic detection { ( <a href="#">opto-acoustic detection G01N 21/1702</a> ) }
G01N 21/39	....	using tunable lasers
G01N 21/41	..	Refractivity ; Phase-affecting properties, e.g. optical path length ( <a href="#">G01N 21/21 takes precedence</a> )
G01N 21/412	...	{ Index profiling of optical fibres }
G01N 21/4133	...	{ Refractometers, e.g. differential }
G01N 21/43	...	by measuring critical angle
G01N 21/431	....	{ Dip refractometers, e.g. using optical fibres }
G01N 21/45	...	using interferometric methods ; using Schlieren methods
G01N 21/453	....	{ Holographic interferometry ( for dimensional measurements <a href="#">G01B 9/021</a> to <a href="#">G01B 9/029</a> ) }
G01N 21/455	....	{ Schlieren methods, e.g. for gradient index determination; Shadowgraph }
G01N 21/47	..	Scattering, i.e. diffuse reflection ( <a href="#">G01N 21/25</a> , <a href="#">G01N 21/41</a> take precedence ) { <a href="#">G01N 21/55</a> takes precedence }
G01N 21/4738	...	{ Diffuse reflection ( precedence is given to <a href="#">G01N 21/55</a> - <a href="#">G01N 21/57</a> if specular component is taken into consideration ) , e.g. also for testing fluids, fibrous materials }
G01N 21/474	....	{ Details of optical heads therefor, e.g. using optical fibres }
G01N 21/4785	...	{ Standardising light scatter apparatus; Standards therefor }
G01N 21/4788	...	{ Diffraction ( for sizing particles <a href="#">G01N 15/0205</a> ) }
G01N 21/4795	...	{ spatially resolved investigating of object in scattering medium ( in vivo <a href="#">A61B</a> ) }
G01N 21/49	...	within a body or fluid
G01N 21/51	....	inside a container, e.g. in an ampoule ( <a href="#">G01N 21/53</a> takes precedence; checking containers for cleanliness <a href="#">B08B 9/46</a> )
G01N 21/53	....	within a flowing fluid, e.g. smoke ( alarm devices actuated by smoke <a href="#">G08B 17/10</a> )
G01N 21/532	.....	{ with measurement of scattering and transmission }
G01N 21/534	.....	{ by measuring transmission alone, i.e. determining opacity }
G01N 21/538	.....	{ for determining atmospheric attenuation and visibility }
G01N 21/55	..	Specular reflectivity

G01N 21/552	...	{ Attenuated total reflection }
G01N 21/553	....	{ and using surface plasmons ( fluorescence excitation <a href="#">G01N 21/648</a> ; enhanced Raman <a href="#">G01N 21/658</a> ) }
G01N 21/554	.....	{ detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance }
G01N 21/57	...	Measuring gloss
G01N 21/59	..	Transmissivity ( <a href="#">G01N 21/25</a> takes precedence )
G01N 21/5907	...	{ Densitometers }
G01N 21/5911	....	{ of the scanning type ( scanning per se <a href="#">G02B</a> ) }
G01N 21/61	...	Non-dispersive gas analysers { ( <a href="#">G01N 21/3504</a> takes precedence ) }
G01N 21/62	.	Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light
G01N 21/63	..	optically excited
G01N 21/631	...	{ using photolysis and investigating photolysed fragments }
G01N 21/636	...	{ using an arrangement of pump beam and probe beam; using the measurement of optical non-linear properties; ( non-linear optics per se <a href="#">G02F 1/35</a> ) }
G01N 21/64	...	Fluorescence ; Phosphorescence
G01N 21/6402	....	{ Atomic fluorescence; Laser induced fluorescence }
G01N 21/6404	.....	{ Atomic fluorescence }
G01N 21/6408	....	{ with measurement of decay time, time resolved fluorescence }
G01N 21/6428	....	{ Measuring fluorescence of fluorescent products of reactions or of fluorochrome labelled reactive substances, e.g. measuring quenching effects, using measuring "optrodes" ( in vivo <a href="#">A61B 5/00</a> ; immunoassay <a href="#">G01N 33/53</a> ) }
G01N 21/643	.....	{ non-biological material }

**WARNING**

Not complete, see [G01N 21/64](#) H

G01N 21/6445	....	{ Measuring fluorescence polarisation }
G01N 21/6447	....	{ by visual observation }
G01N 21/645	....	{ Specially adapted constructive features of fluorimeters }

**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64](#) M

G01N 21/6452	.....	{ Individual samples arranged in a regular 2D-array, e.g. multiwell plates }
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**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/645](#) and [G01N 21/253](#)

G01N 21/6454	.....	{ using an integrated detector array }
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**NOTE**

Not complete, see [G01N 21/64 P](#)

G01N 21/6456 . . . . . { Spatial resolved fluorescence measurements; Imaging }

**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64 M](#)

G01N 21/6458 . . . . . { Fluorescence microscopy ( fluorescence microscopes per se [G02B 21/0076](#) and [G02B 21/16](#) ) }

**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64 M](#)

G01N 21/648 . . . . . { using evanescent coupling or surface plasmon coupling for the excitation of fluorescence }

**WARNING**

Not complete, see also [G01N 21/553](#) and [G01N 21/64 H](#)

G01N 21/6486 . . . . { Measuring fluorescence of biological material, e.g. DNA, RNA, cells ( [G01N 21/6428](#) takes precedence ) }

**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64 M](#)

G01N 21/6489 . . . . { Photoluminescence of semiconductors }

G01N 21/65 . . . Raman scattering

G01N 21/658 . . . . { enhancement Raman, e.g. surface plasmons }

**WARNING**

Not complete, see [G01N 21/65](#)

G01N 21/66 . . electrically excited, e.g. electroluminescence

G01N 21/67 . . . using electric arcs or discharges ( [spark gaps](#) per se [H01T](#) )

G01N 21/68 . . . using high frequency electric fields

G01N 21/69 . . . specially adapted for fluids { e.g. molten metal }

G01N 21/70 . . mechanically excited, e.g. triboluminescence

G01N 21/71 . . thermally excited

G01N 21/714 . . . { Sample nebulisers for flame burners or plasma burners ( [nebulizers](#) per se [B05B](#) ) }

G01N 21/716 . . . { by measuring the radiation emitted by a test object treated by combustion gases for investigating the composition of gas mixtures }

G01N 21/718 . . . { Laser microanalysis, i.e. with formation of sample plasma }

G01N 21/72 . . . using flame burners

G01N 21/73 . . . using plasma burners or torches

- G01N 21/74 . . . using flameless atomising, e.g. graphite furnaces
- G01N 21/75 . Systems in which material is subjected to a chemical reaction, the progress or the result of the reaction being investigated ( systems in which material is burnt in a flame or plasma [G01N 21/72](#) , [G01N 21/73](#) )
- G01N 21/76 . . Chemiluminescence ; Bioluminescence
- G01N 21/763 . . . { Bioluminescence }
- G01N 21/766 . . . { of gases }
- G01N 21/77 . . by observing the effect on a chemical indicator
- G01N 21/7703 . . . { using reagent-clad optical fibres or optical waveguides ( using measurement of total internal reflection or attenuated total reflection [G01N 21/552](#) ; optical fibres or waveguides per se [G02B](#) ) }
- G01N 21/774 . . . . { the reagent being on a grating or periodic structure }
- G01N 21/7743 . . . . . { the reagent-coated grating coupling light in or out of the waveguide }
- G01N 21/7746 . . . . { the waveguide coupled to a cavity resonator }
- G01N 21/78 . . . producing a change of colour
- G01N 21/783 . . . . { for analysing gases }
- G01N 21/79 . . . . Photometric titration
- G01N 21/80 . . . . Indicating pH value
- G01N 21/81 . . . . Indicating humidity
- G01N 21/82 . . . producing a precipitate or turbidity
- G01N 21/83 . . . . Turbidimetric titration
- G01N 21/84 . Systems specially adapted for particular applications
- G01N 21/8422 . . { Investigating thin films, e.g. matrix isolation method }
- G01N 21/8483 . . { Investigating reagent band ( test-element handling not specific to a test method [G01N 33/4875](#) ; analytical elements specific to chemical analysis of biological material [G01N 33/52](#) ; autometer with reagent band [G01N 35/04](#) ) }
- G01N 21/85 . . Investigating moving fluids or granular solids
- G01N 21/8507 . . . { Probe photometers, i.e. with optical measuring part dipped into fluid sample }
- G01N 21/86 . . Investigating moving sheets ( [G01N 21/89](#) takes precedence )
- G01N 21/87 . . Investigating jewels ( [G01N 21/88](#) takes precedence )
- G01N 21/88 . . Investigating the presence of flaws or contamination
- G01N 21/8803 . . . { Visual inspection ( measuring projectors [G01B 9/08](#) ) }
- G01N 21/8806 . . . { Specially adapted optical and illumination features }
- G01N 21/8851 . . . { Scan or image signal processing specially adapted therefor, e.g. for scan signal adjustment, for detecting different kinds of defects, for compensating for structures, markings, edges ( [G01N 21/8806](#) and [G01N 21/93](#) to [G01N 21/95692](#) take precedence; optical measurement of dimensions [G01B 11/00](#) ; optical scanning [G02B 26/10](#) ; image transformation [G06T 3/00](#) ; computerised image enhancement [G06T 5/00](#) ; image processing per se for flaw detection [G06T 7/0002](#) ) }
- G01N 21/89 . . . in moving material, e.g. running paper or textiles ( [G01N 21/90](#) , [G01N 21/91](#) , [G01N 21/94](#) take precedence )
- G01N 21/8901 . . . . { Optical details; Scanning details ( per se [G02B](#) ) }
- G01N 21/8903 . . . . . { using a multiple detector array }
- G01N 21/8914 . . . . { characterised by the material examined }



G01N 21/8915	.....	{ non-woven textile material }
G01N 21/8916	.....	{ for testing photographic material }
G01N 21/892	....	characterised by the flaw, defect or object feature examined
G01N 21/8921	.....	{ Streaks }
G01N 21/8922	.....	{ Periodic flaws }
G01N 21/894	.....	Pinholes
G01N 21/896	.....	Optical defects in or on transparent materials, e.g. distortion, surface flaws { in conveyed flat sheet or rod ( for other objects <a href="#">G01N 21/958</a> ) }
G01N 21/898	.....	irregularities in textured or patterned surfaces, e.g. textiles, wood
G01N 21/8983	.....	{ for testing textile webs, i.e. woven material }
G01N 21/8986	.....	{ Wood }
G01N 21/90	...	in a container or its contents ( <a href="#">G01N 21/91</a> takes precedence )
G01N 21/9009	....	{ Non-optical constructional details affecting optical inspection, e.g. cleaning mechanisms for optical parts, vibration reduction }
G01N 21/9018	....	{ Dirt detection in containers }
G01N 21/9027	.....	{ in containers after filling }

**WARNING**

Not complete, see also [G01N 21/90](#) , [G01N 21/90 B](#), [G01N 21/90 C](#)

G01N 21/9036	....	{ using arrays of emitters or receivers }
G01N 21/9045	....	{ Inspection of ornamented or stippled container walls }

**WARNING**

Not complete, see also [G01N 21/90](#) , [G01N 21/90 B](#), [G01N 21/90 C](#)

G01N 21/9054	....	{ Inspection of sealing surface and container finish }
G01N 21/9072	....	{ with illumination or detection from inside the container }
G01N 21/9081	....	{ Inspection especially designed for plastic containers, e.g. preforms }
G01N 21/909	....	{ in opaque containers or opaque container parts, e.g. cans, tins, caps, labels }
G01N 21/91	...	using penetration of dyes, e.g. fluorescent ink
G01N 21/93	...	Detection standards ; Calibrating { baseline adjustment, drift correction }
G01N 21/94	...	Investigating contamination, e.g. dust ( <a href="#">G01N 21/85</a> takes precedence )
G01N 21/95	...	characterised by the material or shape of the object to be examined ( <a href="#">G01N 21/89</a> to <a href="#">G01N 21/91</a> , <a href="#">G01N 21/94</a> take precedence )
G01N 21/9501	....	{ Semiconductor wafers ( manufacturing processes per se of semiconductor devices implementing a measuring step <a href="#">H01L 22/10</a> ) }
G01N 21/9503	.....	{ Wafer edge inspection }
G01N 21/9505	.....	{ Wafer internal defects, e.g. microcracks }
G01N 21/9506	....	{ Optical discs }
G01N 21/9508	....	{ Capsules; Tablets }
G01N 21/951	....	{ Balls }
G01N 21/9515	....	{ Objects of complex shape, e.g. examined with use of a surface follower device ( measuring contours and curvatures <a href="#">G01B 11/24</a> ) }

- G01N 21/952 . . . . Inspecting the exterior surface of cylindrical bodies or wires ( [G01N 21/956](#) takes precedence )
- G01N 21/954 . . . . Inspecting the inner surface of hollow bodies, e.g. bores
- G01N 21/956 . . . . Inspecting patterns on the surface of objects ( [contactless testing of electronic circuits G01R 31/308](#) ; testing currency [G07D](#) { [manufacturing processes per se of semiconductor devices implementing a measuring step H01L 22/10](#) } )
- G01N 21/95607 . . . . . { using a comparative method }
- G01N 21/95623 . . . . . { using a spatial filtering method ( [per se G02B](#) ) }
- G01N 21/95684 . . . . . { Patterns showing highly reflecting parts, e.g. metallic elements }
- G01N 21/95692 . . . . . { Patterns showing hole parts, e.g. honeycomb filtering structures }
- G01N 21/958 . . . . Inspecting transparent materials { or objects, e.g. windscreens ( [for conveyed flat sheet or rod G01N 21/896](#) ) }
  
- G01N 22/00** **Investigating or analysing materials by the use of microwaves ( [G01N 3/00](#) to [G01N 17/00](#) , [G01N 24/00](#) take precedence )**
- G01N 22/005 . { and using Stark effect modulation }
- G01N 22/02 . Investigating the presence of flaws
- G01N 22/04 . Investigating moisture content
  
- G01N 23/00** **Investigating or analysing materials by the use of wave or particle radiation not covered by [G01N 21/00](#) or [G01N 22/00](#) , e.g. X-rays or neutrons ( [G01N 3/00](#) to [G01N 17/00](#) take precedence; measuring stress in general [G01L 1/00](#) ; measurement of nuclear or X-radiation [G01T](#) ; introducing objects or materials into nuclear reactors, or removing them therefrom, or storing them after treatment therein [G21C](#) ; construction or operation of X-ray apparatus or circuits therefor [H05G](#) )**
- G01N 23/005 . { by using neutrons ( [G01N 23/02](#) to [G01N 23/227](#) take precedence ) }
- G01N 23/02 . by transmitting the radiation through the material
- G01N 23/025 . . { using neutrons }
- G01N 23/04 . . and forming a picture ( [electron microscope per se H01J](#) )
- G01N 23/043 . . . { using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images }
- G01N 23/046 . . . { using tomography, e.g. computer tomography ( [radiation tomography used in diagnosis A61B 6/02](#) ) }
- G01N 23/05 . . . using neutrons
- G01N 23/06 . . and measuring the absorption
- G01N 23/063 . . . { X-ray absorption fine structure, i.e. EXAFS ( [G01N 23/2076](#) takes precedence ) }
- G01N 23/066 . . . { Gamma-ray resonance absorption, e.g. Mössbauer effect ( [resonant absorbers or driving arrangements therefor, e.g. for Mössbauer effect devices G21K 1/12](#) ) }
- G01N 23/08 . . . using electric detection means
- G01N 23/083 . . . . the radiation being X-rays ( [G01N 23/10](#) to [G01N 23/18](#) take precedence )

**WARNING**

Not complete, see also [G01N 23/08](#)

G01N 23/087 . . . . . using polyenergetic X-rays

**WARNING**

Not complete, see also [G01N 23/08](#)

- G01N 23/09 . . . . the radiation being neutrons
- G01N 23/10 . . . . the material being confined in a container ( [G01N 23/09](#) takes precedence )
- G01N 23/12 . . . . the material being a flowing fluid or a flowing granular solid ( [G01N 23/09](#) takes precedence )
- G01N 23/125 . . . . . { with immersed detecting head }
- G01N 23/14 . . . . . specially adapted for controlling or monitoring operations or for signalling
- G01N 23/16 . . . . the material being a moving sheet { or a sheet or tube examined by a scanning probe } ( [G01N 23/09](#) , [G01N 23/18](#) take precedence )
- G01N 23/18 . . . . Investigating the presence of flaws ( [G01N 23/09](#) takes precedence )
- G01N 23/185 . . . . . { in tyres ( testing tyre performance [G01M 17/02](#) ) }
- G01N 23/20 . . by using diffraction of the radiation, e.g. for investigating crystal structure ; by using reflection of the radiation
- G01N 23/20008 . . { Constructional details; Accessories ( monochromators for X Rays using crystals [G2K 1/06](#) ; using gratings [G01J 3/1833](#) ) }
- G01N 23/20016 . . . { Goniometers }
- G01N 23/20025 . . . { Sample holders or supports }
- G01N 23/20033 . . . . { provided with temperature control or heating devices }
- G01N 23/20041 . . . . { for high pressure testing, e.g. anvil cells }
- G01N 23/2005 . . . { Details concerning the preparation of powder samples }
- G01N 23/20058 . . { by measuring diffraction of electrons, e.g. LEED method }
- G01N 23/20066 . . { by measuring inelastic scatter of gamma rays, e.g. Compton effect }
- G01N 23/20075 . . { by measuring interferences of X-rays, e.g. Borrmann effect }
- G01N 23/20083 . . { by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement }
- G01N 23/20091 . . { by measuring the energy-dispersion spectrum of diffracted radiation, i.e. EDS ( [G01T 1/36](#) takes precedence ) }
- G01N 23/201 . . by measuring small-angle scattering { [G01N 23/202](#) takes precedence }
- G01N 23/202 . . . using neutrons
- G01N 23/203 . . by measuring back scattering
- G01N 23/204 . . . using neutrons
- G01N 23/205 . . by means of diffraction cameras ( [G01N 23/201](#) takes precedence )
- G01N 23/2055 . . . { Analysing diffraction patterns ( optical densitometers [G01N 21/5907](#) ) }
- G01N 23/206 . . . the radiation being neutrons { ( [G01N 23/2055](#) takes precedence ) }
- G01N 23/207 . . by means of diffractometry using detectors, e.g. using an analysing crystal or a crystal to be analysed in a central position and one or more displaceable detectors

in circumferential positions ( [G01N 23/201](#) { [G01N 23/2073](#) } take precedence; spectrometry of detected or measured radiation intensity [G01T 1/36](#) )

- [G01N 23/2073](#) . . . { using neutron detectors ( [G01N 23/202](#) takes precedence; neutron spectrometry [G01T 3/00](#) ) }
- [G01N 23/2076](#) . . . { for spectrometry, i.e. using an analysing crystal, e.g. for measuring X-ray fluorescence spectrum of a sample with wavelength-dispersion, i.e. WDXFS ( analysis by X-ray fluorescence in general [G01N 23/223](#) ; Spectrometry of X-rays or gamma-ray beams per se [G01T 1/36](#) ) }

- [G01N 23/22](#) . by measuring secondary emission

#### **NOTE**

Devices per se are classified in the relevant places, e.g. [H01J 37/00](#) , [H01J 49/00](#)

- [G01N 23/2202](#) . . { Preparing specimens ( in general [G01N 1/28](#) ) }
- [G01N 23/2204](#) . . { Specimen supports; Sample conveying means ( as parts of specific apparatus, see the relevant groups, e.g. [H01J 37/20](#) and [H01J 49/00](#) ) }
- [G01N 23/2206](#) . . { using a combination of at least two kinds of measurements, with at least one measurement of secondary emission }
- [G01N 23/2208](#) . . . { using a combination of at least two kinds of measurements, each one being of a secondary emission kind }
- [G01N 23/221](#) . . by activation analysis
- [G01N 23/222](#) . . . using neutrons
- [G01N 23/223](#) . . by irradiating the sample with X-rays { or gamma-rays } and by measuring X-ray fluorescence { ( [G01N 23/2076](#) takes precedence ) }
- [G01N 23/225](#) . . using electron or ion microprobe { or incident electron or ion beam } ( electron or ion beam tubes for micropobe analysis [H01J 37/00](#) )
- [G01N 23/2251](#) . . . { with incident electron beam }
- [G01N 23/2252](#) . . . . { and measuring excited X-rays }
- [G01N 23/2254](#) . . . . { and measuring cathodoluminescence }
- [G01N 23/2255](#) . . . { with incident ion beam, e.g. proton beam }
- [G01N 23/2257](#) . . . . { and measuring X-rays excited from incident proton beam, i.e. PIXE }
- [G01N 23/2258](#) . . . . { and measuring secondary ion beam, i.e. SIMS }
- [G01N 23/227](#) . . by measuring photoelectric effect, e.g. Auger electrons
- [G01N 23/2273](#) . . . { by measuring photoelectron spectrum, i.e. ESCA, XPS }
- [G01N 23/2276](#) . . . { by measuring Auger electrons, i.e. AES }

**[G01N 24/00](#)** Investigating or analyzing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects ( arrangements or instruments for measuring magnetic resonance effects [G01R 33/20](#) )

- [G01N 24/002](#) . { Using resonance on molecular beams ( atomic clocks [G04F 5/14](#) ; beam masers [H01S 1/06](#) ) }
- [G01N 24/004](#) . { Using acoustical resonance, i.e. phonon interactions }
- [G01N 24/006](#) . { using optical pumping ( magnetometers using optical pumping [G01R 33/26](#) , optical pumping of lasers [H01S 3/091](#) ) }

- G01N 24/008 . { by using resonance effects in zero field, e.g. in microwave, submillimetric region ( by measuring absorption of microwaves by the material [G01N 22/00](#) ) }
- G01N 24/08 . by using nuclear magnetic resonance ( [G01N 24/12](#) takes precedence )
- G01N 24/081 .. { Making measurements of geologic samples, e.g. measurements of moisture, pH, porosity, permeability, tortuosity or viscosity }
- G01N 24/082 .. { Measurement of solid, liquid or gas content }
- G01N 24/084 .. { Detection of potentially hazardous samples, e.g. toxic samples, explosives, drugs, firearms, weapons }
- G01N 24/085 .. { Analysis of materials for the purpose of controlling industrial production systems }
- G01N 24/087 .. { Structure determination of a chemical compound, e.g. of a biomolecule such as a protein }

**WARNING**

Not complete pending reclassification, see also [G01R 33/44](#)

- G01N 24/088 .. { Assessment or manipulation of a chemical or biochemical reaction, e.g. verification whether a chemical reaction occurred or whether a ligand binds to a receptor in drug screening or assessing reaction kinetics }

**WARNING**

Not complete, see also [G01R 33/44](#) and its subgroups]

- G01N 24/10 . by using electron paramagnetic resonance ( [G01N 24/12](#) takes precedence )
- G01N 24/12 . by using double resonance
- G01N 24/14 . by using cyclotron resonance

**G01N 25/00** **Investigating or analyzing materials by the use of thermal means** ( [G01N 3/00](#) to [G01N 23/00](#) take precedence )

- G01N 25/005 . { by investigating specific heat }
- G01N 25/02 . by investigating changes of state or changes of phase ; by investigating sintering { ( investigating or analysing oils or hydrocarbon fluids by measuring cloud point or pour point [G01N 33/2811](#) ) }
- G01N 25/04 .. of melting point ; of freezing point ; of softening point
- G01N 25/06 ... Analysis by measuring change of freezing point
- G01N 25/08 .. of boiling point
- G01N 25/085 ... { Investigating nucleation }
- G01N 25/10 ... Analysis by measuring change of boiling point
- G01N 25/12 .. of critical point ; of other phase change
- G01N 25/14 . by using distillation, extraction, sublimation, condensation, freezing, or crystallisation ( [G01N 25/02](#) takes precedence )
- G01N 25/142 .. { by condensation }

- G01N 25/145 . . { Accessories, e.g. cooling devices ( in general [B01L](#) , [F25D](#) ) }
- G01N 25/147 . . { by cristallisation }
- G01N 25/16 . by investigating thermal coefficient of expansion
- G01N 25/18 . by investigating thermal conductivity ( by calorimetry [G01N 25/20](#) ; by measuring change of resistance of an electrically-heated body [G01N 27/18](#) )
- G01N 25/20 . by investigating the development of heat, i.e. calorimetry, e.g. by measuring specific heat, by measuring thermal conductivity ( calorimeters per se [G01K](#) )
- G01N 25/22 . . on combustion or catalytic oxidation, e.g. of components of gas mixtures
- G01N 25/24 . . . using combustion tubes, e.g. for microanalysis
- G01N 25/26 . . . using combustion with oxygen under pressure, e.g. in bomb calorimeter
- G01N 25/28 . . . the rise in temperature of the gases resulting from combustion being measured directly
- G01N 25/30 . . . . using electric temperature-responsive elements
- G01N 25/32 . . . . . using thermoelectric elements
- G01N 25/34 . . . . using mechanical temperature-responsive elements, e.g. bimetallic ( bimetallic elements per se [G12B 1/02](#) )
- G01N 25/36 . . . . . for investigating the composition of gas mixtures
- G01N 25/38 . . . . using the melting or combustion of a solid
- G01N 25/385 . . . . . { for investigating the composition of gas mixtures }
- G01N 25/40 . . . the heat developed being transferred to a flowing fluid
- G01N 25/42 . . . . continuously
- G01N 25/44 . . . the heat developed being transferred to a fixed quantity of fluid
- G01N 25/46 . . . . for investigating the composition of gas mixtures
- G01N 25/48 . . on solution, sorption, or a chemical reaction not involving combustion or catalytic oxidation
- G01N 25/4806 . . . { Details not adapted to a particular type of sample }
- G01N 25/4813 . . . . { concerning the measuring means }
- G01N 25/482 . . . . . { concerning the temperature responsive elements ( measuring temperature or quantity of heat, thermally-sensitive elements [G01K](#) ; thermoelectric devices [H01L 35/00](#) , [H01L 37/00](#) ) }
- G01N 25/4826 . . . . { concerning the heating or cooling arrangements ( heating apparatus for chemical or physical laboratory apparatus in general [B01L 7/00](#) ) }
- G01N 25/4833 . . . . . { specially adapted for temperature scanning }
- G01N 25/484 . . . . { Heat insulation }
- G01N 25/4846 . . . { for a motionless, e.g. solid sample }
- G01N 25/4853 . . . . { Details }
- G01N 25/486 . . . . . { Sample holders }
- G01N 25/4866 . . . . { by using a differential method }
- G01N 25/4873 . . . { for a flowing e.g. gas sample }
- G01N 25/488 . . . . { Details }
- G01N 25/4886 . . . . . { concerning the circulation of the sample }
- G01N 25/4893 . . . . { by using a differential method }
- G01N 25/50 . by investigating flash-point ; by investigating explosibility

- G01N 25/52 . . . by determining flash-point of liquids
- G01N 25/54 . . . by determining explosibility
- G01N 25/56 . . by investigating moisture content
- G01N 25/58 . . . by measuring changes of properties of the material due to heat, cold or expansion
- G01N 25/60 . . . . for determining the wetness of steam
- G01N 25/62 . . . by psychrometric means, e.g. wet-and-dry bulb thermometers
- G01N 25/64 . . . . using electric temperature-responsive elements
- G01N 25/66 . . . by investigating dew-point
- G01N 25/68 . . . . by varying the temperature of a condensing surface
- G01N 25/70 . . . . by varying the temperature of the material, e.g. by compression, by expansion
- G01N 25/72 . . Investigating presence of flaws ( [by investigating thermal conductivity G01N 25/18](#) )
- G01N 27/00** **Investigating or analysing materials by the use of electric, electro-chemical, or magnetic means ( [G01N 3/00](#) to [G01N 25/00](#) take precedence; measurement or testing electric or magnetic variables or of electric or magnetic properties of materials [G01R](#) )**
- G01N 27/002 . . { [by investigating the work function voltage](#) }
- G01N 27/005 . . . { [by determining the work function in vacuum](#) }
- G01N 27/007 . . { [by investigating the electric dipolar moment \( measuring piezo-electric properties \[G01R 29/22\]\(#\) \)](#) }
- G01N 27/02 . . by investigating the impedance of the material
- G01N 27/021 . . . { [before and after chemical transformation of the material](#) }
- G01N 27/023 . . . { [where the material is placed in the field of a coil](#) }
- G01N 27/025 . . . . { [a current being generated within the material by induction](#) }
- G01N 27/026 . . . { [Dielectric impedance spectroscopy \( electrochemical impedance spectroscopy for measuring corrosion \[G01N 17/02\]\(#\) \)](#) }
- G01N 27/028 . . . { [Circuits therefor \( measuring impedance per se \[G01R 27/02\]\(#\) \)](#) }
- G01N 27/04 . . . by investigating resistance { ( [for measuring the amount of particles \[G01N 15/0656\]\(#\)](#) ) }
- G01N 27/041 . . . . { [of a solid body](#) }
- G01N 27/043 . . . . { [of a granular material](#) }
- G01N 27/045 . . . . { [Circuits \( measuring resistance per se \[G01R 27/00\]\(#\) , e.g. \[G01R 27/22\]\(#\) \)](#) }
- G01N 27/046 . . . . . { [provided with temperature compensation](#) }
- G01N 27/048 . . . . { [for determining moisture content of the material](#) }
- G01N 27/06 . . . . of a liquid ( [involving electrolysis \[G01N 27/26\]\(#\) ; involving polarography \[G01N 27/48\]\(#\) ; measuring electric resistance of fluids \[G01R 27/22\]\(#\) \)](#) }
- G01N 27/07 . . . . . Construction of measuring vessels ; Electrodes therefor
- G01N 27/08 . . . . . which is flowing continuously
- G01N 27/10 . . . . . Investigation or analysis specially adapted for controlling or monitoring operations or for signalling ( [regulating \[G05D\]\(#\)](#) )
- G01N 27/12 . . . . of a solid body in dependence upon absorption of a fluid ; of a solid body in dependence upon reaction with a fluid, { [for detecting components in the fluid](#) }



G01N 27/121	....	{ for determining moisture content, e.g. humidity, of the fluid ( moisture content of the tested material <a href="#">G01N 27/048</a> ) }
G01N 27/122	....	{ Circuits particularly adapted therefor, e.g. linearising circuits }
G01N 27/123	.....	{ for controlling the temperature ( temperature control per se <a href="#">G05D 23/00</a> ) }
G01N 27/124	.....	{ varying the temperature, e.g. in a cyclic manner }
G01N 27/125	....	{ Composition of the body, e.g. the composition of its sensitive layer }
G01N 27/126	.....	{ comprising organic polymers }
G01N 27/127	.....	{ comprising nanoparticles }
G01N 27/128	....	{ Micro-apparatus }
G01N 27/129	....	{ Diode type sensors, e.g. gas sensitive Schottky diodes ( capacitor type sensors <a href="#">G01N 27/227</a> ; field-effect transistor type sensors <a href="#">G01N 27/414</a> ) }
G01N 27/14	...	of an electrically-heated body in dependence upon change of temperature
G01N 27/16	....	caused by burning or catalytic oxidation of a surrounding material to be tested, e.g. of gas
G01N 27/18	....	caused by changes in the thermal conductivity of a surrounding material to be tested ( <a href="#">G01N 27/20</a> takes precedence )
G01N 27/185	.....	{ using a catharometer }
G01N 27/20	...	Investigating the presence of flaws
G01N 27/205	....	{ in insulating materials }
G01N 27/22	..	by investigating capacitance
G01N 27/221	...	{ by investigating the dielectric properties ( using microwaves <a href="#">G01N 22/00</a> ; measuring loss factors or dielectric constants per se <a href="#">G01R 27/26</a> ) }
G01N 27/223	...	{ for determining moisture content, e.g. humidity ( rain detectors on vehicle windows <a href="#">B60S 1/0825</a> ) }
G01N 27/225	....	{ by using hygroscopic materials }
G01N 27/226	...	{ Construction of measuring vessels; Electrodes therefor }
G01N 27/227	...	{ Sensors changing capacitance upon adsorption or absorption of fluid components, e.g. electrolyte-insulator-semiconductor sensors, MOS capacitors ( <a href="#">G01N 27/225</a> takes precedence ) }
G01N 27/228	...	{ Circuits therefor ( measuring capacitance per se <a href="#">G01R 27/26</a> ) }
G01N 27/24	...	Investigating the presence of flaws
G01N 27/26	.	by investigating electrochemical variables ; by using electrolysis or electrophoresis ( investigating resistance to corrosion <a href="#">G01N 17/00</a> ; investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography, <a href="#">G01N 30/00</a> ; immunoelectrophoresis <a href="#">G01N 33/561</a> ; electrochemical processes or apparatus in general <a href="#">B01J</a> ; standard cells <a href="#">H01M 6/28</a> )
G01N 27/27	..	Association of two or more measuring systems or cells, each measuring a different parameter, where the measurement results may be either used independently, the systems or cells being physically associated, or combined to produce a value for a further parameter { e.g. electrochemical electrode arrays ( gas sensor arrays <a href="#">G01N 33/0031</a> ) }
G01N 27/28	..	Electrolytic cell components
G01N 27/283	...	{ Means for supporting or introducing electrochemical probes }
G01N 27/286	....	{ Power or signal connectors associated therewith }
G01N 27/30	...	Electrodes, e.g. test electrodes ; Half-cells ( <a href="#">G01N 27/414</a> takes precedence )

G01N 27/301	....	{ Reference electrodes }
G01N 27/302	....	{ pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes ( ion selective electrodes <a href="#">G01N 27/333</a> , glass electrodes <a href="#">G01N 27/36</a> ) }
G01N 27/304	....	{ Gas permeable electrodes }
G01N 27/305	....	{ optically transparent or photoresponsive electrodes }
G01N 27/307	....	{ Disposable laminated or multilayered electrodes ( <a href="#">G01N 27/3272</a> takes precedence ) }
G01N 27/308	....	{ at least partially made of carbon }
G01N 27/31	....	Half-cells with permeable membranes, e.g. semi-porous or perm-selective membranes
G01N 27/32	....	Calomel electrodes
G01N 27/327	....	Biochemical electrodes { electrical and mechanical details of in vitro measurements ( chemical and biological details <a href="#">C12Q 1/001</a> , <a href="#">G01N 33/543</a> ; in vivo <a href="#">A61B 5/00</a> ) }
G01N 27/3271	.....	{ Amperometric enzyme electrodes for analytes in body fluids, e.g. glucose in blood ( amperometry per se <a href="#">G01N 27/49</a> ; aspects concerning the enzyme reagent <a href="#">C12Q 1/001</a> ) }
G01N 27/3272	.....	{ Test elements therefor, i.e. disposable laminated substrates with electrodes, reagent and channels ( optical biosensors <a href="#">G01N 33/52</a> ) }
G01N 27/3273	.....	{ Devices therefor, e.g. test element readers, circuitry ( details not specific to biochemical electrodes <a href="#">G01N 33/4875</a> ) }
G01N 27/3274	.....	{ Corrective measures, e.g. error detection, compensation for temperature or hematocrit, calibration ( coding of calibration information <a href="#">G01N 33/48771</a> ) }
G01N 27/3275	.....	{ Sensing specific biomolecules, e.g. nucleic acid strands, based on an electrode surface reaction }
G01N 27/3276	.....	{ being a hybridisation with immobilised receptors ( using a FET type sensor <a href="#">G01N 27/4145</a> ; concerning the hybridisation <a href="#">C12Q 1/68</a> ) }
G01N 27/3277	.....	{ being a redox reaction, e.g. detection by cyclic voltammetry ( voltammetry per se <a href="#">G01N 27/42</a> , <a href="#">G01N 27/48</a> ) }
G01N 27/3278	.....	{ involving nanosized elements, e.g. nanogaps or nanoparticles ( nanopores <a href="#">G01N 33/48721</a> ; magnetic beads <a href="#">G01N 27/745</a> ) }
G01N 27/333	....	Ion-selective electrodes or membranes ( glass electrodes <a href="#">G01N 27/36</a> )
G01N 27/3335	.....	{ the membrane containing at least one organic component ( <a href="#">G01N 27/3271</a> takes precedence; aspects concerning the enzyme reagent in enzyme electrodes <a href="#">C12Q 1/001</a> ) }
G01N 27/34	....	Dropping-mercury electrodes
G01N 27/36	....	Glass electrodes
G01N 27/38	....	Cleaning of electrodes
G01N 27/40	...	Semi-permeable membranes or partitions
G01N 27/401	...	Salt-bridge leaks ; Liquid junctions
G01N 27/403	..	Cells and electrode assemblies
G01N 27/4035	...	{ Combination of a single ion-sensing electrode and a single reference electrode ( <a href="#">G01N 27/406</a> and <a href="#">G01N 27/413</a> take precedence ) }
G01N 27/404	...	Cells with anode, cathode and cell electrolyte on the same side of a permeable membrane which separates them from the sample fluid { e.g. Clark-type oxygen sensors }
G01N 27/4045	....	{ for gases other than oxygen }

G01N 27/406	...	Cells and probes with solid electrolytes
G01N 27/4062	....	{ Electrical connectors associated therewith }
G01N 27/4065	....	{ Circuit arrangements specially adapted therefor }
G01N 27/4067	....	{ Means for heating or controlling the temperature of the solid electrolyte }
G01N 27/407	....	for investigating or analysing gases { ( <a href="#">G01N 27/411</a> takes precedence ) }
G01N 27/4071	.....	{ using sensor elements of laminated structure }
G01N 27/4072	.....	{ characterized by the diffusion barrier }
G01N 27/4073	.....	{ Composition or fabrication of the solid electrolyte }
G01N 27/4074	.....	{ for detection of gases other than oxygen }
G01N 27/4075	.....	{ Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts }
G01N 27/4076	.....	{ Reference electrodes or reference mixtures }
G01N 27/4077	.....	{ Means for protecting the electrolyte or the electrodes }
G01N 27/4078	.....	{ Means for sealing the sensor element in a housing }
G01N 27/409	.....	Oxygen concentration cells
G01N 27/41	.....	Oxygen pumping cells
G01N 27/411	....	for investigating liquid metals
G01N 27/4111	.....	{ using sensor elements of laminated structure }
G01N 27/4112	.....	{ Composition or fabrication of the solid electrolyte }
G01N 27/4114	.....	{ for detection of gases other than oxygen }
G01N 27/4115	.....	{ Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts }
G01N 27/4117	.....	{ Reference electrodes or reference mixtures }
G01N 27/4118	.....	{ Means for protecting the electrolyte or the electrodes }
G01N 27/413	...	Concentration cells using liquid electrolytes { measuring currents or voltages in voltaic cells }
G01N 27/414	...	Ion-sensitive or chemical field-effect transistors, i.e. ISFETS or CHEMFETS
G01N 27/4141	....	{ specially adapted for gases }
G01N 27/4143	.....	{ Air gap between gate and channel, i.e. suspended gate [SG] FETs ( work function measurement per se <a href="#">G01N 27/002</a> ) }
G01N 27/4145	....	{ specially adapted for biomolecules, e.g. gate electrode with immobilised receptors }
G01N 27/4146	....	{ involving nanosized elements, e.g. nanotubes, nanowires }
G01N 27/4148	....	{ Integrated circuits therefor, e.g. fabricated by CMOS processing ( CMOS processing per se <a href="#">H01L 21/82</a> ) }
G01N 27/416	..	Systems ( <a href="#">G01N 27/27</a> takes precedence { ; for testing batteries <a href="#">G01R 31/36</a> } )
G01N 27/4161	...	{ measuring the voltage and using a constant current supply, e.g. chronopotentiometry }
G01N 27/4162	...	{ investigating the composition of gases, by the influence exerted on ionic conductivity in a liquid ( conductometry in general <a href="#">G01N 27/06</a> ; amperometric gas sensors <a href="#">G01N 27/404</a> ) }
G01N 27/4163	...	{ checking the operation of, or calibrating, the measuring apparatus ( <a href="#">G01N 27/3274</a> , <a href="#">G01N 27/4175</a> and <a href="#">G01N 33/0006</a> take precedence ) }
G01N 27/4165	....	{ for pH meters }
G01N 27/4166	...	{ measuring a particular property of an electrolyte }

G01N 27/4167	....	{ pH ( electrodes therefor <a href="#">G01N 27/302</a> , <a href="#">G01N 27/36</a> ) }
G01N 27/4168	....	{ Oxidation-reduction potential, e.g. for chlorination of water ( <a href="#">water analysis G01N 33/18</a> ) }
G01N 27/417	...	using cells { i.e. more than one cell } and probes with solid electrolytes
G01N 27/4175	....	{ Calibrating or checking the analyser }
G01N 27/419	....	Measuring voltages or currents of oxygen pumping cells and oxygen concentration cells
G01N 27/42	...	Measuring disposition or liberation of materials from an electrolyte ; Coulometry, i.e. measuring coulomb-equivalent of material in an electrolyte
G01N 27/423	....	{ Coulometry }
G01N 27/426	....	{ by weighing }
G01N 27/44	....	using electrolysis to regenerate a reagent, e.g. for titration
G01N 27/447	...	using electrophoresis { ( aspects concerning peptides or proteins <a href="#">C07K 1/26</a> ; for non-analytical purposes <a href="#">B01D 57/02</a> ; separating particles by dielectrophoresis <a href="#">B03C5</a> ) }
G01N 27/44704	....	{ Details; Accessories }
G01N 27/44708	.....	{ Cooling }
G01N 27/44713	.....	{ Particularly adapted electric power supply }
G01N 27/44717	.....	{ Arrangements for investigating the separated zones, e.g. localising zones }
G01N 27/44721	.....	{ by optical means }
G01N 27/44726	.....	{ using specific dyes, markers or binding molecules }
G01N 27/4473	.....	{ by electric means }
G01N 27/44734	.....	{ by thermal means }
G01N 27/44739	.....	{ Collecting the separated zones, e.g. blotting to a membrane or punching of gel spots }
G01N 27/44743	.....	{ Introducing samples }
G01N 27/44747	.....	{ Composition of gel or of carrier mixture }
G01N 27/44752	.....	{ Controlling the zeta potential, e.g. by wall coatings }
G01N 27/44756	....	{ Apparatus specially adapted therefor }
G01N 27/4476	.....	{ of the density gradient type }
G01N 27/44765	.....	{ of the counter-flow type }
G01N 27/44769	.....	{ Continuous electrophoresis, i.e. the sample being continuously introduced, e.g. free flow electrophoresis [FFE ] }
G01N 27/44773	.....	{ Multi-stage electrophoresis, e.g. two-dimensional electrophoresis }
G01N 27/44778	.....	{ on a common gel carrier, i.e. 2D gel electrophoresis }
G01N 27/44782	.....	{ of a plurality of samples }
G01N 27/44786	.....	{ of the magneto-electrophoresis type }
G01N 27/44791	.....	{ Micro-apparatus ( sample containers with integrated microfluidic structures <a href="#">B01L 3/5027</a> ) }
G01N 27/44795	.....	{ Isoelectric focusing }
G01N 27/453	....	Cells therefor
G01N 27/48	...	Polarography, i.e. measuring changes in current under a slowly-varying voltage
G01N 27/49	...	Systems involving the determination of the current at a single specific value, or small range of values, of applied voltage for producing selective measurement

of one or more particular ionic species

- G01N 27/60 . by investigating electrostatic variables, e.g. electrographic flaw testing ( { [G01N 27/007](#) takes precedence } ; by investigating capacitance [G01N 27/22](#) )
- G01N 27/605 . . { for determining moisture content, e.g. humidity }
- G01N 27/61 . . Investigating the presence of flaws
- G01N 27/62 . by investigating the ionisation of gases ; by investigating electric discharges, e.g. emission of cathode ( [particle spectrometers per se H01J 49/00](#) )
- G01N 27/622 . . { separating and identifying ionized molecules based on their mobility in a carrier gas, i.e. ion mobility spectrometry ( [mass spectrometry H01J 49/26](#) ) }
- G01N 27/624 . . . { using a non-uniform electric field, i.e. differential mobility spectrometry [DMS] or high-field asymmetric-waveform ion-mobility spectrometry [FAIMS] }
- G01N 27/626 . . { using heat to ionise a gas }
- G01N 27/628 . . . { and a beam of energy, e.g. laser enhanced ionisation }
- G01N 27/64 . . using wave or particle radiation to ionise a gas, e.g. in an ionisation chamber { ( [discharge tubes for measuring pressure of introduced gas or for detecting presence of gas H01J 41/02](#) ) }
- G01N 27/66 . . . and measuring current or voltage
- G01N 27/68 . . using electric discharge to ionise a gas
- G01N 27/70 . . . and measuring current or voltage
- G01N 27/72 . by investigating magnetic variables
- G01N 27/725 . . { by using magneto-acoustical effects or the Barkhausen effect }
- G01N 27/74 . . of fluids ( [G01N 24/00](#) takes precedence )
- G01N 27/745 . . . { for detecting magnetic beads used in biochemical assays ( concerning the assays [G01N 33/54326](#) ; sensors therefor [G01R 33/1269](#) ; automatic analysers therefor [G01N 35/0098](#) ) }
- G01N 27/76 . . . by investigating susceptibility { [measuring susceptibility G01R 33/16](#) }
- G01N 27/80 . . for investigating mechanical hardness, e.g. by investigating saturation or remanence of ferromagnetic material
- G01N 27/82 . . for investigating the presence of flaws
- G01N 27/825 . . . { by using magnetic attraction force ( [G01N 27/84](#) takes precedence ) }
- G01N 27/83 . . . by investigating stray magnetic fields
- G01N 27/84 . . . . by applying magnetic powder or magnetic ink
- G01N 27/85 . . . . using magnetographic methods
- G01N 27/87 . . . . using probes
- G01N 27/90 . . . using eddy currents { ( [for measuring thickness G01B 7/06](#) ) }
- G01N 27/9006 . . . . { Details }
- G01N 27/9013 . . . . . { specially adapted for scanning }
- G01N 27/902 . . . . . { by moving the sensors }
- G01N 27/9026 . . . . . { by moving the material }
- G01N 27/9033 . . . . . { Sensors }
- G01N 27/904 . . . . { and more than one sensor }
- G01N 27/9046 . . . . { by analysing electrical signals }
- G01N 27/9053 . . . . . { Compensating for probe to workpiece spacing }

- G01N 27/906 ..... { Compensating for velocity }
- G01N 27/9066 ..... { by measuring the propagation time, or delaying the signals }
- G01N 27/9073 ..... { Recording measured data ( in general [G01D](#) ) }
- G01N 27/908 ..... { synchronously with scanning }
- G01N 27/9086 ..... { Calibrating of recording device }
- G01N 27/9093 ..... { arrangements for supporting or marking or rejecting, e.g. machines ( sorting individual articles or bulk material fit to be sorted piece-meal, controlled indirectly by devices which detect or measure some feature of the article or material to be sorted [B07C 5/00](#) ) }
  
- G01N 27/92 . by investigating breakdown voltage ( [G01N 27/60](#) , [G01N 27/62](#) take precedence; testing of articles or specimens of solids or fluids for dielectric strength or breakdown voltage [G01R 31/12](#) )
  
- G01N 29/00** **Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves ; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object** ( [G01N 3/00](#) to [G01N 27/00](#) take precedence; measuring or indicating of ultrasonic, sonic or infrasonic waves in general [G01H](#) ; systems using the reflection or reradiation of acoustic waves, e.g. acoustic imaging, [G01S 15/00](#) ; obtaining records by techniques analogous to photography using ultrasonic, sonic or infrasonic waves [G03B 42/06](#) ; { medical diagnosis by ultrasounds [A61B 8/00](#) ; generating or transmitting mechanical or acoustic waves [B06B](#) , [G10K](#) ; seismic or acoustic prospecting or detecting [G01V 1/00](#) } )
  
- G01N 29/02 . Analysing fluids ( using acoustic emission techniques [G01N 29/14](#) ; { constructional or flow details for analysing fluids [G01N 29/222](#) ; optoacoustic fluid cells [G01N 29/2425](#) } )
- G01N 29/022 .. { Fluid sensors based on micro-sensors, e.g. quartz crystal-microbalance (QCM), surface acoustic wave (SAW) devices, tuning forks, cantilevers, flexural plate wave (FPW) devices ( micro-devices per se [B81B](#) ) }
- G01N 29/024 .. by measuring propagation velocity or propagation time of acoustic waves
- G01N 29/028 .. by measuring mechanical or acoustic impedance
- G01N 29/032 .. by measuring attenuation of acoustic waves
- G01N 29/036 .. by measuring frequency or resonance of acoustic waves
  
- G01N 29/04 . Analysing solids ( using acoustic emission techniques [G01N 29/14](#) )
- G01N 29/041 .. { on the surface of the material, e.g. using Lamb, Rayleigh or shear waves }
- G01N 29/043 .. { in the interior, e.g. by shear waves }
- G01N 29/045 .. { by imparting shocks to the workpiece and detecting the vibrations or the acoustic waves caused by the shocks ( measuring resonant frequency [G01H 13/00](#) ; measuring strength properties by application of mechanical stress [G01N 3/00](#) ) }
- G01N 29/046 ... { using the echo of particles imparting on a surface; using acoustic emission of particles ( investigating concentration of particle suspensions [G01N 15/06](#) ; devices for measuring flow of solids in suspension [G01F 1/74](#) ) }
- G01N 29/048 .. { Marking the faulty objects }
- G01N 29/06 .. Visualisation of the interior, e.g acoustic microscopy { ( medical or veterinary diagnosis using sonic waves [A61B 8/00](#) ; representation of acoustic wave distribution [G01H 3/125](#) , [G01H 9/002](#) ; short-range imaging systems using reflection of acoustic waves [G01S 15/8906](#) ) }
- G01N 29/0609 ... { Display arrangements, e.g. colour displays ( indicating or recording in connection with measuring in general [G01D](#) ) }



G01N 29/0618	....	{ synchronised with scanning, e.g. in real-time }
G01N 29/0627	.....	{ Cathode-ray tube displays ( in general <a href="#">G01R 13/20</a> ) }
G01N 29/0636	.....	{ with permanent recording }
G01N 29/0645	....	{ Display representation or displayed parameters, e.g. A-, B- or C-Scan }
G01N 29/0654	...	{ Imaging }
G01N 29/0663	....	{ by acoustic holography ( acoustical holography per se <a href="#">G03H 3/00</a> ) }
G01N 29/0672	....	{ by acoustic tomography ( medical tomography <a href="#">A61B 8/13</a> ) }
G01N 29/0681	....	{ by acoustic microscopy, e.g. scanning acoustic microscopy }
G01N 29/069	....	{ Defect imaging, localisation and sizing using, e.g. time of flight diffraction (TOFD), synthetic aperture focusing technique (SAFT), Amplituden-Laufzeit-Ortskurven (ALOK) technique }
G01N 29/07	..	by measuring propagation velocity or propagation time of acoustic waves
G01N 29/075	...	{ by measuring or comparing phase angle ( measuring frequencies or phase angles per se <a href="#">G01R 23/00</a> , <a href="#">G01R 25/00</a> ) }
G01N 29/09	..	by measuring mechanical or acoustic impedance
G01N 29/11	..	by measuring attenuation of acoustic waves
G01N 29/12	..	by measuring frequency or resonance of acoustic waves { ( measuring frequency or resonant frequency of mechanical vibrations or acoustic waves in general <a href="#">G01H 1/06</a> , <a href="#">G01H 3/04</a> , <a href="#">G01H 13/00</a> ; acoustic resonators <a href="#">G10K 11/04</a> ; vibration or shock testing of structures <a href="#">G01M 7/00</a> ) }
G01N 29/14	.	using acoustic emission techniques { ( echo of particles <a href="#">G01N 29/046</a> ; measuring mechanical vibrations or acoustic waves in solids in general <a href="#">G01H 1/00</a> ) }
G01N 29/22	.	Details, { e.g. general constructional or apparatus details }
G01N 29/221	..	{ Arrangements for directing or focusing the acoustical waves ( electronic orientation or focusing <a href="#">G01N 29/262</a> ; sound directing or focusing <a href="#">G10K 11/26</a> ; mechanical steering of sound transducers or their beams <a href="#">G10K 11/35</a> ) }
G01N 29/222	..	{ Constructional or flow details for analysing fluids ( optoacoustic fluid cells <a href="#">G01N 29/2425</a> ) }
G01N 29/223	..	{ Supports, positioning or alignment in fixed situation ( mounting transducers per se <a href="#">G10K 11/004</a> ) }
G01N 29/225	..	{ Supports, positioning or alignment in moving situation }
G01N 29/226	...	{ Handheld or portable devices }
G01N 29/227	..	{ related to high pressure, tension or stress conditions }
G01N 29/228	..	{ related to high temperature conditions }
G01N 29/24	..	Probes { ( transducers for acoustic waves <a href="#">B06B</a> , <a href="#">G10K</a> ; for measuring <a href="#">G01H</a> ) }
G01N 29/2406	...	{ Electrostatic or capacitive probes, e.g. electret or cMUT-probes }
G01N 29/2412	...	{ using the magnetostrictive properties of the material to be examined, e.g. electromagnetic acoustic transducers ( EMAT ) ; ( investigating the presence of flaws using eddy currents <a href="#">G01N 27/90</a> , magnetostrictive transducers <a href="#">B06B 1/08</a> , measuring magnetostrictive properties <a href="#">G01R 33/18</a> ) }
G01N 29/2418	...	{ using optoacoustic interaction with the material, e.g. laser radiation, photoacoustics ( photoacoustic cells <a href="#">G01N 21/1702</a> ; measuring characteristics of vibrations by using radiation-sensitive means <a href="#">G01H 9/00</a> ; acousto-optical conversion techniques for short-range imaging <a href="#">G01S 15/8965</a> ; sound-producing devices using laser bundle <a href="#">G10K 15/046</a> ) }
G01N 29/2425	....	{ optoacoustic fluid cells therefor }



- G01N 29/2431 . . . { using other means for acoustic excitation, e.g. heat, microwaves, electron beams ( sound producing devices not otherwise provided for [G10K 15/04](#) ) }
- G01N 29/2437 . . . { Piezoelectric probes }
- G01N 29/2443 . . . . { Quartz crystal probes }
- G01N 29/245 . . . . { Ceramic probes, e.g. lead zirconate titanate (PZT) probes }
- G01N 29/2456 . . . { Focusing probes ( focusing arrangements [G01N 29/221](#) ) }
- G01N 29/2462 . . . { Probes with waveguides, e.g. SAW devices }
- G01N 29/2468 . . . { Probes with delay lines }
- G01N 29/2475 . . . { Embedded probes, i.e. probes incorporated in objects to be inspected }
- G01N 29/2481 . . . { Wireless probes, e.g. with transponders or radio links }
- G01N 29/2487 . . . { Directing probes, e.g. angle probes ( directing arrangements [G01N 29/221](#) ) }
- G01N 29/2493 . . . { Wheel shaped probes }
- G01N 29/26 . . Arrangements for orientation or scanning { by relative movement of the head and the sensor ( mechanical steering of sound transducers or their beams [G10K 11/35](#) ) }
- G01N 29/262 . . . { by electronic orientation or focusing, e.g. with phased arrays ( phased arrays per se [G10K 11/34](#) ) }
- G01N 29/265 . . . by moving the sensor relative to a stationary material
- G01N 29/27 . . . by moving the material relative to a stationary sensor
- G01N 29/275 . . . by moving both the sensor and the material
- G01N 29/28 . . providing acoustic coupling { e.g. water ( impedance matching [G10K 11/02](#) ) }
- G01N 29/30 . . Arrangements for calibrating or comparing, e.g. with standard objects
- G01N 29/32 . . Arrangements for suppressing undesired influences, e.g. temperature or pressure variations, { compensating for signal noise }
- G01N 29/323 . . . { compensating for pressure or tension variations }
- G01N 29/326 . . . { compensating for temperature variations }
- G01N 29/34 . . Generating the ultrasonic, sonic or infrasonic waves, { e.g. electronic circuits specially adapted therefor }
- G01N 29/341 . . { with time characteristics }
- G01N 29/343 . . . { pulse waves, e.g. particular sequence of pulses, bursts }
- G01N 29/345 . . . { continuous waves }
- G01N 29/346 . . { with amplitude characteristics, e.g. modulated signal }
- G01N 29/348 . . { with frequency characteristics, e.g. single frequency signals, chirp signals ( measuring frequency of mechanical vibrations or acoustic waves in general [G01H 1/06](#) , [G01H 3/04](#) ; measuring frequency or analysing frequency spectra [G01R 23/00](#) ) }
- G01N 29/36 . . Detecting the response signal, { e.g. electronic circuits specially adapted therefor }
- G01N 29/38 . . by time filtering, e.g. using time gates
- G01N 29/40 . . by amplitude filtering, e.g. by applying a threshold { or by gain control }
- G01N 29/42 . . by frequency filtering { or by tuning to resonant frequency }
- G01N 29/44 . . Processing the detected response signal, { e.g. electronic circuits specially adapted therefor ( digital signal processing per se [G06F 17/00](#) ) }
- G01N 29/4409 . . { by comparison }

- G01N 29/4418 . . . { with a model, e.g. best-fit, regression analysis }
- G01N 29/4427 . . . { with stored values, e.g. threshold values }
- G01N 29/4436 . . . { with a reference signal ( [amplitude comparison G01N 29/48](#) ) }
- G01N 29/4445 . . { Classification of defects }
- G01N 29/4454 . . { Signal recognition, e.g. specific values or portions, signal events, signatures }
- G01N 29/4463 . . { Signal correction, e.g. distance amplitude correction (DAC), distance gain size (DGS), noise filtering }
- G01N 29/4472 . . { Mathematical theories or simulation }
- G01N 29/4481 . . { Neural networks }
- G01N 29/449 . . { Statistical methods not provided for in [G01N 29/4409](#) , e.g. averaging, smoothing and interpolation }
- G01N 29/46 . . by spectral analysis, e.g. Fourier analysis { or [wavelet analysis \( spectral signal processing per se G06F 17/14 \)](#) }
- G01N 29/48 . . by amplitude comparison
- G01N 29/50 . . using auto-correlation techniques or cross-correlation techniques
- G01N 29/52 . . using inversion methods other than spectral analysis, e.g. conjugated gradient inversion

**G01N 30/00**

**Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography** ( [G01N 3/00](#) to [G01N 29/00](#) take precedence; separation for the preparation or production of components [B01D 15/00](#) , [B01D 53/02](#) , [B01D 53/14](#) ; solid sorbent compositions in general [B01J 20/00](#) ; ion-exchange in general [B01J 39/00](#) to [B01J 49/00](#) ) { or [field flow fractionation](#) ( for preparation or production of components [B01D 21/00](#) , [B01D 43/00](#) , [B01D 45/00](#) or [B03C](#) ) }

**NOTE**

In this group, the following term is used with the meaning indicated:

- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.

- G01N 30/0005 . { [Field flow fractionation](#) }
- G01N 30/02 . Column chromatography
- G01N 30/04 . . Preparation or injection of sample to be analysed
- G01N 30/06 . . . Preparation
  - G01N 30/08 . . . . using an enricher
  - G01N 30/10 . . . . using a splitter
  - G01N 30/12 . . . . by evaporation
  - G01N 30/14 . . . . by elimination of some components
- G01N 30/16 . . . Injection ( [G01N 30/24](#) takes precedence )
  - G01N 30/18 . . . . using a septum or microsyringe
  - G01N 30/20 . . . . using a sampling valve
  - G01N 30/22 . . . . in high pressure liquid systems
- G01N 30/24 . . . Automatic injection systems

G01N 30/26	..	Conditioning of the fluid carrier ; Flow patterns
G01N 30/28	...	Control of physical parameters of the fluid carrier
G01N 30/30	....	of temperature
G01N 30/32	....	of pressure or speed ( <a href="#">G01N 30/36</a> takes precedence )
G01N 30/34	....	of fluid composition, e.g. gradient ( <a href="#">G01N 30/36</a> takes precedence )
G01N 30/36	....	in high pressure liquid systems
G01N 30/38	...	Flow patterns
G01N 30/40	....	using back flushing
G01N 30/42	....	using counter-current
G01N 30/44	....	using recycling of the fraction to be distributed
G01N 30/46	....	using more than one column { ( <a href="#">G01N 30/44</a> takes precedence ) }
G01N 30/461	.....	{ with serial coupling of separation columns }
G01N 30/462	.....	{ with different eluents or with eluents in different states ( <a href="#">G01N 30/463</a> takes precedence ) }
G01N 30/463	.....	{ for multidimensional chromatography }
G01N 30/465	.....	{ with specially adapted interfaces between the columns }
G01N 30/466	.....	{ with separation columns in parallel }
G01N 30/467	.....	{ all columns being identical }
G01N 30/468	.....	{ involving switching between different column configurations }
G01N 30/48	..	Sorbent materials therefor

### **WARNING**

Groups [G01N 30/48](#) and [G01N 30/482](#) are no longer used for the classification of new documents as from September 1st, 2004. The backlog of these groups is being continuously reclassified to [B01J 20/281](#) and subgroups

G01N 30/482	...	{ Solid sorbents }
G01N 30/50	..	Conditioning of the sorbent material or stationary liquid
G01N 30/52	...	Physical parameters
G01N 30/54	....	Temperature
G01N 30/56	...	Packing methods or coating methods
G01N 30/58	...	the sorbent moving as a whole
G01N 30/60	..	Construction of the column
G01N 30/6004	...	{ end pieces }
G01N 30/6017	....	{ Fluid distributors }
G01N 30/6021	....	{ Adjustable pistons }
G01N 30/6026	....	{ Fluid seals }
G01N 30/603	....	{ retaining the stationary phase, e.g. Frits }
G01N 30/6034	...	{ joining multiple columns }
G01N 30/6039	....	{ in series }
G01N 30/6043	....	{ in parallel }
G01N 30/6047	...	{ with supporting means; Holders }
G01N 30/6052	...	{ body }

G01N 30/606	....	{ with fluid access or exit ports }
G01N 30/6065	....	{ with varying cross section }
G01N 30/6069	....	{ with compartments or bed substructure }
G01N 30/6073	....	{ in open tubular form }
G01N 30/6078	.....	{ Capillaries }
G01N 30/6082	....	{ transparent to radiation }
G01N 30/6086	....	{ form designed to optimise dispersion }
G01N 30/6091	...	{ Cartridges }
G01N 30/6095	...	{ Micro-machined or nano-machined, e.g. micro- or nano-size }

**NOTE**

Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "micro-structural devices" and "micro-structural systems" and the Notes following the title of subclass [B82B](#) relating to "nano-structures"

G01N 30/62	..	Detectors specially adapted therefor
G01N 30/64	...	Electrical detectors
G01N 30/66	....	Thermal conductivity detectors
G01N 30/68	....	Flame ionisation detectors
G01N 30/70	....	Electron capture detectors
G01N 30/72	...	Mass spectrometers { ( mass spectrometers per se <a href="#">H01J 49/00</a> ) }
G01N 30/7206	....	{ interfaced to gas chromatograph ( interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see <a href="#">H01J 49/04</a> ) }
G01N 30/7213	.....	{ splitting of the gaseous effluent }
G01N 30/722	.....	{ through a gas permeable barrier ( membranes, porous layers ) }
G01N 30/7233	....	{ interfaced to liquid or superfluid chromatograph ( interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see <a href="#">H01J 49/04</a> ) }
G01N 30/724	.....	{ Nebulising, aerosol formation or ionisation ( spraying or atomising in general <a href="#">B05B</a> ) }
G01N 30/7246	.....	{ by pneumatic means }
G01N 30/7253	.....	{ by thermal means, e.g. thermospray }
G01N 30/726	.....	{ by electrical or glow discharge }
G01N 30/7266	.....	{ by electric field, e.g. electrospray }
G01N 30/7273	.....	{ Desolvation chambers }
G01N 30/728	....	{ Intermediate storage of effluent, including condensation on surface }
G01N 30/7286	.....	{ the store moving as a whole, e.g. moving wire }
G01N 30/7293	....	{ Velocity or momentum separators }
G01N 30/74	...	Optical detectors { measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light <a href="#">G01J</a> }
G01N 30/76	...	Acoustical detectors { measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves <a href="#">G01H</a> }
G01N 30/78	...	using more than one detector
G01N 30/80	..	Fraction collectors

- G01N 30/82 . . . Automatic means therefor
- G01N 30/84 . . Preparation of the fraction to be distributed
- G01N 30/86 . . Signal analysis
  - G01N 30/8603 . . . { with integration or differentiation }
  - G01N 30/8606 . . . . { Integration }
  - G01N 30/861 . . . . { Differentiation }
  - G01N 30/8613 . . . . { Dividing or multiplying by a constant }
  - G01N 30/8617 . . . . { Filtering, e.g. Fourier filtering }
  - G01N 30/8624 . . . { Detection of slopes or peaks; baseline correction }
  - G01N 30/8627 . . . . { Slopes }
  - G01N 30/8631 . . . . { Peaks }
  - G01N 30/8634 . . . . . { Peak quality criteria }
  - G01N 30/8637 . . . . . { Peak shape }
  - G01N 30/8641 . . . . { Baseline }
  - G01N 30/8644 . . . . { Data segmentation, e.g. time windows }
  - G01N 30/8651 . . . { Recording, data acquisition, archiving and storage }
  - G01N 30/8655 . . . . { Details of data formats }
  - G01N 30/8658 . . . { Optimising operation parameters }
  - G01N 30/8662 . . . . { Expert systems; optimising a large number of parameters }
  - G01N 30/8665 . . . { for calibrating the measuring apparatus }
  - G01N 30/8668 . . . . { using retention times }
  - G01N 30/8672 . . . . { not depending on an individual instrument, e.g. retention time indexes or calibration transfer }
  - G01N 30/8675 . . . { Evaluation, i.e. decoding of the signal into analytical information ( for analysis of specific compounds see also [G01N 30/88](#) and subgroups of G01N33; chemical libraries per se [C40B](#) ) }
  - G01N 30/8679 . . . . { Target compound analysis, i.e. whereby a limited number of peaks is analysed }
  - G01N 30/8682 . . . . { Group type analysis, e.g. of components having structural properties in common }
  - G01N 30/8686 . . . . { Fingerprinting, e.g. without prior knowledge of the sample components }
  - G01N 30/8689 . . . . { Peak purity of co-eluting compounds }
  - G01N 30/8693 . . . { Models, e.g. prediction of retention times, method development and validation }
  - G01N 30/8696 . . . { Details of Software }
  - G01N 30/88 . . Integrated analysis systems specially adapted therefor, not covered by a single one of the groups [G01N 30/04](#) to [G01N 30/86](#) ( signal analysis systems per se [G06F](#) , [G06G](#) )
  - G01N 30/89 . Inverse chromatography
  - G01N 30/90 . Plate chromatography, e.g. thin layer or paper chromatography
  - G01N 30/91 . . Application of the sample
  - G01N 30/92 . . Construction of the plate
  - G01N 30/93 . . . Application of the sorbent layer

- G01N 30/94 . . Development
- G01N 30/95 . . Detectors specially adapted therefor ; Signal analysis
- G01N 30/96 . using ion-exchange ( [G01N 30/02](#) , [G01N 30/90](#) take precedence )

**G01N 31/00** **Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup ( testing the effectiveness or completeness of sterilisation procedures without using enzymes or microorganisms [A61L 2/28](#) ; measuring or testing processes involving enzymes or micro-organisms [C12Q 1/00](#) ) ; Apparatus specially adapted for such methods**

- G01N 31/002 . { Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method }
- G01N 31/005 . { investigating the presence of an element by oxidation ( [G01N 31/12](#) takes precedence ) }
- G01N 31/007 . . { by measuring the quantity of water resulting therefrom ( [G01N 31/12](#) takes precedence ) }

#### **NOTE**

The observation of the progress of the reaction specified below by any of the methods specified in groups [G01N 3/00](#) to [G01N 3/00](#) to [G01N 29/00](#) , if this is of major importance, is dealt with in the group concerned.

- G01N 31/02 . using precipitation { measuring deposition or liberation of materials from an electrolyte [G01N 27/42](#) }
- G01N 31/10 . using catalysis
- G01N 31/12 . using combustion ( [G01N 25/20](#) takes precedence )
- G01N 31/16 . using titration
- G01N 31/162 . . { Determining the equivalent point by means of a discontinuity }
- G01N 31/164 . . . { by electrical or electrochemical means }
- G01N 31/166 . . { Continuous titration of flowing liquids }
- G01N 31/168 . . { Determining water content by using Karl Fischer reagent }
- G01N 31/18 . . Burettes specially adapted for titration ( burettes in general [B01L 3/02](#) )
- G01N 31/20 . using micro-analysis, e.g. drop reaction
- G01N 31/22 . using chemical indicators ( [G01N 31/02](#) takes precedence )
- G01N 31/221 . . { for investigating pH value }
- G01N 31/222 . . { for investigating moisture content }
- G01N 31/223 . . { for investigating presence of specific gases or aerosols ( [G01N 31/221](#) , [G01N 31/222](#) take precedence; actuation of fire alarm by presence of smoke or gases [G08B 17/10](#) ) }
- G01N 31/224 . . . { for investigating presence of dangerous gases }
- G01N 31/225 . . . { for oxygen, e.g. including dissolved oxygen }
- G01N 31/226 . . { for investigating the degree of sterilisation }

G01N 31/227	.. { for nitrates or nitrites }
G01N 31/228	.. { for peroxides }
G01N 31/229	.. { for investigating time/temperature history }
<b>G01N 33/00</b>	<b>Investigating or analysing materials by specific methods not covered by the preceding groups</b>
G01N 33/0001	. { by organoleptic means }
G01N 33/0004	. { Gaseous mixtures, e.g. polluted air ( gaseous biological material <a href="#">G01N 33/497</a> ; exhaust gas of internal combustion engines <a href="#">G01M 15/102</a> ) }
G01N 33/0006	.. { Calibrating gas analysers }
G01N 33/0008	... { Details concerning storage of calibration data, e.g. in EEPROM }
G01N 33/0009	.. { General constructional details of gas analysers, e.g. portable test equipment ( <a href="#">G01N 1/22</a> takes precedence ) }
G01N 33/0011	... { Sample conditioning ( in general <a href="#">G01N 1/28</a> ) }
G01N 33/0013	.... { by a chemical reaction ( <a href="#">G01N 33/0024</a> takes precedence ) }
G01N 33/0014	.... { by eliminating a gas ( <a href="#">G01N 33/0013</a> and <a href="#">G01N 33/0024</a> take precedence ) }
G01N 33/0016	.... { by regulating a physical variable, e.g. pressure, temperature }
G01N 33/0018	.... { by diluting a gas }
G01N 33/0021	.... { involving the use of a carrier gas for transport to the sensor }
G01N 33/0022	... { using a number of analysing channels }
G01N 33/0024	.... { a chemical reaction taking place or a gas being eliminated in one or more channels }
G01N 33/0026	... { use of an alternating circulation of another gas ( calibrating gas analysers <a href="#">G01N 33/0006</a> ) }
G01N 33/0027	... { concerning the detector }
G01N 33/0029	.... { cleaning }
G01N 33/0031	.... { comprising two or more sensors, e.g. a sensor array ( electrochemical electrode arrays <a href="#">G01N 27/27</a> ) }
G01N 33/0032	..... { using two or more different physical functioning modes }
G01N 33/0034	..... { comprising neural networks or related mathematical techniques }
G01N 33/0036	.... { Specially adapted to detect a particular component ( all the other sub-groups of <a href="#">G01N 33/0004</a> take precedence ) }
G01N 33/0037	..... { for NO <sub>x</sub> }
G01N 33/0039	..... { for O <sub>3</sub> }
G01N 33/004	..... { for CO, CO <sub>2</sub> }
G01N 33/0042	..... { for SO <sub>2</sub> , SO <sub>3</sub> }
G01N 33/0044	..... { for H <sub>2</sub> S, sulfides }
G01N 33/0045	..... { for Hg }
G01N 33/0047	..... { for organic compounds }
G01N 33/0049	..... { for halogenated organic compounds }
G01N 33/005	..... { for H <sub>2</sub> }
G01N 33/0052	..... { for gaseous halogens }



G01N 33/0054	.....	{ for ammonia }
G01N 33/0055	.....	{ for radionuclides }
G01N 33/0057	.....	{ for warfare agents or explosives ( properties of explosives <a href="#">G01N 33/227</a> ) }
G01N 33/0059	.....	{ avoiding interference of a gas with the gas to be measured }
G01N 33/006	.....	{ avoiding interference of water vapour with the gas to be measured }
G01N 33/0062	...	{ concerning the measuring method, e.g. intermittent, or the display, e.g. digital }
G01N 33/0063	....	{ using a threshold to release an alarm or displaying means ( alarm arrangements <a href="#">G08B</a> , e.g. fire alarm actuated by the presence of smoke or gases <a href="#">G08B 17/10</a> , for other abnormal conditions <a href="#">G08B 21/00</a> ) }
G01N 33/0065	.....	{ using more than one threshold }
G01N 33/0067	....	{ by measuring the rate of variation of the concentration }
G01N 33/007	...	{ Arrangements to check the analyser ( calibrating <a href="#">G01N 33/0006</a> ) }
G01N 33/0073	...	{ Control unit therefor }
G01N 33/0075	....	{ for multiple spatially distributed sensors, e.g. for environmental monitoring ( transmission systems for measured values <a href="#">G08C</a> ) }
G01N 33/0098	.	{ Plants or trees ( wood <a href="#">G01N 33/46</a> ) }
G01N 33/02	.	food
G01N 33/025	..	{ Fruits or vegetables }
G01N 33/03	..	edible oils or edible fats
G01N 33/04	..	dairy products
G01N 33/06	...	Determining fat content, e.g. by butyrometer
G01N 33/08	..	eggs, e.g. by candling
G01N 33/085	...	{ by candling }
G01N 33/10	..	starch-containing substances, e.g. dough
G01N 33/12	..	meat ; fish
G01N 33/14	..	beverages
G01N 33/143	...	{ containing sugar }
G01N 33/146	...	{ containing alcohol }
G01N 33/15	.	Medicinal preparations; { Physical properties thereof, e.g. dissolubility ( drug screening with animal cells <a href="#">G01N 33/5008</a> , drug screening with microorganisms <a href="#">C12Q 1/025</a> ) }
G01N 33/18	.	Water { ( treatment of water <a href="#">C02F</a> ) }
G01N 33/1806	..	{ biological or chemical oxygen demand ( BOD or COD ) }
G01N 33/1813	..	{ specific cations in water, e.g. heavy metals ( electrochemical analysis 27/26; detection of ions by colorimetry <a href="#">G01N 31/22</a> ) }
G01N 33/182	..	{ specific anions in water ( electrochemical analysis <a href="#">G01N 27/26</a> ; detection of ions by colorimetry <a href="#">G01N 31/22</a> ) }
G01N 33/1826	..	{ organic contamination in water }
G01N 33/1833	...	{ Oil in water ( water in oil <a href="#">G01N 33/2847</a> ) }
G01N 33/1846	...	{ Total carbon analysis }
G01N 33/1853	..	{ hardness of water }
G01N 33/186	..	{ using one or more living organisms, e.g. a fish }

- G01N 33/1866 . . . { using micro-organisms ( [G01N 33/1806](#) takes precedence ) }
- G01N 33/188 . . { Determining the state of nitrification ( biological treatment of water by aerobic or anaerobic processes for denitrification of water [C02F 3/305](#) ) }
- G01N 33/1886 . . { using probes, e.g. submersible probes, buoys }
- G01N 33/1893 . . { using flow cells }
  
- G01N 33/20 . metals
- G01N 33/203 . . { for the presence of a volatilizable e.g. gaseous component }
- G01N 33/206 . . { in molten state, e.g. after local fusion }
  
- G01N 33/22 . Fuels, explosives { ( liquid hydrocarbons [G01N 33/28](#) ) }
- G01N 33/222 . . { Solid fuels, e.g. coal }
- G01N 33/225 . . { Gaseous fuels, e.g. natural gas }
- G01N 33/227 . . { Explosives, e.g. combustive properties thereof ( detecting explosives in air [G01N 33/0057](#) ) }
  
- G01N 33/24 . earth materials ( [G01N 33/42](#) takes precedence; { testing the nature of borehole walls, formation testing [E21B 49/00](#) ; investigation of foundation soil in situ [E02D 1/00](#) ; geophysics, e.g. prospecting [G01V](#) } )
- G01N 33/241 . . { for hydrocarbon content ( drilling mud [G01N 33/2823](#) ; drilling per se [E21B](#) ; prospecting [G01V](#) ) }
- G01N 33/246 . . { for water content ( for control of watering [A01G 25/167](#) ) }
  
- G01N 33/26 . oils ; viscous liquids ; paints ; inks ( [G01N 33/22](#) takes precedence )
- G01N 33/28 . . Oils, { i.e. hydrocarbon liquids ( gaseous fuels [G01N 33/225](#) ) } ( edible oils or edible fats [G01N 33/03](#) )
- G01N 33/2805 . . . { investigating the resistance to heat or oxidation ( to the weather, to corrosion, or to light [G01N 17/00](#) ) }
- G01N 33/2811 . . . { by measuring cloud point or pour point of oils }
- G01N 33/2817 . . . { using a test engine ( testing of engines [G01M 15/00](#) ) }
- G01N 33/2823 . . . { raw oil, drilling fluid or polyphasic mixtures ( hydrocarbon content of earth materials [G01N 33/241](#) ; prospecting [G01V](#) ; drilling per se [E21B](#) ) }
- G01N 33/2829 . . . { mixtures of fuels, e.g. determining the RON-number }
- G01N 33/2835 . . . { specific substances contained in the oil or fuel }
- G01N 33/2841 . . . . { gas in oil, e.g. hydrogen in insulating oil }
- G01N 33/2847 . . . . { Water in oil ( basic sediment and water [G01N 33/2823](#) ; oil in water [G01N 33/1833](#) ) }
- G01N 33/2852 . . . . { alcohol/fuel mixtures }
- G01N 33/2858 . . . . { metal particles }
- G01N 33/2864 . . . . { lead content }
- G01N 33/287 . . . . { Sulfur content }
- G01N 33/2876 . . . . { Total acid number }
- G01N 33/2882 . . . . { Markers ( marking of fuels [C10L 1/003](#) ) }
- G01N 33/2888 . . . { Lubricating oil characteristics, e.g. deterioration ( lubricating properties [G01N 33/30](#) ) }
- G01N 33/2894 . . . { for metal working or machining }
- G01N 33/30 . . . for lubricating properties

- G01N 33/32 . . paints ; inks { investigating resistance to the weather, to corrosion, to light [G01N 17/00](#) }
- G01N 33/34 . paper
- G01N 33/343 . . { paper pulp }
- G01N 33/346 . . { paper sheets }
- G01N 33/36 . textiles
- G01N 33/362 . . { material before processing, e.g. bulk cotton or wool }
- G01N 33/365 . . { filiform textiles, e.g. yarns ( for measuring diameter [G01B](#) ) }
- G01N 33/367 . . { Fabric or woven textiles ( optical analysis of moving sheets [G01N 21/86](#) ) }
- G01N 33/38 . concrete ; ceramics ; glass ; bricks
- G01N 33/381 . . { precious stones; pearls }
- G01N 33/383 . . { Concrete, cement }
- G01N 33/385 . . { Crystals }
- G01N 33/386 . . { Glass }
- G01N 33/388 . . { Ceramics }
- G01N 33/40 . grinding-materials
- G01N 33/42 . road-making materials ( [G01N 33/38](#) takes precedence )
- G01N 33/44 . resins ; rubber ; leather
- G01N 33/442 . . { Resins, plastics }
- G01N 33/445 . . { Rubber }
- G01N 33/447 . . { Leather }
- G01N 33/46 . wood
- G01N 33/48 . biological material, e.g. blood, urine ( [G01N 33/02](#) to [G01N 33/14](#) , [G01N 33/26](#) , [G01N 33/44](#) , [G01N 33/46](#) take precedence; determining the germinating capacity of seeds [A01C 1/02](#) ) ; Haemocytometers ( counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#) )
- G01N 33/483 . . Physical analysis of biological material
- G01N 33/4833 . . . { of solid biological material, e.g. tissue samples, cell cultures ( tissue in vivo [A61B5](#); cell suspensions [G01N 33/48735](#) ) }
- G01N 33/4836 . . . . { using multielectrode arrays }
- G01N 33/487 . . of liquid biological material
- G01N 33/48707 . . . { by electrical means ( [G01N 33/49](#) , [G01N 33/493](#) take precedence ) }
- G01N 33/48714 . . . . { for determining substances foreign to the organism, e.g. drugs or heavy metals ( drugs by chemical analysis [G01N 33/94](#) ) }
- G01N 33/48721 . . . . { Investigating individual macromolecules, e.g. by translocation through nanopores ( Coulter counters in general [G01N 15/12](#) ; fabrication methods for nano-scale apertures [B81B 1/00](#) ; sequencing of nucleic acids [C12Q 1/68](#) ) }
- G01N 33/48728 . . . . { Investigating individual cells, e.g. by patch clamp, voltage clamp ( investigating individual particles in general [G01N 15/10](#) ) }

G01N 33/48735	.....	{ Investigating suspensions of cells, e.g. measuring microbe concentration ( by chemical means <a href="#">C12Q 1/04</a> ; colony counters <a href="#">C12M 1/34</a> ; concentration of particle suspensions in general <a href="#">G01N 15/06</a> ) }
G01N 33/48742	....	{ Determining urea by measuring the volume of a gas ( in general <a href="#">G01N 7/14</a> to <a href="#">G01N 7/18</a> ) }
G01N 33/4875	....	{ Details of handling test elements, e.g. dispensing or storage, not specific to a particular test method ( test-elements per se <a href="#">B01L</a> , automatic analysers <a href="#">G01N 35/00</a> , in-vivo analysis on the human body for medical diagnosis <a href="#">A61B</a> ) }
G01N 33/48757	.....	{ Test elements dispensed from a stack }
G01N 33/48764	.....	{ Test tape taken off a spool }
G01N 33/48771	.....	{ Coding of information, e.g. calibration data, lot number }
G01N 33/48778	.....	{ Containers specially adapted therefor, e.g. for dry storage }
G01N 33/48785	....	{ Electrical and electronic details of measuring devices for physical analysis of liquid biological material not specific to a particular test method, e.g. user interface or power supply }
G01N 33/48792	.....	{ Data management, e.g. communication with processing unit ( for in vivo diagnostics <a href="#">A61B 5/0002</a> ; medical informatics <a href="#">G06F 19/30</a> ; transmission systems for measured values <a href="#">G08C</a> ) }
G01N 33/49	....	Blood { ( taking blood samples <a href="#">A61B 5/15</a> ; chemical methods for determining blood cell populations <a href="#">G01N 33/5094</a> ; chemical analysis of blood groups or blood types <a href="#">G01N 33/80</a> ) }
G01N 33/4905	.....	{ Determining clotting time of blood ( by chemical methods <a href="#">G01N 33/86</a> , <a href="#">C12Q 1/54</a> ) }
G01N 33/491	.....	{ by separating the blood components ( <a href="#">G01N 15/05</a> takes precedence; test tubes per se <a href="#">B01L 3/14</a> ) }
G01N 33/4915	.....	{ using flow cells ( flow cytometry <a href="#">G01N 15/14</a> ) }
G01N 33/492	.....	{ Determining multiple analytes }
G01N 33/4925	.....	{ measuring blood gas content, e.g. O <sub>2</sub> , <a href="#">C02</a> , HCO <sub>3</sub> }
G01N 33/493	....	urine
G01N 33/497	...	of gaseous biological material, e.g. breath { ( for evaluating respiratory organs <a href="#">A61B 5/08</a> ) }
G01N 33/4972	....	{ Determining alcohol content ( for vehicle safety devices <a href="#">B60K 28/06</a> ) }
G01N 33/50	..	Chemical analysis of biological material, e.g. blood, urine ; Testing involving biospecific ligand binding methods ; Immunological testing ( measuring or testing processes involving enzymes or micro-organisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes <a href="#">C12Q</a> )

**NOTE**

The expression "involving", when used in relation to a material includes the testing for the material as well as employing the material as a determinant or reactant in a test for a different material.

In groups [G01N 33/52](#) to [G01N 33/96](#) , in the absence of an indication to the contrary, an invention is also classified in the last appropriate place.

Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in

diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group

G01N 33/5002	...	{ Partitioning blood components }
G01N 33/5005	...	{ involving human or animal cells ( immunoassay <a href="#">G01N 33/569 H</a> ; immunoassays of protozoa <a href="#">G01N 33/569 B</a> ; protozoa in screening assays <a href="#">C12Q 1/02 B</a> ) }
G01N 33/5008	....	{ for testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics }
G01N 33/5011	.....	{ for testing antineoplastic activity }
G01N 33/5014	.....	{ for testing toxicity }
G01N 33/5017	.....	{ for testing neoplastic activity }
G01N 33/502	.....	{ for testing non-proliferative effects }
G01N 33/5023	.....	{ on expression patterns }
G01N 33/5026	.....	{ on cell morphology }
G01N 33/5029	.....	{ on cell motility }
G01N 33/5032	.....	{ on intercellular interactions }
G01N 33/5035	.....	{ on sub-cellular localization }
G01N 33/5038	.....	{ involving detection of metabolites per se }
G01N 33/5041	.....	{ involving analysis of members of signalling pathways }
G01N 33/5044	.....	{ involving specific cell types }
G01N 33/5047	.....	{ Cells of the immune system }
G01N 33/505	.....	{ involving T-cells }
G01N 33/5052	.....	{ involving B-cells }
G01N 33/5055	.....	{ involving macrophages }
G01N 33/5058	.....	{ Neurological cells }
G01N 33/5061	.....	{ Muscle cells }
G01N 33/5064	.....	{ Endothelial cells }
G01N 33/5067	.....	{ Liver cells }
G01N 33/507	.....	{ Pancreatic cells }
G01N 33/5073	.....	{ Stem cells }
G01N 33/5076	.....	{ involving cell organelles, e.g. Golgi complex, endoplasmic reticulum }
G01N 33/5079	.....	{ Mitochondria }
G01N 33/5082	.....	{ Supracellular entities, e.g. tissue, organisms }
G01N 33/5085	.....	{ of invertebrates }
G01N 33/5088	.....	{ of vertebrates }
G01N 33/5091	....	{ for testing the pathological state of an organism }
G01N 33/5094	....	{ for blood cell populations ( red blood cells <a href="#">G01N 33/80</a> ) }
G01N 33/5097	...	{ involving plant cells ( immunoassays of plant cells <a href="#">G01N 33/56961</a> ; unicellular algae, photoplankton and photosynthetic bacteria in screening assays <a href="#">C12Q 1/025</a> ) }
G01N 33/52	...	Use of compounds or compositions for colorimetric, spectrophotometric or fluorometric investigation, e.g. use of reagent paper { and including single- and multilayer analytical elements ( immunological elements <a href="#">G01N 33/54386</a> ;

		involving labelled immunochemicals <a href="#">G01N 33/58</a> ; for haemoglobin or occult blood <a href="#">G01N 33/72</a> ) }
<a href="#">G01N 33/521</a>	....	{ Single-layer analytical elements }
<a href="#">G01N 33/523</a>	.....	{ the element being adapted for a specific analyte }
<a href="#">G01N 33/525</a>	....	{ Multi-layer analytical elements }
<a href="#">G01N 33/526</a>	.....	{ the element being adapted for a specific analyte }
<a href="#">G01N 33/528</a>	....	{ Atypical element structures, e.g. gloves, rods, tampons, toilet paper }
<a href="#">G01N 33/53</a>	...	Immunoassay ; Biospecific binding assay ( <a href="#">preparations containing antigens or antibodies for therapeutic purposes A61K 39/00</a> ; haptens in general, see the relevant places in class <a href="#">C07</a> ; proteins in general <a href="#">C07K</a> )
<a href="#">G01N 33/5302</a>	....	{ Apparatus specially adapted for immunological test procedures }
<a href="#">G01N 33/5304</a>	.....	{ Reaction vessels, e.g. agglutination plates ( <a href="#">for solid-phase systems G01N 33/543</a> ) }
<a href="#">G01N 33/5306</a>	....	{ Improving reaction conditions, e.g. reduction of non-specific binding, promotion of specific binding }
<a href="#">G01N 33/5308</a>	....	{ for analytes not provided for elsewhere, e.g. nucleic acids, uric acid, worms, mites }
<a href="#">G01N 33/531</a>	....	Production of immunochemical test materials
<a href="#">G01N 33/532</a>	.....	Production of labelled immunochemicals
<a href="#">G01N 33/533</a>	.....	with fluorescent label
<a href="#">G01N 33/534</a>	.....	with radioactive label
<a href="#">G01N 33/535</a>	.....	with enzyme label { or co-enzymes, co-factors, enzyme inhibitors or enzyme substrates }
<a href="#">G01N 33/536</a>	....	with immune complex formed in liquid phase
<a href="#">G01N 33/537</a>	.....	with separation of immune complex from unbound antigen or antibody
<a href="#">G01N 33/5375</a>	.....	{ by changing the physical or chemical properties of the medium or immunochemicals, e.g. temperature, density, pH, partitioning }
<a href="#">G01N 33/538</a>	.....	by sorbent column, particles or resin strip { i.e. sorbent materials }
<a href="#">G01N 33/539</a>	.....	involving precipitating reagent { e.g. ammonium sulfate }
<a href="#">G01N 33/541</a>	.....	Double or second antibody { i.e. precipitating antibody }
<a href="#">G01N 33/542</a>	....	with steric inhibition or signal modification, e.g. fluorescent quenching
<a href="#">G01N 33/543</a>	....	with an insoluble carrier for immobilising immunochemicals
<a href="#">G01N 33/54306</a>	.....	{ Solid-phase reaction mechanisms }
<a href="#">G01N 33/54313</a>	.....	{ the carrier being characterised by its particulate form }
<a href="#">G01N 33/5432</a>	.....	{ Liposomes or microcapsules }
<a href="#">G01N 33/54326</a>	.....	{ Magnetic particles }
<a href="#">G01N 33/54333</a>	.....	{ Modification of conditions of immunological binding reaction, e.g. use of more than one type of particle, use of chemical agents to improve binding, choice of incubation time or application of magnetic field during binding reaction }
<a href="#">G01N 33/5434</a>	.....	{ using magnetic particle immunoreagent carriers which constitute new materials per se }
<a href="#">G01N 33/54346</a>	.....	{ Nanoparticles }
<a href="#">G01N 33/54353</a>	....	{ with ligand attached to the carrier via a chemical coupling agent ( <a href="#">coatings G01N 33/54393</a> ) }

G01N 33/5436	.....	{ with ligand physically entrapped within the solid phase ( liposomes <a href="#">G01N 33/5432</a> ; immunological test elements <a href="#">G01N 33/54386</a> ) }
G01N 33/54366	.....	{ Apparatus specially adapted for solid-phase testing }
G01N 33/54373	.....	{ involving physiochemical end-point determination, e.g. wave-guides, FETS, gratings }
G01N 33/5438	.....	{ Electrodes }
G01N 33/54386	.....	{ Analytical elements }
G01N 33/54393	.....	{ Improving reaction conditions or stability, e.g. by coating or irradiation of surface, by reduction of non-specific binding, by promotion of specific binding }
G01N 33/544	.....	the carrier being organic
G01N 33/545	.....	Synthetic resin
G01N 33/546	.....	as water suspendable particles { not used, see <a href="#">G01N 33/54313</a> }
G01N 33/547	.....	with antigen or antibody attached to the carrier via a bridging agent { not used, see <a href="#">G01N 33/54353</a> }
G01N 33/548	.....	Carbohydrates, e.g. dextran
G01N 33/549	.....	with antigen or antibody entrapped within the carrier { not used, see <a href="#">G01N 33/5436</a> }
G01N 33/551	.....	the carrier being inorganic
G01N 33/552	.....	Glass or silica
G01N 33/553	.....	Metal or metal coated
G01N 33/554	.....	the carrier being a biological cell or cell fragment, e.g. bacteria, yeast cells
G01N 33/555	.....	Red blood cell
G01N 33/556	.....	Fixed or stabilised red blood cell
G01N 33/557	....	using kinetic measurement, i.e. time rate of progress of an antigen-antibody interaction
G01N 33/558	....	using diffusion or migration of antigen or antibody
G01N 33/559	.....	through a gel, e.g. Ouchterlony technique
G01N 33/561	.....	Immunoelectrophoresis
G01N 33/563	....	involving antibody fragments { not used, see <a href="#">G01N 33/6857</a> }
G01N 33/564	....	for pre-existing immune complex or autoimmune disease { i.e. systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, rheumatoid factors or complement components C1-C9 }
G01N 33/566	....	using specific carrier or receptor proteins as ligand binding reagents { where possible specific carrier or receptor proteins are classified with their target compounds }
G01N 33/567	.....	utilising isolate of tissue or organ as binding agent
G01N 33/569	....	for micro-organisms, e.g. protozoa, bacteria, viruses
G01N 33/56905	.....	{ Protozoa }
G01N 33/56911	.....	{ Bacteria }
G01N 33/56916	.....	{ Enterobacteria; e.g. shigella, salmonella, klebsiella, serratia }
G01N 33/56922	.....	{ Campylobacter }
G01N 33/56927	.....	{ Chlamydia }
G01N 33/56933	.....	{ Mycoplasma }
G01N 33/56938	.....	{ Staphylococcus }



G01N 33/56944	.....	{ Streptococcus }
G01N 33/5695	.....	{ Mycobacteria }
G01N 33/56955	.....	{ involved in periodontal diseases }
G01N 33/56961	.....	{ Plant cells or fungi }
G01N 33/56966	.....	{ Animal cells }
G01N 33/56972	.....	{ White blood cells }
G01N 33/56977	.....	{ HLA or MHC typing }
G01N 33/56983	.....	{ Viruses }
G01N 33/56988	.....	{ AIDS or HTLV }
G01N 33/56994	.....	{ Herpetoviridae, e.g. cytomegalovirus, Epstein-Barr virus }
G01N 33/571	.....	for venereal disease, e.g. syphilis, gonorrhoea { ( herpes <a href="#">G01N 33/56994</a> ; chlamydia <a href="#">G01N 33/56927</a> ) }
G01N 33/573	....	for enzymes or isoenzymes
G01N 33/5735	.....	{ co-enzymes or co-factors, e.g. NAD, ATP }
G01N 33/574	....	for cancer

**NOTE**

In this group:

- relevant features relating to a specifically defined cancer are only classified in groups [G01N 33/57407](#) to [G01N 33/57449](#)
- relevant features describing cancer markers related to multiple forms of cancer are classified in groups [G01N 33/57484](#) to [G01N 33/57496](#)

G01N 33/57407	.....	{ Specifically defined cancers }
G01N 33/57411	.....	{ of cervix }
G01N 33/57415	.....	{ of breast }
G01N 33/57419	.....	{ of colon }
G01N 33/57423	.....	{ of lung }
G01N 33/57426	.....	{ leukemia }
G01N 33/5743	.....	{ of skin, melanoma }
G01N 33/57434	.....	{ of prostate }
G01N 33/57438	.....	{ of liver, pancreas or kidney }
G01N 33/57442	.....	{ of the uterus and endometrial }
G01N 33/57446	.....	{ of stomach or intestine }
G01N 33/57449	.....	{ of ovaries }
G01N 33/57469	.....	{ involving tumor associated glycolinkage, i.e. TAG }
G01N 33/57473	.....	{ involving carcinoembryonic antigen, i.e. CEA }
G01N 33/57476	.....	{ involving oncofetal proteins }
G01N 33/5748	.....	{ involving oncogenic proteins }
G01N 33/57484	.....	{ involving compounds serving as markers for tumor, cancer, neoplasia, e.g. cellular determinants, receptors, heat shock/stress proteins, A-protein, oligosaccharides, metabolites }
G01N 33/57488	.....	{ involving compounds identifiable in body fluids }

G01N 33/57492	.....	{ involving compounds localized on the membrane of tumor or cancer cells }
G01N 33/57496	.....	{ involving intracellular compounds }
G01N 33/576	....	for hepatitis
G01N 33/5761	.....	{ Hepatitis B }
G01N 33/5762	.....	{ Hepatitis B core antigen }
G01N 33/5764	.....	{ Hepatitis B surface antigen }
G01N 33/5765	.....	{ Hepatitis delta antigen }
G01N 33/5767	.....	{ non-A, non-B hepatitis }
G01N 33/5768	.....	{ Hepatitis A }
G01N 33/577	....	involving monoclonal antibodies { binding reaction mechanisms characterised by the use of monoclonal antibodies; monoclonal antibodies per se are classified with their corresponding antigens; <a href="#">G01N 33/53</a> to <a href="#">G01N 33/576</a> take precedence }
G01N 33/579	...	involving limulus lysate

**NOTE**

Groups [G01N 33/53](#) to [G01N 33/576](#) take precedence over groups [G01N 33/58](#) to [G01N 33/98](#)

G01N 33/58	...	involving labelled substances ( <a href="#">G01N 33/53</a> takes precedence; for testing in vivo <a href="#">A61K 49/00</a> )
G01N 33/581	....	{ with enzyme label ( including co-enzymes, co-factors, enzyme inhibitors or substrates ) }
G01N 33/582	....	{ with fluorescent label }
G01N 33/583	....	{ with non-fluorescent dye label }
G01N 33/585	....	{ with a particulate label, e.g. coloured latex }
G01N 33/586	.....	{ Liposomes, microcapsules or cells }
G01N 33/587	.....	{ Nanoparticles }
G01N 33/588	....	{ with semiconductor nanocrystal label, e.g. quantum dots }
G01N 33/60	....	involving radioactive labelled substances ( tracers <a href="#">G21H 5/02</a> )
G01N 33/62	...	involving urea
G01N 33/64	...	involving ketones
G01N 33/66	...	involving blood sugars, e.g. galactose
G01N 33/68	...	involving proteins, peptides or amino acids { involving lipoproteins <a href="#">G01N 33/92</a> }
G01N 33/6803	.....	{ General methods of protein analysis not limited to specific proteins or families of proteins }
G01N 33/6806	.....	{ Determination of free amino acids }
G01N 33/6809	.....	{ involving fluorescent derivatizing reagents reacting non-specifically with all amino acids }
G01N 33/6812	.....	{ Assays for specific amino acids }
G01N 33/6815	.....	{ containing sulfur, e.g. cysteine, cystine, methionine, homocysteine }
G01N 33/6818	.....	{ Sequencing of polypeptides }
G01N 33/6821	.....	{ involving C-terminal degradation }
G01N 33/6824	.....	{ involving N-terminal degradation, e.g. Edman degradation }

G01N 33/6827	.....	{ Total protein determination, e.g. albumin in urine }
G01N 33/683	.....	{ involving metal ions }
G01N 33/6833	.....	{ Copper, e.g. Folin-, Lowry-, biuret methods }
G01N 33/6836	.....	{ Silver staining }
G01N 33/6839	.....	{ involving dyes, e.g. Coomassie blue, bromcresol green }
G01N 33/6842	.....	{ Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins }
G01N 33/6845	.....	{ Methods of identifying protein-protein interactions in protein mixtures }
G01N 33/6848	.....	{ Methods of protein analysis involving mass spectrometry }
G01N 33/6851	.....	{ Methods of protein analysis involving laser desorption ionisation mass spectrometry }
G01N 33/6854	....	{ Immunoglobulins }
G01N 33/6857	.....	{ Antibody fragments }
G01N 33/686	.....	{ Anti-idiotypic }
G01N 33/6863	....	{ Cytokines, i.e. immune system proteins modifying a biological response such as cell growth proliferation or differentiation, e.g. TNF, CNF, GM-CSF, lymphotoxin, MIF or their receptors }
G01N 33/6866	.....	{ Interferon }
G01N 33/6869	.....	{ Interleukin }
G01N 33/6872	....	{ Intracellular protein regulatory factors and their receptors, e.g. including ion channels }
G01N 33/6875	....	{ Nucleoproteins }
G01N 33/6878	....	{ in epitope analysis }
G01N 33/6881	....	{ from skin }
G01N 33/6884	....	{ from lung }
G01N 33/6887	....	{ from muscle, cartilage or connective tissue }
G01N 33/689	....	{ related to pregnancy or the gonads }
G01N 33/6893	....	{ related to diseases not provided for elsewhere }
G01N 33/6896	.....	{ Neurological disorders, e.g. Alzheimer's disease }
G01N 33/70	...	involving creatine or creatinine
G01N 33/72	...	involving blood pigments, e.g. haemoglobin, bilirubin { or other porphyrins; involving occult blood }
G01N 33/721	....	{ Haemoglobin }
G01N 33/723	.....	{ Glycosylated haemoglobin }
G01N 33/725	.....	{ using peroxidative activity }
G01N 33/726	.....	{ Devices }
G01N 33/728	....	{ Bilirubin; including biliverdin }
G01N 33/74	...	involving hormones { or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors }
G01N 33/743	....	{ Steroid hormones }
G01N 33/746	....	{ Erythropoietin }
G01N 33/76	....	Human chorionic gonadotropin { including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors }

G01N 33/78	....	Thyroid gland hormones, { e.g. T3, T4, TBH, TBG or their receptors }
G01N 33/80	...	involving blood groups or blood types { or red blood cells ( white blood cells <a href="#">G01N 33/56972</a> ) }
G01N 33/82	...	involving vitamins { or their receptors }
G01N 33/84	...	involving inorganic compounds or pH
G01N 33/86	...	involving blood coagulating time { or factors, or their receptors }
G01N 33/88	...	involving prostaglandins { or their receptors }
G01N 33/90	...	involving iron binding capacity of blood
G01N 33/92	...	involving lipids, e.g. cholesterol, { lipoproteins, or their receptors ( steroid hormones <a href="#">G01N 33/743</a> ) }
G01N 33/94	...	involving narcotics { or drugs or pharmaceuticals, neurotransmitters or associated receptors }
G01N 33/9406	....	{ Neurotransmitters }
G01N 33/9413	.....	{ Dopamine }
G01N 33/942	.....	{ Serotonin, i.e. 5-hydroxy-tryptamine }
G01N 33/9426	.....	{ GABA, i.e. gamma-amino-butyrate }
G01N 33/9433	.....	{ (Nor)adrenaline }
G01N 33/944	.....	{ Acetylcholine }
G01N 33/9446	....	{ Antibacterials }
G01N 33/9453	....	{ Cardioregulators, e.g. antihypotensives, antiarrhythmics }
G01N 33/946	....	{ CNS-stimulants, e.g. cocaine, amphetamines }
G01N 33/9466	....	{ Antidepressants }
G01N 33/9473	....	{ Anticonvulsants, e.g. phenobarbitol, phenytoin }
G01N 33/948	....	{ Sedatives, e.g. cannabinoids, barbiturates ( opiates <a href="#">G01N 33/9486</a> ) }
G01N 33/9486	....	{ Analgesics, e.g. opiates, aspirine }
G01N 33/9493	....	{ Immunosuppressants }
G01N 33/96	...	involving blood or serum control standard
G01N 33/98	...	involving alcohol, e.g. ethanol in breath

**NOTE**

In groups [G01N 35/00](#) to [G01N 35/085](#) , the indexing codes of [S01N](#) are added

**G01N 35/00** Automatic analysis not limited to methods or materials provided for in any single one of groups [G01N 1/00](#) to [G01N 33/00](#) ; Handling materials therefor

G01N 35/00009	.	{ provided with a sample supporting tape, e.g. with absorbent zones }
G01N 35/00029	.	{ provided with flat sample substrates, e.g. slides ( <a href="#">G01N 35/028</a> takes precedence ) }
G01N 35/00069	..	{ whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk }
G01N 35/00584	.	{ Control arrangements for automatic analysers }
G01N 35/00594	..	{ Quality control, including calibration or testing of components of the analyser }

G01N 35/00603	...	{ Reinspection of samples }
G01N 35/00613	...	{ Quality control }
G01N 35/00623	....	{ of instruments }
G01N 35/00663	....	{ of consumables }
G01N 35/00693	...	{ Calibration }
G01N 35/00712	...	{ Automatic status testing, e.g. at start-up or periodic }
G01N 35/00722	..	{ Communications; Identification }
G01N 35/00732	...	{ Identification of carriers, materials or components in automatic analysers }
G01N 35/00871	...	{ Communications between instruments or with remote terminals }
G01N 35/0092	..	{ Scheduling }
G01N 35/0095	...	{ introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS] }
G01N 35/0098	.	{ involving analyte bound to insoluble magnetic carrier, e.g. using magnetic separation ( magnetic particles used in immunoassays <a href="#">G01N 33/54326</a> ; magnetic separation in general <a href="#">B03C</a> ) }
G01N 35/0099	.	[comprising robots or similar manipulators ( robots per se <a href="#">B25J</a> ) ]
G01N 35/02	.	using a plurality of sample containers moved by a conveyer system past one or more treatment or analysis stations { ( <a href="#">G01N 35/0098</a> and <a href="#">G01N 35/0099</a> take precedence ) }
G01N 35/021	..	{ having a flexible chain, e.g. "cartridge belt", conveyer for reaction cells or cuvettes }
G01N 35/025	..	{ having a carousel or turntable for reaction cells or cuvettes }
G01N 35/026	..	{ having blocks or racks of reaction cells or cuvettes }
G01N 35/028	..	{ having reaction cells in the form of micro-titration plates }
G01N 35/04	..	Details of the conveyer system { ( <a href="#">G01N 35/021</a> to <a href="#">G01N 35/028</a> take precedence ) }
G01N 35/08	.	using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis
G01N 35/085	..	{ Flow Injection Analysis }
G01N 35/10	.	Devices for transferring samples { or any liquids } to, in, or from, the analysis apparatus, e.g. suction devices, injection devices { ( <a href="#">G01N 35/0099</a> takes precedence ) }
G01N 35/1002	..	{ Reagent dispensers }
G01N 35/1004	..	{ Cleaning sample transfer devices ( cleaning laboratory glassware <a href="#">B01L 11/00D</a> ) }
G01N 35/1009	..	{ Characterised by arrangements for controlling the aspiration or dispense of liquids }
G01N 35/1011	...	{ Control of the position or alignment of the transfer device }
G01N 35/1016	...	{ Control of the volume dispensed or introduced }
G01N 35/1065	..	{ Multiple transfer devices }
G01N 35/1067	...	{ for transfer to or from containers having different spacing }
G01N 35/1072	...	{ with provision for selective pipetting of individual channels }
G01N 35/1074	...	{ arranged in a two-dimensional array }

- G01N 35/1079 . . { with means for piercing stoppers or septums }
- G01N 35/1081 . . { characterised by the means for relatively moving the transfer device and the containers in an horizontal plane ( [G01N 35/1011](#) takes precedence ) }
- G01N 35/1083 . . . { with one horizontal degree of freedom }
- G01N 35/109 . . . { with two horizontal degrees of freedom }
- G01N 35/1095 . . { for supplying the samples to flow-through analysers ( for a specific analyser see relevant groups, e.g. under [G01N 15/00](#) , [G01N 21/00](#) , [G01N 27/00](#) , [G01N 30/00](#) , [H01J 49/00](#) ) }
- G01N 35/1097 . . . { characterised by the valves ( valves in general [F16K](#) ) }

#### **G01N 37/00** Details not covered by any other group of this subclass

- G01N 37/005 . { Measurement methods not based on established scientific theories }

#### **Guidance heading:**

#### **G01N 2001/00** Sampling ; Preparing specimens for investigation

- G01N 2001/002 . Devices for supplying or distributing samples to an analysing apparatus
- G01N 2001/005 . . Packages for mailing or similar transport of samples
- G01N 2001/007 . . Devices specially adapted for forensic samples, e.g. tamper-proofing, sample tracking
- G01N 2001/02 . Devices for withdrawing samples ( for medical or veterinary purposes [A61](#) ; { sampling of foundation soil [E02D 1/04](#) } ; obtaining samples of soil or well fluids [E21B 49/00](#) ; { collecting or conveying radioactive samples [G01T 7/00](#) , e.g. [G01T 7/02](#) , [G01T 7/08](#) } )
- G01N 2001/021 . . Correlating sampling sites with geographical information, e.g. GPS
- G01N 2001/022 . . sampling for security purposes, e.g. contraband, warfare agents
- G01N 2001/024 . . . passengers or luggage
- G01N 2001/025 . . . postal items
- G01N 2001/027 . . . field kits / quick test kits
- G01N 2001/028 . . Sampling from a surface, swabbing, vaporising
- G01N 2001/04 . . in the solid state, e.g. by cutting
- G01N 2001/045 . . . Laser ablation ; Microwave vaporisation
- G01N 2001/06 . . . providing a thin slice, e.g. microtome
- G01N 2001/061 . . . . Blade details
- G01N 2001/063 . . . . . with sawing action
- G01N 2001/065 . . . . Drive details
- G01N 2001/066 . . . . . electric
- G01N 2001/068 . . . . Illumination means
- G01N 2001/08 . . . involving an extracting tool, e.g. core bit
- G01N 2001/085 . . . . Grabs
- G01N 2001/10 . . in the liquid or fluent state { burettes, pipettes [B01L 3/02](#) ; Sampling of ground water [E02D 1/06](#) ; metering by volume of fluids or fluent solid material [G01F 11/00](#) }

		, <a href="#">G01F 13/00</a> }
G01N 2001/1006	...	Dispersed solids
G01N 2001/1012	....	Suspensions
G01N 2001/1018	.....	Gas suspensions ; Fluidised beds
G01N 2001/1025	.....	Liquid suspensions ; Slurries ; Mud ; Sludge
G01N 2001/1031	...	Sampling from special places
G01N 2001/1037	....	from an enclosure ( <a href="#">hazardous waste</a> , <a href="#">radioactive</a> )
G01N 2001/1043	....	from sewers
G01N 2001/105	....	from high-pressure reactors or lines
G01N 2001/1056	...	Disposable (single-use) samplers
G01N 2001/1062	...	Sampling under constant temperature, pressure, or the like
G01N 2001/1068	....	Cooling sample below melting point
G01N 2001/1075	....	Trapping evaporated liquids by cooling
G01N 2001/1081	....	Storing samples under refrigeration
G01N 2001/1087	...	Categories of sampling
G01N 2001/1093	....	Composite sampling ; Cumulative sampling
G01N 2001/14	...	Suction devices, e.g. pumps ; Ejector devices
G01N 2001/1418	....	Depression, aspiration
G01N 2001/1427	.....	Positive displacement, piston, peristaltic
G01N 2001/1436	.....	Ejector
G01N 2001/1445	....	Overpressure, pressurisation at sampling point
G01N 2001/1454	.....	Positive displacement, piston
G01N 2001/1463	.....	Injector ; Air-lift
G01N 2001/1472	....	Devices not actuated by pressure difference
G01N 2001/1481	.....	Archimedian screw ; Auger
G01N 2001/149	.....	Capillaries ; Sponges
G01N 2001/18	...	with provision for splitting samples into portions ( <a href="#">G01N 1/12</a> , <a href="#">G01N 1/14</a> take precedence; <a href="#">fraction-collection apparatus for chromatography</a> <a href="#">B01D 15/08</a> )
G01N 2001/185	....	Conveyer of containers successively filled
G01N 2001/20	...	for flowing or falling materials { <a href="#">G01N 1/2035</a> } ( <a href="#">G01N 1/12</a> , <a href="#">G01N 1/14</a> take precedence )
G01N 2001/2007	....	Flow conveyers
G01N 2001/2014	.....	Pneumatic conveyers
G01N 2001/2021	.....	falling under gravity
G01N 2001/2028	.....	Belts
G01N 2001/2035	....	{ <a href="#">by deviating part of a fluid stream, e.g. by drawing-off or tapping</a> }
G01N 2001/205	.....	using a valve
G01N 2001/2057	.....	Sample chamber in a valve/piston
G01N 2001/2064	.....	using a by-pass loop
G01N 2001/2071	.....	Removable sample bottle
G01N 2001/2078	.....	Pre-evacuated bottle
G01N 2001/2085	.....	Non-pre-evacuated septum closed bottles
G01N 2001/2092	....	Cross-cut sampling



- G01N 2001/22 ... in the gaseous state { ( specially adapted for biological material [G01N 33/497](#) ; measuring breath flow [A61B 5/087](#) ) }
- G01N 2001/2202 ... { involving separation of sample components during sampling }
- G01N 2001/2214 .... { by sorption }
- G01N 2001/2217 ..... using a liquid
- G01N 2001/222 .... other features ( not used )
- G01N 2001/2223 ..... aerosol sampling devices
- G01N 2001/2226 ... { Sampling from a closed space, e.g. food package, head space }
- G01N 2001/2229 .... Headspace sampling, i.e. vapour over liquid
- G01N 2001/2232 ..... using a membrane, i.e. pervaporation
- G01N 2001/2235 .... over a melt, e.g. furnace
- G01N 2001/2238 .... the gas being compressed or pressurized
- G01N 2001/2241 .... purpose-built sampling enclosure for emissions
- G01N 2001/2244 ... Exhaled gas, e.g. alcohol detecting
- G01N 2001/2247 ... { Sampling from a flowing stream of gas }
- G01N 2001/225 .... isokinetic, same flow rate for sample and bulk gas
- G01N 2001/2252 .... { in a vehicle exhaust }
- G01N 2001/2255 ..... with dilution of the sample
- G01N 2001/2258 .... { in a stack or chimney }
- G01N 2001/2261 ..... preventing condensation ( heating lines )
- G01N 2001/2264 .... with dilution
- G01N 2001/2267 .... separating gas from liquid, e.g. bubbles
- G01N 2001/227 .... separating gas from solid, e.g. filter
- G01N 2001/2273 ... { Atmospheric sampling }
- G01N 2001/2276 .... Personal monitors
- G01N 2001/2279 .... high altitude, e.g. rockets, balloons
- G01N 2001/2282 ... with cooling means
- G01N 2001/2285 ... Details of probe structures
- G01N 2001/2288 .... Filter arrangements
- G01N 2001/2291 .... Movable probes, e.g. swivelling, swinging
- G01N 2001/2297 ... Timing devices
- G01N 2001/24 ... Suction devices { ( [G01N 1/22](#) to [G01N 1/2294](#) take precedence ) }
- G01N 2001/241 .... Bellows
- G01N 2001/242 .... Injectors or ejectors
- G01N 2001/244 ..... using critical flow orifices
- G01N 2001/245 .... Fans
- G01N 2001/247 .... Syringes
- G01N 2001/248 .... Evacuated containers
- G01N 2001/28 . Preparing specimens for investigation { including physical details of (bio-)chemical methods covered elsewhere, e.g. [G01N 33/50](#) , [C12Q](#) } ( mounting specimens on microscopic slides [G02B 21/34](#) ; means for supporting the objects or the materials to be analysed in electron microscopes [H01J 37/20](#) ; { laboratory gas handling apparatus [B01L 5/00](#) } )

G01N 2001/2813	..	{ Producing thin layers of samples on a substrate, e.g. smearing, spinning-on ( <a href="#">G01N 1/30</a> takes precedence ) }
<a href="#">G01N 2001/282</a>	...	with mapping ; Identification of areas ; Spatial correlated pattern
<a href="#">G01N 2001/2826</a>	...	Collecting by adsorption or absorption
<a href="#">G01N 2001/2833</a>	...	Collecting samples on a sticky, tacky, adhesive surface
<a href="#">G01N 2001/284</a>	....	using local activation of adhesive, i.e. Laser Capture Microdissection
<a href="#">G01N 2001/2846</a>	...	Cytocentrifuge method
G01N 2001/286	..	{ involving mechanical work, e.g. chopping, disintegrating, compacting, homogenising ( microtomes <a href="#">G01N 1/06</a> ; pulverising in general <a href="#">B02C</a> ; mixing in general <a href="#">B01F</a> ) }
<a href="#">G01N 2001/2866</a>	...	Grinding or homogeneising
<a href="#">G01N 2001/2873</a>	...	Cutting or cleaving
<a href="#">G01N 2001/288</a>	....	Filter punches
<a href="#">G01N 2001/2886</a>	....	Laser cutting, e.g tissue catapult
<a href="#">G01N 2001/2893</a>	..	Preparing calibration standards
G01N 2001/30	..	Staining ; Impregnating { Fixation; Dehydration; Multistep processes for preparing samples of tissue, cell or nucleic acid material and the like for analysis }
<a href="#">G01N 2001/302</a>	...	Stain compositions
<a href="#">G01N 2001/305</a>	...	Fixative compositions
<a href="#">G01N 2001/307</a>	....	non-toxic, no Hg, no formaldehyde
G01N 2001/31	...	Apparatus therefor
<a href="#">G01N 2001/315</a>	....	Basket-type carriers for tissues
<a href="#">G01N 2001/317</a>	....	spraying liquids onto surfaces
G01N 2001/36	..	Embedding or analogous mounting of samples
<a href="#">G01N 2001/362</a>	...	using continuous plastic film to mount sample
<a href="#">G01N 2001/364</a>	...	using resins, epoxy
<a href="#">G01N 2001/366</a>	...	Moulds ; Demoulding
<a href="#">G01N 2001/368</a>	...	Mounting multiple samples in one block, e.g. TMA ( <a href="#">Tissue Micro-arrays</a> )
G01N 2001/38	..	Diluting, dispersing or mixing samples
<a href="#">G01N 2001/381</a>	...	by membrane diffusion ; Permeation tubes
<a href="#">G01N 2001/382</a>	...	using pistons of different sections
<a href="#">G01N 2001/383</a>	...	collecting and diluting in a flow of liquid
<a href="#">G01N 2001/385</a>	...	diluting by adsorbing a fraction of the sample
<a href="#">G01N 2001/386</a>	...	Other diluting or mixing processes
<a href="#">G01N 2001/387</a>	....	mixing by blowing a gas, bubbling
<a href="#">G01N 2001/388</a>	....	mixing the sample with a tracer
G01N 2001/40	..	Concentrating samples
G01N 2001/4005	...	{ by transferring a selected component through a membrane }
<a href="#">G01N 2001/4011</a>	....	being a ion-exchange membrane
<a href="#">G01N 2001/4016</a>	....	being a selective membrane, e.g. dialysis or osmosis
G01N 2001/4022	...	{ by thermal techniques; Phase changes }
<a href="#">G01N 2001/4027</a>	....	evaporation leaving a concentrated sample
<a href="#">G01N 2001/4033</a>	....	sample concentrated on a cold spot, e.g. condensation or distillation

G01N 2001/4038	...	electric methods, e.g. electromigration, electrophoresis, ionisation
G01N 2001/4055	...	{ by solubility techniques }
G01N 2001/4061	....	Solvent extraction
G01N 2001/4066	....	using difference of solubility between liquid and gas, e.g. bubbling, scrubbing or sparging
G01N 2001/4072	....	membraneless transfer of a component between two parallel laminar flows of fluid
G01N 2001/4077	...	{ by other techniques involving separation of suspended solids }
G01N 2001/4083	....	sedimentation
G01N 2001/4088	....	filtration
G01N 2001/4094	....	using ultrasound

**G01N 2009/00      Investigating density or specific gravity of materials ; Analysing materials by determining density or specific gravity ( weighing apparatus [G01G](#) )**

G01N 2009/002	.	{ using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis ( <a href="#">G01N 9/34</a> takes precedence ) }
G01N 2009/004	..	comparing frequencies of two elements
G01N 2009/006	..	vibrating tube, tuning fork
G01N 2009/008	..	Schlatter vibrating vane type
G01N 2009/02	.	by measuring weight of a known volume
G01N 2009/022	..	of solids
G01N 2009/024	...	the volume being determined directly, e.g. by size of container
G01N 2009/026	...	the volume being determined by amount of fluid displaced
G01N 2009/028	....	a gas being used as displacement fluid
G01N 2009/26	.	by measuring pressure differences
G01N 2009/263	..	using vertically-movable pressure transducer

**G01N 2011/00      Investigating flow properties of materials, e.g. viscosity, plasticity ; Analysing materials by determining flow properties**

G01N 2011/0006	.	Calibrating, controlling or cleaning viscometers
G01N 2011/0013	..	Temperature compensation
G01N 2011/002	..	Controlling sample temperature ; Thermal cycling during measurement
G01N 2011/0026	.	Investigating specific flow properties of non-Newtonian fluids
G01N 2011/0033	..	Yield stress ; Residual stress at zero shear rate
G01N 2011/004	..	Stress relaxation time
G01N 2011/0046	.	In situ measurement during mixing process
G01N 2011/0053	..	using ergometry ; measuring power consumption
G01N 2011/006	.	Determining flow properties indirectly by measuring other parameters of the system
G01N 2011/0066	..	electrical properties

G01N 2011/0073	..	acoustic properties
G01N 2011/008	..	optical properties
G01N 2011/0086	..	magnetic properties
G01N 2011/0093	..	thermal properties
G01N 2011/10	.	by moving a body within the material
G01N 2011/14	..	by using rotary bodies, e.g. vane ( <a href="#">G01N 11/16</a> takes precedence )
G01N 2011/142	...	{ Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer }
G01N 2011/145	....	both members rotating
G01N 2011/147	...	Magnetic coupling
<b>G01N 2013/00</b>		<b>Investigating surface or boundary effects, e.g. wetting power ; Investigating diffusion effects ; Analysing materials by determining surface, boundary, or diffusion effects ( <a href="#">scanning-probe techniques or apparatus G01Q</a> )</b>
G01N 2013/003	.	Diffusion ; diffusivity between liquids
G01N 2013/006	.	Dissolution of tablets or the like
G01N 2013/02	.	Investigating surface tension of liquids
G01N 2013/0208	..	by measuring contact angle
G01N 2013/0216	..	by measuring skin friction or shear force
G01N 2013/0225	..	of liquid metals or solder
G01N 2013/0233	..	Langmuir troughs ; thin-film balances
G01N 2013/0241	..	bubble, pendant drop, sessile drop methods
G01N 2013/025	...	Measuring foam stability
G01N 2013/0258	...	Oscillating drop methods
G01N 2013/0266	...	Bubble methods
G01N 2013/0275	..	involving surface-active agents
G01N 2013/0283	..	methods of calculating surface tension
G01N 2013/0291	..	Wilhelmy plate
<b>G01N 2015/00</b>		<b>Investigating characteristics of particles ; Investigating permeability, pore-volume, or surface-area of porous materials ( <a href="#">identification of micro-organisms C12Q</a> )</b>
G01N 2015/0003	.	Determining electric mobility, velocity profile, average speed or velocity of a plurality of particles
G01N 2015/0007	.	Investigating dispersion of gas
G01N 2015/0011	..	in liquids, e.g. bubbles
G01N 2015/0015	..	in solids
G01N 2015/0019	.	Means for transferring or separating particles prior to analysis, e.g. hoppers or particle conveyors
G01N 2015/0023	.	Investigating dispersion of liquids

- G01N 2015/0026 . . . in gas, e.g. fog
- G01N 2015/003 . . . in liquids, e.g. emulsion
- G01N 2015/0034 . . . in solids
- G01N 2015/0038 . Investigating nano particles
- G01N 2015/0042 . Investigating dispersion of solids
- G01N 2015/0046 . . . in gas, e.g. smoke
- G01N 2015/0049 . . . . . of filaments in gas
- G01N 2015/0053 . . . in liquids, e.g. trouble
- G01N 2015/0057 . . . . . of filaments in liquids
- G01N 2015/0061 . . . in solids, e.g. petrography
- G01N 2015/0065 . . biological, e.g. blood
- G01N 2015/0069 . . . with lysing, e.g. of erythrocyts
- G01N 2015/0073 . . . Red blood cells
- G01N 2015/0076 . . . . . Reticulocytes
- G01N 2015/008 . . . White cells
- G01N 2015/0084 . . . Platelets
- G01N 2015/0088 . . . Biological contaminants ; Fouling
- G01N 2015/0092 . . Monitoring flocculation or agglomeration
- G01N 2015/0096 . . Investigating consistence of powders, dustability, dustiness
- G01N 2015/02 . . Investigating particle size or size distribution ( [G01N 15/04](#) , [G01N 15/10](#) take precedence; by measuring osmotic pressure [G01N 7/10](#) ; by filtering [B01D](#) ; by sifting [B07B](#) )
- G01N 2015/0205 . . . { by optical means, e.g. by light scattering, diffraction, holography or imaging }
- G01N 2015/0211 . . . . . { Investigating a scatter or diffraction pattern }
- G01N 2015/0216 . . . . . from fluctuations of diffraction pattern
- G01N 2015/0222 . . . . . from dynamic light scattering, e.g. photon correlation spectroscopy
- G01N 2015/0233 . . . . . using holography
- G01N 2015/0238 . . . . . Single particle scatter
- G01N 2015/0244 . . . . . with cutting-out molecular scatter
- G01N 2015/025 . . . . . Methods for single or grouped particles
- G01N 2015/0255 . . . { with mechanical, e.g. inertial, classification, and investigation of sorted collections ( with centrifuges [G01N 15/042](#) ) }
- G01N 2015/0261 . . . . . using impactors
- G01N 2015/0277 . . . Average size only
- G01N 2015/0283 . . . using control of suspension concentration
- G01N 2015/0288 . . . Sorting the particles
- G01N 2015/0294 . . . Particle shape
- G01N 2015/03 . . Electro-optical investigation of a plurality of particles, the analyser being characterised by the optical arrangement

- G01N 2015/035 .. the optical arrangement forming an integrated apparatus with the sample container
- G01N 2015/04 . Investigating sedimentation of particle suspensions
- G01N 2015/042 .. { by centrifuging and investigating centrifugates ( centrifuges per se [B04B](#) ) }
- G01N 2015/045 ... by optical analysis
- G01N 2015/047 .... by static multidetectors
- G01N 2015/05 .. in blood
- G01N 2015/055 ... for hematocrite determination
- G01N 2015/06 . Investigating concentration of particle suspensions ( [G01N 15/04](#) , [G01N 15/10](#) take precedence; by weighing [G01N 5/00](#) )

### **NOTE**

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group and its subgroups:

- Investigating or analysing materials;
- by the use of optical means: [G01N 21/00](#) , e.g. [G01N 21/47](#) , [G01N 21/90](#) ;
- by other radiations or by particles: [G01N 23/00](#) , e.g. [G01N 23/02](#) , [G01N 23/201](#) ;
- by measuring impedance: [G01N 27/02](#) , e.g. [G01N 27/06](#) , [G01N 27/22](#) ;
- by electrochemical means: [G01N 27/00](#) , e.g. [G01N 27/26](#) , [G01N 27/56B](#) ;
- by measuring absorption of sonic or ultrasonic vibrations: [G01N 29/00](#) , e.g. [G01N 29/02](#)

- G01N 2015/0662 .. Comparing before/after passage through filter
- G01N 2015/0668 .. Comparing properties of sample and carrier fluid, e.g. oil in water
- G01N 2015/0675 .. Comparing suspension before/after dilution
- G01N 2015/0681 .. Purposely modifying particles, e.g. humidifying for growing
- G01N 2015/0687 .. in solutions, e.g. non volatile residue
- G01N 2015/0693 .. by optical means, e.g. by integrated nephelometry
- G01N 2015/08 . Investigating permeability, pore-volume, or surface area of porous materials
- G01N 2015/0813 .. Measuring intrusion, e.g. of mercury
- G01N 2015/0833 .. Pore surface area
- G01N 2015/084 .. Testing filters
- G01N 2015/0846 .. by use of radiation, e.g. transmitted or reflected light
- G01N 2015/0853 .. by electrical capacitance measurement
- G01N 2015/086 .. of films, membranes or pellicules
- G01N 2015/0866 .. Sorption
- G01N 2015/0873 ... Dynamic sorption, e.g. with flow control means
- G01N 2015/10 . Investigating individual particles
- G01N 2015/1006 .. for cytology
- G01N 2015/1012 .. { Calibrating particle analysers; References therefor }

G01N 2015/1018	...	Constitution of reference particles
G01N 2015/1025	...	Particle flow simulating, e.g. liquid crystal cell
G01N 2015/1037	..	Associating coulter-counter and optical flow cytometer (OFC)
G01N 2015/1043	..	Measuring mass of individual particles
G01N 2015/105	..	Other than optical measurement of deformation of individual particles ( <a href="#">optical measurement G01N 2015/1495</a> )
G01N 2015/1062	..	counting the particles by other than electro-optical means ( <a href="#">by electro-optical means G01N 2015/1486</a> )
G01N 2015/1068	..	Recognizing failure of the analyser, e.g. bubbles ; Quality control for particle analysers
G01N 2015/1075	..	Determining speed or velocity of a particle
G01N 2015/1081	..	Sorting the particles
G01N 2015/1087	..	Particle size
G01N 2015/1093	..	Particle shape
G01N 2015/12	..	Coulter-counters
G01N 2015/1209	...	{ <a href="#">Details</a> }
G01N 2015/1236	....	Flow forming
G01N 2015/1254	...	Electrodes
G01N 2015/1263	....	Scanning electrodes
G01N 2015/1272	...	Cleaning
G01N 2015/1281	...	Detecting blocking debris
G01N 2015/129	...	measuring the ratio of AC/DC impedances
G01N 2015/14	..	Electro-optical investigation, e.g. flow cytometers
G01N 2015/1402	...	Data analysis by thresholding or gating operations performed on the acquired signals or stored data
G01N 2015/1404	...	{ <a href="#">Fluid conditioning in flow cytometers, e.g. flow cells; Supply; Control of flow</a> }
G01N 2015/1406	....	Control of droplet point
G01N 2015/1409	....	Control of supply of sheaths fluid, e.g. sample injection control
G01N 2015/1411	.....	Features of sheaths fluids
G01N 2015/1413	....	Hydrodynamic focussing
G01N 2015/1415	....	Control of particle position
G01N 2015/1418	....	Eliminating clogging of debris
G01N 2015/142	....	Acoustic or ultrasonic focussing
G01N 2015/1422	....	Electrical focussing
G01N 2015/1434	...	{ <a href="#">using an analyser being characterised by its optical arrangement</a> }
G01N 2015/1438	....	Using two lasers in succession
G01N 2015/144	....	Imaging characterised by its optical setup
G01N 2015/1443	.....	Auxiliary imaging
G01N 2015/1445	.....	Three-dimensional imaging, imaging in different image planes, e.g. under different angles or at different depths, e.g. by a relative motion of sample and detector, for instance by tomography
G01N 2015/1447	....	Spatial selection
G01N 2015/145	.....	by pattern of light, e.g. fringe pattern
G01N 2015/1452	....	Adjustment of focus ; Alignment



G01N 2015/1454	....	using phase shift or interference, e.g. for improving contrast
G01N 2015/1456	...	{ without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals }
G01N 2015/1461	....	Coincidence detecting ; Circuits therefor
G01N 2015/1463	....	{ using image analysis for extracting features of the particle }

**NOTE**

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#)
- image enhancement in general [G06T 5/00](#)
- image analysis in general [G06T 7/00](#) ]

G01N 2015/1465	.....	image analysis on colour image
G01N 2015/1468	...	{ with spatial resolution of the texture or inner structure of the particle } { Informative Note References listed below indicate CPC places which could also be interest when carrying out a search in respect of the subject matter covered by the preceding group: -counting objects disposed at random with size distinction <a href="#">G06M 11/04</a> -extraction of features from image for pattern recognition <a href="#">G06K 9/46</a> -specific image analysis method for the recognition of microscopic objects <a href="#">G06K 9/00127</a> -image enhancement in general <a href="#">G06T 5/00</a> -image analysis in general <a href="#">G06T 7/00</a> }

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- image enhancement [G06T 5/00](#)
- image analysis [G06T 7/00](#)

G01N 2015/1472	....	with colour
G01N 2015/1477	...	Multiparameters
G01N 2015/1479	....	Using diffuse illumination or excitation
G01N 2015/1481	...	Optical analysis of particle in droplet
G01N 2015/1486	...	Counting the particles
G01N 2015/1488	...	Methods for deciding
G01N 2015/149	...	Sorting the particles
G01N 2015/1493	...	Particle size
G01N 2015/1495	....	Deformation of particles
G01N 2015/1497	...	Particle shape

**G01N 2021/00**

**Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible, or ultra-violet light** ( [G01N 3/00](#) to [G01N 19/00](#) take precedence; measuring stress in general [G01L 1/00](#) ; optical elements of measuring instruments [G02B](#) )

**NOTE**

This group does not cover the investigation of spectral properties of light per se, or measurements of the properties of materials where spectral properties of light are sensed and primary emphasis is placed on creating, detecting or analysing the spectrum providing that the properties of the materials to be investigated are of minor importance (see also Note (4) after the title of class [G01](#) ). Those subjects are covered by group [G01J 3/00](#) .

**G01N 2021/01**

. Arrangements or apparatus for facilitating the optical investigation

**[G01N 2021/0106](#)**

.. General arrangement of respective parts

**[G01N 2021/0112](#)**

... Apparatus in one mechanical, optical or electronic block

**[G01N 2021/0118](#)**

... Apparatus with remote processing

**[G01N 2021/0125](#)**

.... with stored program or instructions

**[G01N 2021/0131](#)**

..... being externally stored

**[G01N 2021/0137](#)**

.... with PC or the like

**[G01N 2021/0143](#)**

.... with internal and external computer

**[G01N 2021/015](#)**

... Apparatus with interchangeable optical heads or interchangeable block of optics and detector

**[G01N 2021/0156](#)**

.... with optics only in separate head, e.g. connection by optical fibres

**[G01N 2021/0162](#)**

.. using microprocessors for control of a sequence of operations, e.g. test, powering, switching, processing

**[G01N 2021/0168](#)**

... for the measurement cycle

**[G01N 2021/0175](#)**

... for selecting operating means

**[G01N 2021/0181](#)**

.. Memory or computer-assisted visual determination

**[G01N 2021/0187](#)**

.. Mechanical sequence of operations

**[G01N 2021/0193](#)**

.. the sample being taken from a stream or flow to the measurement cell

**[G01N 2021/03](#)**

.. Cuvette constructions

**[G01N 2021/0303](#)**

... { Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment ( [G01N 21/031](#) to [G01N 21/15](#) take precedence ) }

**[G01N 2021/0307](#)**

.... Insert part in cell

**[G01N 2021/031](#)**

... { Multipass arrangements }

**[G01N 2021/0314](#)**

.... Double pass, autocollimated path

**[G01N 2021/0321](#)**

... One time use cells, e.g. integrally moulded

**[G01N 2021/0325](#)**

... Cells for testing reactions, e.g. containing reagents

**[G01N 2021/0328](#)**

.... Arrangement of two or more cells having different functions for the measurement of reactions

**[G01N 2021/0332](#)**

... { with temperature control ( control of temperature [G05D 23/00](#) ; cryostats [F17C 3/08](#) ) }

**[G01N 2021/0335](#)**

.... Refrigeration of cells ; Cold stages

G01N 2021/0339	...	Holders for solids, powders
G01N 2021/0342	...	Solid sample being immersed, e.g. equiindex fluid
G01N 2021/0346	...	Capillary cells ; Microcells
G01N 2021/035	....	Supports for sample drops
G01N 2021/0353	.....	Conveyer of successive sample drops
G01N 2021/0357	...	Sets of cuvettes
G01N 2021/036	...	transformable, modifiable
G01N 2021/0364	...	flexible, compressible
G01N 2021/0367	...	Supports of cells, e.g. pivotable
G01N 2021/0371	....	Supports combined with sample intake
G01N 2021/0375	....	Slidable cells
G01N 2021/0378	...	Shapes
G01N 2021/0382	....	Frustoconical, tapered cell
G01N 2021/0385	...	Diffusing membrane ; Semipermeable membrane
G01N 2021/0389	...	Windows
G01N 2021/0392	....	Nonplanar windows
G01N 2021/0396	....	Oblique incidence
G01N 2021/05	...	Flow-through cuvettes ( <a href="#">G01N 21/09</a> takes precedence; handling fluid samples <a href="#">G01N 1/10</a> )
G01N 2021/052	....	Tubular type ; cavity type ; multireflective
G01N 2021/054	....	Bubble trap ; Debubbling
G01N 2021/056	....	Laminated construction
G01N 2021/058	....	Flat flow cell
G01N 2021/11	..	Filling or emptying of cuvettes
G01N 2021/115	...	Washing ; Purging
G01N 2021/13	..	Moving of cuvettes or solid samples to or from the investigating station { <a href="#">handling materials for automatic analysis G01N 35/00</a> }
G01N 2021/135	...	Sample holder displaceable ( <a href="#">in automatised apparatus G01N 35/02</a> )
G01N 2021/15	..	Preventing contamination of the components of the optical system or obstruction of the light path
G01N 2021/151	...	Gas blown
G01N 2021/152	...	Scraping ; Brushing ; Moving band
G01N 2021/154	...	Ultrasonic cleaning
G01N 2021/155	...	Monitoring cleanness of window, lens, or other parts
G01N 2021/157	....	Monitoring by optical means
G01N 2021/158	...	Eliminating condensation
G01N 2021/17	.	Systems in which incident light is modified in accordance with the properties of the material investigated ( <a href="#">where the material investigated is optically excited causing a change in wavelength of the incident light G01N 21/63</a> )
G01N 2021/1702	..	{ <a href="#">with opto-acoustic detection, e.g. for gases or analysing solids</a> }
G01N 2021/1704	...	in gases
G01N 2021/1706	...	in solids
G01N 2021/1708	...	with piezotransducers ( <a href="#">probes for investigating or analysing materials by the</a>

- use of ultrasonic, sonic or infrasonic waves [G01N 29/24](#) )
- G01N 2021/171 .. { with calorimetric detection, e.g. with thermal lens detection }
- G01N 2021/1712 ... Thermal lens, mirage effect
- G01N 2021/1714 ... Photothermal radiometry with measurement of emission
- G01N 2021/1717 .. { with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance }
- G01N 2021/1719 ... Carrier modulation in semiconductors
- G01N 2021/1721 ... Electromodulation
- G01N 2021/1723 ... Fluid modulation
- G01N 2021/1725 ... Modulation of properties by light, e.g. photoreflectance
- G01N 2021/1727 ... Magnetomodulation
- G01N 2021/1729 ... Piezomodulation
- G01N 2021/1731 ... Temperature modulation
- G01N 2021/1734 .. Sequential different kinds of measurements ; Combining two or more methods
- G01N 2021/1736 ... with two or more light sources
- G01N 2021/1738 .. Optionally different kinds of measurements ; Method being valid for different kinds of measurement
- G01N 2021/174 ... either absorption-reflection or emission-fluorescence
- G01N 2021/1742 ... either absorption or reflection
- G01N 2021/1744 ... either absorption or scatter
- G01N 2021/1746 .. Method using tracers
- G01N 2021/1748 .. Comparative step being essential in the method
- G01N 2021/1751 ... Constructive features therefore, e.g. using two measurement cells
- G01N 2021/1753 .... and using two light sources
- G01N 2021/1755 .... and using two apparatus or two probes
- G01N 2021/1757 .. Time modulation of light being essential to the method of light modification, e.g. using single detector ( [circuits for photometry with modulation, using one detector S01J 1/44M](#) )
- G01N 2021/1759 ... Jittering, dithering, optical path modulation
- G01N 2021/1761 .. A physical transformation being implied in the method, e.g. a phase change
- G01N 2021/1763 ... Gas to liquid phase change
- G01N 2021/1765 .. Method using an image detector and processing of image signal
- G01N 2021/1768 ... using photographic film
- G01N 2021/177 ... Detector of the video camera type
- G01N 2021/1772 .... Array detector
- G01N 2021/1774 ..... Line array detector
- G01N 2021/1776 .... Colour camera
- G01N 2021/1778 .... IIT [intensified image tube]
- G01N 2021/178 .. Methods for obtaining spatial resolution of the property being measured
- G01N 2021/1782 ... In-depth resolution
- G01N 2021/1785 ... Three dimensional
- G01N 2021/1787 .... Tomographic, i.e. computerised reconstruction from projective measurements
- G01N 2021/1789 .. Time resolved

G01N 2021/1791	...	stroboscopic ; pulse gated ; time range gated
G01N 2021/1793	..	Remote sensing
G01N 2021/1795	...	Atmospheric mapping of gases
G01N 2021/1797	...	in landscape, e.g. crops
G01N 2021/21	..	Polarisation-affecting properties ( <a href="#">G01N 21/19 takes precedence</a> )
G01N 2021/211	...	{ <a href="#">Ellipsometry ( optical thickness measurement G01B 11/06 )</a> }
G01N 2021/212	....	Arrangement with total internal reflection
G01N 2021/213	....	Spectrometric ellipsometry
G01N 2021/214	....	Variangle incidence arrangement
G01N 2021/215	....	Brewster incidence arrangement
G01N 2021/216	...	using circular polarised light
G01N 2021/217	...	Measuring depolarisation or comparing polarised and depolarised parts of light
G01N 2021/218	...	Measuring properties of electrooptical or magnetooptical media
G01N 2021/25	..	Colour ; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands
G01N 2021/258	...	Surface plasmon spectroscopy, e.g. micro- or nano- particles in suspension
G01N 2021/29	...	using visual detection ( <a href="#">G01N 21/31 takes precedence</a> )
G01N 2021/296	....	Visually measuring scintillation effect
G01N 2021/31	...	Investigating relative effect of material at wavelengths characteristic of specific elements or molecules, e.g. atomic absorption spectrometry { ( <a href="#">G01N 21/72 takes precedence</a> ) }
G01N 2021/3103	....	{ <a href="#">Atomic absorption analysis</a> }
G01N 2021/3107	.....	Cold vapor, e.g. determination of Hg
G01N 2021/3111	.....	using Zeeman split
G01N 2021/3114	.....	Multi-element AAS arrangements
G01N 2021/3118	.....	Commutating sources, e.g. line source/broad source, chopping for comparison of broad/narrow regimes
G01N 2021/3122	.....	using a broad source with a monochromator
G01N 2021/3125	....	Measuring the absorption by excited molecules
G01N 2021/3129	....	Determining multicomponents by multiwavelength light
G01N 2021/3133	.....	with selection of wavelengths before the sample
G01N 2021/3137	.....	with selection of wavelengths after the sample
G01N 2021/314	....	{ <a href="#">with comparison of measurements at specific and non-specific wavelengths ( dual wavelength spectrometry G01J 3/427 )</a> }
G01N 2021/3144	.....	for oxymetry
G01N 2021/3148	.....	using three or more wavelengths
G01N 2021/3155	.....	Measuring in two spectral ranges, e.g. UV and visible
G01N 2021/3159	.....	Special features of multiplexing circuits
G01N 2021/3162	.....	with offset adjustment between filters
G01N 2021/3166	.....	using separate detectors and filters
G01N 2021/317	.....	Special constructive features
G01N 2021/3174	.....	Filter wheel
G01N 2021/3177	.....	Use of spatially separated filters in simultaneous way
G01N 2021/3181	.....	using LEDs

G01N 2021/3185	....	typically monochromatic or band-limited
G01N 2021/3188	.....	band-limited
G01N 2021/3192	.....	Absorption edge variation is measured
G01N 2021/3196	....	Correlating located peaks in spectrum with reference data, e.g. fingerprint data
G01N 2021/33	....	using ultra-violet light ( <a href="#">G01N 21/39</a> takes precedence )
G01N 2021/335	.....	Vacuum UV
G01N 2021/35	....	using infra-red light ( <a href="#">G01N 21/39</a> takes precedence )
G01N 2021/3504	.....	{ for analysing gases, e.g. multigases analysis }
G01N 2021/3509	.....	Correlation method, e.g. one beam alternating in correlator/sample field
G01N 2021/3513	.....	Open path with an instrumental source
G01N 2021/3518	.....	{ Devices using the gas filter correlation method including the radiometric type, i.e. without instrumental source; Devices using gas pressure modulation method }
G01N 2021/3522	.....	balancing by two filters on two detectors
G01N 2021/3527	.....	and using one filter cell as attenuator
G01N 2021/3531	.....	without instrumental source, i.e. radiometric
G01N 2021/3536	.....	using modulation of pressure or density
G01N 2021/354	.....	Hygrometry of gases
G01N 2021/3545	.....	Disposition for compensating effect of interfering gases
G01N 2021/355	.....	by using a third optical path, e.g. interference cuvette
G01N 2021/3563	.....	{ for analysing solids; preparation of samples therefor ( <a href="#">sampling or preparing specimen for investigation in general G01N 1/00</a> ) }
G01N 2021/3568	.....	applied to semiconductors, e.g. Silicon
G01N 2021/3572	.....	Preparation of samples, e.g. salt matrices
G01N 2021/3595	.....	using FTIR
G01N 2021/39	....	using tunable lasers
G01N 2021/391	.....	Intracavity sample
G01N 2021/392	.....	Measuring reradiation, e.g. fluorescence, backscatter
G01N 2021/393	.....	and using a spectral variation of the interaction of the laser beam and the sample
G01N 2021/394	.....	DIAL method
G01N 2021/395	.....	using a topographic target
G01N 2021/396	.....	Type of laser source
G01N 2021/397	.....	Dye laser
G01N 2021/398	.....	CO2 laser
G01N 2021/399	.....	Diode laser
G01N 2021/41	..	Refractivity ; Phase-affecting properties, e.g. optical path length ( <a href="#">G01N 21/21</a> takes precedence )
G01N 2021/4106	...	Atmospheric distortion ; Turbulence
G01N 2021/4113	....	Atmospheric dispersion
G01N 2021/4126	...	Index of thin films
G01N 2021/4133	...	{ Refractometers, e.g. differential }

G01N 2021/414	....	Correcting temperature effect in refractometers
G01N 2021/4146	....	Differential cell arrangements
G01N 2021/4153	....	Measuring the deflection of light in refractometers
G01N 2021/416	...	Visualising flow by index measurement
G01N 2021/4166	...	Methods effecting a waveguide mode enhancement through the property being measured
G01N 2021/4173	...	Phase distribution
G01N 2021/418	....	Frequency/phase diagrams
G01N 2021/4186	....	Phase modulation imaging
G01N 2021/4193	....	using a PSD
G01N 2021/43	...	by measuring critical angle
G01N 2021/431	....	{ Dip refractometers, e.g. using optical fibres }
G01N 2021/432	.....	comprising optical fibres
G01N 2021/433	.....	with an unclad part on the fibre
G01N 2021/434	....	Dipping block in contact with sample, e.g. prism
G01N 2021/435	....	Sensing drops on the contact surface
G01N 2021/436	....	Sensing resonant reflection
G01N 2021/437	.....	with investigation of angle
G01N 2021/438	.....	with investigation of wavelength
G01N 2021/45	...	using interferometric methods ; using Schlieren methods
G01N 2021/451	....	for determining the optical absorption
G01N 2021/456	....	Moire deflectometry
G01N 2021/458	....	using interferential sensor, e.g. sensor fibre, possibly on optical waveguide
G01N 2021/47	..	Scattering, i.e. diffuse reflection ( <a href="#">G01N 21/25</a> , <a href="#">G01N 21/41</a> take precedence ) { <a href="#">G01N 21/55</a> takes precedence }
G01N 2021/4702	...	Global scatter ; Total scatter, excluding reflections
G01N 2021/4704	...	Angular selective
G01N 2021/4707	....	Forward scatter ; Low angle scatter
G01N 2021/4709	....	Backscatter
G01N 2021/4711	....	Multiangle measurement
G01N 2021/4714	.....	Continuous plural angles
G01N 2021/4716	.....	Using a ring of sensors, or a combination of diaphragm and sensors ; Annular sensor
G01N 2021/4719	.....	using a optical fibre array
G01N 2021/4721	.....	using a PSD
G01N 2021/4723	.....	Scanning scatter angles
G01N 2021/4726	....	Detecting scatter at 90°
G01N 2021/4728	....	Optical definition of scattering volume
G01N 2021/473	...	Compensating for unwanted scatter, e.g. reliefs, marks
G01N 2021/4733	...	Discriminating different types of scatterers
G01N 2021/4735	...	Solid samples, e.g. paper, glass
G01N 2021/4738	...	{ Diffuse reflection ( precedence is given to <a href="#">G01N 21/55</a> - <a href="#">G01N 21/57</a> if specular component is taken into consideration ) , e.g. also for testing fluids, fibrous materials }



G01N 2021/474	....	{ Details of optical heads therefor, e.g. using optical fibres }
G01N 2021/4742	.....	comprising optical fibres
G01N 2021/4745	.....	Fused bundle, i.e. for backscatter
G01N 2021/4747	.....	Concentric bundles
G01N 2021/475	.....	Bifurcated bundle
G01N 2021/4752	.....	Geometry
G01N 2021/4754	.....	Diffuse illumination
G01N 2021/4757	.....	Geometry 0/45° or 45/0°
G01N 2021/4759	.....	Annular illumination
G01N 2021/4761	.....	Mirror arrangements, e.g. in IR range
G01N 2021/4764	....	Special kinds of physical applications
G01N 2021/4766	.....	Sample containing fluorescent brighteners
G01N 2021/4769	.....	Fluid samples, e.g. slurries, granulates ; Compressible powdery or fibrous samples
G01N 2021/4771	.....	Matte surfaces with reflecting particles
G01N 2021/4773	.....	Partly or totally translucent samples
G01N 2021/4776	....	Miscellaneous in diffuse reflection devices
G01N 2021/4778	.....	Correcting variations in front distance
G01N 2021/478	.....	Application in testing analytical test strips
G01N 2021/4783	.....	Examining under varying incidence ; Angularly adjustable head
G01N 2021/4788	...	{ Diffraction ( for sizing particles <a href="#">G01N 15/0205</a> ) }
G01N 2021/479	....	Speckle
G01N 2021/4792	...	Polarisation of scatter light
G01N 2021/4795	...	{ spatially resolved investigating of object in scattering medium ( in vivo <a href="#">A61B</a> ) }
G01N 2021/4797	.....	time resolved, e.g. analysis of ballistic photons
G01N 2021/49	...	within a body or fluid
G01N 2021/495	.....	the fluid being adsorbed, e.g. in porous medium
G01N 2021/51	....	inside a container, e.g. in an ampoule ( <a href="#">G01N 21/53</a> takes precedence; checking containers for cleanliness <a href="#">B08B 9/46</a> )
G01N 2021/513	.....	Cuvettes for scattering measurements
G01N 2021/516	.....	Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays
G01N 2021/53	....	within a flowing fluid, e.g. smoke ( alarm devices actuated by smoke <a href="#">G08B 17/10</a> )
G01N 2021/534	.....	{ by measuring transmission alone, i.e. determining opacity }
G01N 2021/536	.....	Measurement device mounted at stack
G01N 2021/55	..	Specular reflectivity
G01N 2021/551	...	Retroreflectance
G01N 2021/555	...	Measuring total reflection power, i.e. scattering and specular
G01N 2021/556	...	Measuring separately scattering and specular
G01N 2021/557	...	Detecting specular reflective parts on sample
G01N 2021/558	...	Measuring reflectivity and transmission
G01N 2021/559	...	Determining variation of specular reflection within diffusively reflecting sample

G01N 2021/57	...	Measuring gloss
G01N 2021/575	....	Photogoniometering
G01N 2021/59	..	Transmissivity ( <a href="#">G01N 21/25</a> takes precedence )
G01N 2021/5903	...	using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]
G01N 2021/5907	...	{ <a href="#">Densitometers</a> }
G01N 2021/5915	....	Processing scan data in densitometry
G01N 2021/5919	.....	Determining total density of a zone
G01N 2021/5923	.....	Determining zones of density ; quantitating spots
G01N 2021/5926	.....	Isodensitometers
G01N 2021/593	.....	Correcting from the background density
G01N 2021/5934	.....	Averaging on a zone
G01N 2021/5938	.....	Features of monitor, display
G01N 2021/5942	.....	for dot area ratio in printing applications
G01N 2021/5946	.....	for binary signal
G01N 2021/5949	.....	Correcting nonlinearity of signal, e.g. in measurement of photomedium
G01N 2021/5953	.....	for detecting a spatial spectrum
G01N 2021/5957	....	using an image detector type detector, e.g. CCD
G01N 2021/5961	.....	using arrays of sources and detectors
G01N 2021/5965	.....	using selected detectors in an array
G01N 2021/5969	....	Scanning of a tube, a cuvette, a volume of sample
G01N 2021/5973	.....	where the cuvette or tube is moved
G01N 2021/5976	....	Image projected and scanning projected image
G01N 2021/598	....	Features of mounting, adjusting
G01N 2021/5984	.....	height adjustable
G01N 2021/5988	.....	Fluid mounting or the like, e.g. vortex
G01N 2021/5992	.....	Double pass
G01N 2021/5996	.....	Positioning the head
G01N 2021/62	.	Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light
G01N 2021/625	..	Excitation by energised particles such as metastable molecules
G01N 2021/63	..	optically excited
G01N 2021/631	...	{ <a href="#">using photolysis and investigating photolysed fragments</a> }
G01N 2021/632	....	Predissociation, e.g. for fluorescence of transient excited radicals
G01N 2021/633	...	Photoinduced grating used for analysis
G01N 2021/634	...	Photochromic material analysis
G01N 2021/635	...	Photosynthetic material analysis, e.g. chlorophyll
G01N 2021/636	...	{ <a href="#">using an arrangement of pump beam and probe beam; using the measurement of optical non-linear properties; ( non-linear optics per se <a href="#">G02F 1/35</a> )</a> }
G01N 2021/637	....	Lasing effect used for analysis
G01N 2021/638	....	Brillouin effect, e.g. stimulated Brillouin effect
G01N 2021/64	...	Fluorescence ; Phosphorescence

G01N 2021/6402	....	{ Atomic fluorescence; Laser induced fluorescence }
G01N 2021/6404	.....	{ Atomic fluorescence }
G01N 2021/6406	.....	multi-element
G01N 2021/6408	....	{ with measurement of decay time, time resolved fluorescence }
G01N 2021/641	.....	Phosphorimetry, gated
G01N 2021/6413	.....	Distinction short and delayed fluorescence or phosphorescence
G01N 2021/6415	.....	with two excitations, e.g. strong pump/probe flash
G01N 2021/6417	....	Spectrofluorimetric devices
G01N 2021/6419	.....	Excitation at two or more wavelengths
G01N 2021/6421	.....	Measuring at two or more wavelengths
G01N 2021/6423	.....	Spectral mapping, video display
G01N 2021/6426	.....	Determining Fraunhofer lines
G01N 2021/6428	....	{ Measuring fluorescence of fluorescent products of reactions or of fluorochrome labelled reactive substances, e.g. measuring quenching effects, using measuring "optrodes" ( in vivo <a href="#">A61B 5/00</a> ; immunoassay <a href="#">G01N 33/53</a> ) }
G01N 2021/6432	.....	Quenching
G01N 2021/6434	.....	Optrodes
G01N 2021/6436	.....	for analysing tapes
G01N 2021/6439	.....	with indicators, stains, dyes, tags, labels, marks
G01N 2021/6441	.....	with two or more labels
G01N 2021/6443	.....	Fluorimetric titration
G01N 2021/645	....	{ Specially adapted constructive features of fluorimeters }

**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64 M](#)

G01N 2021/6456	.....	{ Spatial resolved fluorescence measurements; Imaging }
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**WARNING**

Not complete, see also [G01N 21/6428](#) to [G01N 21/64 M](#)

G01N 2021/646	.....	Detecting fluorescent inhomogeneities at a position, e.g. for detecting defects
G01N 2021/6463	.....	Optics
G01N 2021/6465	.....	Angular discrimination
G01N 2021/6467	.....	Axial flow and illumination
G01N 2021/6469	.....	Cavity, e.g. ellipsoid
G01N 2021/6471	.....	Special filters, filter wheel
G01N 2021/6473	.....	In-line geometry
G01N 2021/6476	.....	Front end, i.e. backscatter, geometry
G01N 2021/6478	.....	Special lenses
G01N 2021/6482	.....	Sample cells, cuvettes
G01N 2021/6484	.....	Optical fibres

G01N 2021/6491	....	Measuring fluorescence and transmission ; Correcting inner filter effect
G01N 2021/6493	.....	by alternating fluorescence/transmission or fluorescence/reflection
G01N 2021/6495	....	Miscellaneous methods
G01N 2021/6497	....	Miscellaneous applications
G01N 2021/65	...	Raman scattering
G01N 2021/651	....	Cuvettes therefore
G01N 2021/653	....	Coherent methods (CARS)
G01N 2021/655	.....	Stimulated Raman
G01N 2021/656	.....	Raman microprobe
G01N 2021/66	..	electrically excited, e.g. electroluminescence
G01N 2021/69	...	specially adapted for fluids { e.g. molten metal }
G01N 2021/695	....	Molten metals
G01N 2021/71	..	thermally excited
G01N 2021/712	...	using formation of volatile hydride
G01N 2021/72	...	using flame burners
G01N 2021/725	....	for determining of metalloids, using Beilstein type reaction
G01N 2021/74	...	using flameless atomising, e.g. graphite furnaces
G01N 2021/745	....	Control of temperature, heating, ashing
G01N 2021/75	.	Systems in which material is subjected to a chemical reaction, the progress or the result of the reaction being investigated ( systems in which material is burnt in a flame or plasma <a href="#">G01N 21/72</a> , <a href="#">G01N 21/73</a> )
G01N 2021/751	..	Comparing reactive/non reactive substances
G01N 2021/752	..	Devices comprising reaction zones
G01N 2021/754	..	Reagent flow and intermittent injection of sample or vice-versa
G01N 2021/755	..	Comparing readings with/without reagents, or before/after reaction
G01N 2021/757	..	using immobilised reagents
G01N 2021/758	..	using reversible reaction
G01N 2021/77	..	by observing the effect on a chemical indicator
G01N 2021/7703	...	{ using reagent-clad optical fibres or optical waveguides ( using measurement of total internal reflection or attenuated total reflection <a href="#">G01N 21/552</a> ; optical fibres or waveguides per se <a href="#">G02B</a> ) }
G01N 2021/7706	....	Reagent provision
G01N 2021/7709	.....	Distributed reagent, e.g. over length of guide
G01N 2021/7713	.....	in core
G01N 2021/7716	.....	in cladding
G01N 2021/772	.....	Tip coated light guide
G01N 2021/7723	.....	Swelling part, also for adsorption sensor, i.e. without chemical reaction
G01N 2021/7726	.....	Porous glass
G01N 2021/773	.....	Porous polymer jacket ; Polymer matrix with indicator
G01N 2021/7733	.....	Reservoir, liquid reagent
G01N 2021/7736	.....	exposed, cladding free
G01N 2021/775	...	Indicator and selective membrane
G01N 2021/7753	...	Reagent layer on photoelectrical transducer

G01N 2021/7756	...	Sensor type
G01N 2021/7759	....	Dipstick ; Test strip
G01N 2021/7763	....	Sample through flow
G01N 2021/7766	....	Capillary fill
G01N 2021/7769	...	Measurement method of reaction-produced change in sensor
G01N 2021/7773	....	Reflection
G01N 2021/7776	....	Index
G01N 2021/7779	....	interferometric
G01N 2021/7783	....	Transmission, loss
G01N 2021/7786	....	Fluorescence
G01N 2021/7789	....	Cavity or resonator
G01N 2021/7793	...	Sensor comprising plural indicators
G01N 2021/7796	...	Special mountings, packaging of indicators
G01N 2021/78	...	producing a change of colour
G01N 2021/786	....	with auxiliary heating for reaction
G01N 2021/82	...	producing a precipitate or turbidity
G01N 2021/825	....	Agglutination
G01N 2021/84	.	Systems specially adapted for particular applications
G01N 2021/8405	..	Application to two-phase or mixed materials, e.g. gas dissolved in liquids
G01N 2021/8411	..	Application to online plant, process monitoring
G01N 2021/8416	...	and process controlling, not otherwise provided for
G01N 2021/8422	..	{ Investigating thin films, e.g. matrix isolation method }
G01N 2021/8427	...	Coatings
G01N 2021/8433	....	Comparing coated/uncoated parts
G01N 2021/8438	...	Multilayers
G01N 2021/8444	..	Fibrous material
G01N 2021/845	..	Objects on a conveyer
G01N 2021/8455	...	and using position detectors
G01N 2021/8461	..	Investigating impurities in semiconductor, e.g. Silicon
G01N 2021/8466	..	Investigation of vegetal material, e.g. leaves, plants, fruits
G01N 2021/8472	..	Investigation of composite materials
G01N 2021/8477	..	Investigating crystals, e.g. liquid crystals
G01N 2021/8483	..	{ Investigating reagent band ( test-element handling not specific to a test method <a href="#">G01N 33/4875</a> ; analytical elements specific to chemical analysis of biological material <a href="#">G01N 33/52</a> ; autometer with reagent band <a href="#">G01N 35/04</a> ) }
G01N 2021/8488	...	the band presenting reference patches
G01N 2021/8494	...	Measuring or storing parameters of the band
G01N 2021/85	..	Investigating moving fluids or granular solids
G01N 2021/8507	...	{ Probe photometers, i.e. with optical measuring part dipped into fluid sample }
G01N 2021/8514	....	with immersed mirror
G01N 2021/8521	.....	with a combination mirror cell-cuvette
G01N 2021/8528	....	Immersed light conductor

G01N 2021/8535	.....	presenting a cut
G01N 2021/8542	.....	presenting an exposed part of the core
G01N 2021/855	....	Underground probe, e.g. with provision of a penetration tool
G01N 2021/8557	...	Special shaping of flow, e.g. using a by-pass line, jet flow, curtain flow
G01N 2021/8564	....	Sample as drops
G01N 2021/8571	...	using filtering of sample fluid
G01N 2021/8578	...	Gaseous flow ( <a href="#">IR analysers G01N 21/8507</a> )
G01N 2021/8585	....	using porous sheets, e.g. for separating aerosols
G01N 2021/8592	...	Grain or other flowing solid samples
G01N 2021/86	..	Investigating moving sheets ( <a href="#">G01N 21/89 takes precedence</a> )
G01N 2021/8609	...	Optical head specially adapted
G01N 2021/8618	....	with an optically integrating part, e.g. hemisphere
G01N 2021/8627	....	with an illuminator over the whole width
G01N 2021/8636	.....	Detecting arrangement therefore, e.g. collimators, screens
G01N 2021/8645	...	using multidetectors, detector array
G01N 2021/8654	...	Mechanical support ; Mounting of sheet
G01N 2021/8663	...	Paper, e.g. gloss, moisture content ( <a href="#">inspecting the presence of flaws in moving materials, e.g. paper G01N 21/89</a> ; <a href="#">measurement of gloss in general G01N 21/57</a> )
G01N 2021/8672	....	Paper formation parameter
G01N 2021/8681	....	Paper fibre orientation
G01N 2021/869	...	Plastics or polymeric material, e.g. polymers orientation in plastic, adhesive imprinted band
G01N 2021/88	..	Investigating the presence of flaws or contamination
G01N 2021/8806	...	{ <a href="#">Specially adapted optical and illumination features</a> }
G01N 2021/8809	....	Adjustment for highlighting flaws
G01N 2021/8812	....	Diffuse illumination, e.g. "sky"
G01N 2021/8816	.....	by using multiple sources, e.g. LEDs
G01N 2021/8819	.....	by using retroreflecting screen
G01N 2021/8822	....	Dark field detection
G01N 2021/8825	.....	Separate detection of dark field and bright field
G01N 2021/8829	....	Shadow projection or structured background, e.g. for deflectometry ( <a href="#">three-dimensional metrology of surfaces G01B 11/25</a> )
G01N 2021/8832	.....	Structured background, e.g. for transparent objects
G01N 2021/8835	....	Adjustable illumination, e.g. software adjustable screen
G01N 2021/8838	....	Stroboscopic illumination ; synchronised illumination
G01N 2021/8841	....	Illumination and detection on two sides of object
G01N 2021/8845	....	Multiple wavelengths of illumination or detection
G01N 2021/8848	....	Polarisation of light

G01N 2021/8851	...	{ Scan or image signal processing specially adapted therefor, e.g. for scan signal adjustment, for detecting different kinds of defects, for compensating for structures, markings, edges ( <a href="#">G01N 21/8806</a> and <a href="#">G01N 21/93</a> to <a href="#">G01N 21/95692</a> take precedence; optical measurement of dimensions <a href="#">G01B 11/00</a> ; optical scanning <a href="#">G02B 26/10</a> ; image transformation <a href="#">G06T 3/00</a> ; computerised image enhancement <a href="#">G06T 5/00</a> ; image processing per se for flaw detection <a href="#">G06T 7/0002</a> ) }
G01N 2021/8854	....	Grading and classifying of flaws
G01N 2021/8858	.....	Flaw counting
G01N 2021/8861	.....	Determining coordinates of flaws
G01N 2021/8864	.....	Mapping zones of defects
G01N 2021/8867	.....	using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing
G01N 2021/887	.....	the measurements made in two or more directions, angles, positions
G01N 2021/8874	.....	Taking dimensions of defect into account
G01N 2021/8877	.....	Proximity analysis, local statistics
G01N 2021/888	.....	Marking defects
G01N 2021/8883	....	involving the calculation of gauges, generating models
G01N 2021/8887	....	based on image processing techniques
G01N 2021/889	.....	providing a bare video image, i.e. without visual measurement aids
G01N 2021/8893	.....	providing a video image and a processed signal for helping visual decision
G01N 2021/8896	....	Circuits specially adapted for system specific signal conditioning
G01N 2021/89	...	in moving material, e.g. running paper or textiles ( <a href="#">G01N 21/90</a> , <a href="#">G01N 21/91</a> , <a href="#">G01N 21/94</a> take precedence )
G01N 2021/8901	....	{ Optical details; Scanning details ( per se <a href="#">G02B</a> ) }
G01N 2021/8902	.....	Anamorphic spot
G01N 2021/8904	.....	Sheetwide light conductor on detecting side, e.g. fluorescing light rod
G01N 2021/8905	.....	Directional selective optics, e.g. slits, spatial filters
G01N 2021/8907	.....	Cylindrical optics
G01N 2021/8908	.....	Strip illuminator, e.g. light tube
G01N 2021/8909	....	Scan signal processing specially adapted for inspection of running sheets
G01N 2021/891	.....	Edge discrimination, e.g. by signal filtering
G01N 2021/8911	.....	Setting scan-width signals
G01N 2021/8912	.....	Processing using lane subdivision
G01N 2021/8914	....	{ characterised by the material examined }
G01N 2021/8917	.....	Paper, also ondulated
G01N 2021/8918	.....	Metal
G01N 2021/892	....	characterised by the flaw, defect or object feature examined
G01N 2021/8924	.....	Dents ; Relief flaws
G01N 2021/8925	.....	Inclusions
G01N 2021/8927	.....	Defects in a structured web
G01N 2021/8928	.....	Haze defects, i.e. with a part of diffracted light
G01N 2021/896	.....	Optical defects in or on transparent materials, e.g. distortion, surface flaws { in conveyed flat sheet or rod ( for other objects <a href="#">G01N 21/958</a> ) }



<a href="#">G01N 2021/8962</a>	.....	for detecting separately opaque flaws and refracting flaws
<a href="#">G01N 2021/8965</a>	.....	using slant illumination, using internally reflected light
<a href="#">G01N 2021/8967</a>	.....	Discriminating defects on opposite sides or at different depths of sheet or rod
<a href="#">G01N 2021/90</a>	...	in a container or its contents ( <a href="#">G01N 21/91</a> takes precedence )
<a href="#">G01N 2021/9063</a>	....	Hot-end container inspection
<a href="#">G01N 2021/93</a>	...	Detection standards ; Calibrating { <a href="#">baseline adjustment</a> , <a href="#">drift correction</a> }
<a href="#">G01N 2021/933</a>	....	Adjusting baseline or gain ( <a href="#">also for web inspection</a> )
<a href="#">G01N 2021/936</a>	....	Adjusting threshold, e.g. by way of moving average
<a href="#">G01N 2021/94</a>	...	Investigating contamination, e.g. dust ( <a href="#">G01N 21/85</a> takes precedence )
<a href="#">G01N 2021/945</a>	....	Liquid or solid deposits of macroscopic size on surfaces, e.g. drops, films, or clustered contaminants ( <a href="#">dust particles and microscopic contaminants in G01N 21/94</a> )
<a href="#">G01N 2021/95</a>	...	characterised by the material or shape of the object to be examined ( <a href="#">G01N 21/89</a> to <a href="#">G01N 21/91</a> , <a href="#">G01N 21/94</a> take precedence )
<a href="#">G01N 2021/9511</a>	....	Optical elements other than lenses, e.g. mirrors ( <a href="#">testing of optical apparatus in G01M11</a> )
<a href="#">G01N 2021/9513</a>	....	Liquid crystal panels
<a href="#">G01N 2021/9515</a>	....	{ <a href="#">Objects of complex shape, e.g. examined with use of a surface follower device ( measuring contours and curvatures G01B 11/24 )</a> }
<a href="#">G01N 2021/9516</a>	.....	whereby geometrical features are being masked
<a href="#">G01N 2021/9518</a>	.....	using a surface follower, e.g. robot
<a href="#">G01N 2021/954</a>	....	Inspecting the inner surface of hollow bodies, e.g. bores
<a href="#">G01N 2021/9542</a>	.....	using a probe
<a href="#">G01N 2021/9544</a>	.....	with emitter and receiver on the probe
<a href="#">G01N 2021/9546</a>	.....	with remote light transmitting, e.g. optical fibres
<a href="#">G01N 2021/9548</a>	.....	Scanning the interior of a cylinder
<a href="#">G01N 2021/956</a>	....	Inspecting patterns on the surface of objects ( <a href="#">contactless testing of electronic circuits G01R 31/308</a> ; <a href="#">testing currency G07D</a> { <a href="#">manufacturing processes per se of semiconductor devices implementing a measuring step H01L 22/10</a> } )
<a href="#">G01N 2021/95607</a>	.....	{ <a href="#">using a comparative method</a> }
<a href="#">G01N 2021/95615</a>	.....	with stored comparison signal
<a href="#">G01N 2021/9563</a>	.....	and suppressing pattern images
<a href="#">G01N 2021/95638</a>	.....	for PCB`s
<a href="#">G01N 2021/95646</a>	.....	Soldering
<a href="#">G01N 2021/95653</a>	.....	Through-holes
<a href="#">G01N 2021/95661</a>	.....	for leads, e.g. position, curvature
<a href="#">G01N 2021/95669</a>	.....	for solder coating, coverage
<a href="#">G01N 2021/95676</a>	.....	Masks, reticles, shadow masks
<a href="#">G01N 2021/958</a>	....	Inspecting transparent materials { <a href="#">or objects, e.g. windscreens ( for conveyed flat sheet or rod G01N 21/896 )</a> }
<a href="#">G01N 2021/9583</a>	.....	Lenses
<a href="#">G01N 2021/9586</a>	.....	Windscreens
<b>G01N 2027/00</b>		<b>Investigating or analysing materials by the use of electric, electro-chemical, or</b>

**magnetic means** ( [G01N 3/00](#) to [G01N 25/00](#) take precedence; measurement or testing electric or magnetic variables or of electric or magnetic properties of materials [G01R](#) )

- G01N 2027/02 . by investigating the impedance of the material
- G01N 2027/22 .. by investigating capacitance
- G01N 2027/221 ... { by investigating the dielectric properties ( using microwaves [G01N 22/00](#) ; measuring loss factors or dielectric constants per se [G01R 27/26](#) ) }
- G01N 2027/222 .... for analysing gases

**G01N 2030/00** **Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography** ( [G01N 3/00](#) to [G01N 29/00](#) take precedence; separation for the preparation or production of components [B01D 15/00](#) , [B01D 53/02](#) , [B01D 53/14](#) ; solid sorbent compositions in general [B01J 20/00](#) ; ion-exchange in general [B01J 39/00](#) to [B01J 49/00](#) ) { or field flow fractionation ( for preparation or production of components [B01D 21/00](#) , [B01D 43/00](#) , [B01D 45/00](#) or [B03C](#) ) }

#### **NOTE**

In this group, the following term is used with the meaning indicated:

- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.

- G01N 2030/0005 . { Field flow fractionation }
- G01N 2030/001 .. hydrodynamic fractionation, e.g. CHDF or HDC
- G01N 2030/0015 .. characterised by driving force
- G01N 2030/002 ... sedimentation or centrifugal FFF
- G01N 2030/0025 ... cross flow FFF
- G01N 2030/003 .... Asymmetrical flow
- G01N 2030/0035 ... electrical field
- G01N 2030/004 .. characterised by opposing force
- G01N 2030/0045 ... normal i.e. diffusion or thermal FFF
- G01N 2030/005 ... steric FFF, i.e. diffusion negligible for larger particles ; separation due to protrusion depth into carrier flow profile
- G01N 2030/0055 ... hyperlayer i.e. different particle populations in hyperlayers elevated above wall
- G01N 2030/006 .... lift hyperlayer i.e. hydrodynamic lift forces dominate steric effect
- G01N 2030/0065 ... Dielectric FFF, i.e. opposing forces dominate hydrodynamic lift forces and steric effects
- G01N 2030/007 .. programming of driving force ( [carrier programming G01N 30/02](#) )
- G01N 2030/0075 . Separation due to differential desorption
- G01N 2030/008 .. Thermal desorption
- G01N 2030/0085 .. the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds
- G01N 2030/009 . Extraction

G01N 2030/0095	. Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments
G01N 2030/02	. Column chromatography
G01N 2030/022	.. characterised by the kind of separation mechanism
G01N 2030/025	... Gas chromatography
G01N 2030/027	... Liquid chromatography
G01N 2030/04	.. Preparation or injection of sample to be analysed
G01N 2030/042	... Standards
G01N 2030/045	.... internal
G01N 2030/047	.... external
G01N 2030/06	... Preparation
G01N 2030/062	.... extracting sample from raw material
G01N 2030/065	.... using different phases to separate parts of sample
G01N 2030/067	.... by reaction, e.g. derivatising the sample
G01N 2030/08	.... using an enricher
G01N 2030/085	..... using absorbing precolumn
G01N 2030/12	.... by evaporation
G01N 2030/121	..... cooling ; cold traps
G01N 2030/122	..... cryogenic focusing
G01N 2030/123	..... using more than one trap
G01N 2030/125	..... pyrolysing
G01N 2030/126	..... evaporating sample
G01N 2030/127	..... PTV evaporation
G01N 2030/128	..... Thermal desorption analysis
G01N 2030/14	.... by elimination of some components
G01N 2030/143	..... selective absorption
G01N 2030/146	..... using membranes
G01N 2030/16	... Injection ( <a href="#">G01N 30/24</a> takes precedence )
G01N 2030/162	.... electromigration
G01N 2030/165	.... retention gaps
G01N 2030/167	.... on-column injection
G01N 2030/18	.... using a septum or microsyringe
G01N 2030/185	..... specially adapted to seal the inlet
G01N 2030/20	.... using a sampling valve
G01N 2030/201	..... multiport valves, i.e. having more than two ports
G01N 2030/202	..... rotary valves
G01N 2030/204	..... Linearly moving valves, e.g. sliding valves
G01N 2030/205	..... Diaphragm valves, e.g. deformed member closing the passage
G01N 2030/207	..... with metering cavity, e.g. sample loop
G01N 2030/208	..... with more than one cavity
G01N 2030/26	.. Conditioning of the fluid carrier ; Flow patterns

G01N 2030/28	...	Control of physical parameters of the fluid carrier
G01N 2030/285	....	electrically driven carrier
G01N 2030/30	....	of temperature
G01N 2030/3007	.....	same temperature for whole column
G01N 2030/3015	.....	temperature gradients along column
G01N 2030/3023	.....	using cryogenic fluids
G01N 2030/303	.....	using peltier elements
G01N 2030/3038	.....	temperature control of column exit, e.g. of restrictors
G01N 2030/3046	.....	temperature control of column inlet
G01N 2030/3053	.....	using resistive heating
G01N 2030/3061	.....	column or associated structural member used as heater
G01N 2030/3069	.....	electrical resistance used to determine control temperature
G01N 2030/3076	.....	using specially adapted T(t) profile
G01N 2030/3084	.....	ovens
G01N 2030/3092	.....	Heat exchange between incoming and outgoing mobile phase
G01N 2030/32	....	of pressure or speed ( <a href="#">G01N 30/36 takes precedence</a> )
G01N 2030/322	.....	pulse dampers
G01N 2030/324	.....	speed, flow rate
G01N 2030/326	.....	pumps
G01N 2030/328	.....	valves, e.g. check valves of pumps
G01N 2030/34	....	of fluid composition, e.g. gradient ( <a href="#">G01N 30/36 takes precedence</a> )
G01N 2030/342	.....	fluid composition fixed during analysis
G01N 2030/345	.....	fluid electrical conductivity fixed during analysis
G01N 2030/347	.....	mixers
G01N 2030/38	...	Flow patterns
G01N 2030/381	....	centrifugal chromatography
G01N 2030/382	....	flow switching in a single column
G01N 2030/383	.....	by using auxiliary fluid
G01N 2030/385	.....	by switching valves
G01N 2030/386	....	Radial chromatography, i.e. with mobile phase traversing radially the stationary phase
G01N 2030/387	....	Turbulent flow of mobile phase
G01N 2030/388	....	Elution in two different directions on one stationary phase
G01N 2030/40	....	using back flushing
G01N 2030/402	.....	purging a device
G01N 2030/405	.....	re-concentrating or inverting previous separation
G01N 2030/407	.....	carrying out another separation
G01N 2030/44	....	using recycling of the fraction to be distributed
G01N 2030/445	.....	heart cut
G01N 2030/48	..	Sorbent materials therefor

**WARNING**

Groups [G01N 30/48](#) and [G01N 30/482](#) are no longer used for the classification of new documents as from September 1st, 2004. The backlog of these groups is being continuously reclassified to [B01J 20/281](#) and subgroups

<a href="#">G01N 2030/484</a>	...	Solid sorbents
<a href="#">G01N 2030/486</a>	...	gels
<a href="#">G01N 2030/488</a>	...	liquid sorbents
<a href="#">G01N 2030/50</a>	..	Conditioning of the sorbent material or stationary liquid
<a href="#">G01N 2030/52</a>	...	Physical parameters
<a href="#">G01N 2030/521</a>	....	form
<a href="#">G01N 2030/522</a>	....	pressure
<a href="#">G01N 2030/524</a>	....	structural properties
<a href="#">G01N 2030/525</a>	.....	surface properties, e.g. porosity
<a href="#">G01N 2030/527</a>	.....	sorbent material in form of a membrane
<a href="#">G01N 2030/528</a>	.....	Monolithic sorbent material
<a href="#">G01N 2030/56</a>	...	Packing methods or coating methods
<a href="#">G01N 2030/562</a>	....	packing
<a href="#">G01N 2030/565</a>	.....	slurry packing
<a href="#">G01N 2030/567</a>	....	coating
<a href="#">G01N 2030/58</a>	...	the sorbent moving as a whole
<a href="#">G01N 2030/582</a>	....	micellar electrokinetic capillary chromatography (MECC)
<a href="#">G01N 2030/585</a>	....	Parallel current chromatography
<a href="#">G01N 2030/587</a>	....	Continuous annular chromatography
<a href="#">G01N 2030/60</a>	..	Construction of the column
<a href="#">G01N 2030/6004</a>	...	{ end pieces }
<a href="#">G01N 2030/6008</a>	....	capillary restrictors
<a href="#">G01N 2030/6013</a>	....	interfaces to detectors
<a href="#">G01N 2030/6052</a>	...	{ body }
<a href="#">G01N 2030/6056</a>	....	using semiconductor micromachining techniques
<a href="#">G01N 2030/62</a>	..	Detectors specially adapted therefor
<a href="#">G01N 2030/621</a>	...	signal-to-noise ratio
<a href="#">G01N 2030/623</a>	....	by modulation of sample feed or detector response
<a href="#">G01N 2030/625</a>	....	by measuring reference material, e.g. carrier without sample
<a href="#">G01N 2030/626</a>	...	calibration, baseline
<a href="#">G01N 2030/628</a>	...	Multiplexing, i.e. several columns sharing a single detector
<a href="#">G01N 2030/64</a>	...	Electrical detectors
<a href="#">G01N 2030/642</a>	....	photoionisation detectors
<a href="#">G01N 2030/645</a>	....	electrical conductivity detectors
<a href="#">G01N 2030/647</a>	....	surface ionisation
<a href="#">G01N 2030/685</a>	....	flame photometry
<a href="#">G01N 2030/72</a>	...	Mass spectrometers { ( mass spectrometers per se <a href="#">H01J 49/00</a> ) }

G01N 2030/7206	....	{ interfaced to gas chromatograph ( interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see <a href="#">H01J 49/04</a> ) }
G01N 2030/7226	.....	OWTC, short capillaries or transfer line used as column
G01N 2030/74	...	Optical detectors { measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light <a href="#">G01J</a> }
G01N 2030/743	....	FTIR
G01N 2030/746	....	detecting along the line of flow, e.g. axial
G01N 2030/76	...	Acoustical detectors { measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves <a href="#">G01H</a> }
G01N 2030/765	....	for measuring mechanical vibrations
G01N 2030/77	...	detecting radioactive properties
G01N 2030/84	..	Preparation of the fraction to be distributed
G01N 2030/8405	...	using pyrolysis
G01N 2030/8411	...	Intermediate storage of effluent, including condensation on surface
G01N 2030/8417	....	the store moving as a whole, e.g. moving wire
G01N 2030/8423	...	using permeable separator tubes
G01N 2030/8429	...	adding modifying material
G01N 2030/8435	....	for chemical reaction
G01N 2030/8441	....	to modify physical properties
G01N 2030/8447	...	Nebulising, aerosol formation or ionisation
G01N 2030/8452	....	Generation of electrically charged aerosols or ions
G01N 2030/8458	.....	of ions or clusters of individual ions
G01N 2030/8464	....	Uncharged atoms or aerosols
G01N 2030/847	....	by pneumatic means
G01N 2030/8476	....	by thermal means
G01N 2030/8482	....	by electrical or glow discharge
G01N 2030/8488	....	by electric field
G01N 2030/8494	....	Desolvation chambers
G01N 2030/86	..	Signal analysis
G01N 2030/8603	...	{ with integration or differentiation }
G01N 2030/862	....	Other mathematical operations for data preprocessing
G01N 2030/8624	...	{ Detection of slopes or peaks; baseline correction }
G01N 2030/8648	....	Feature extraction not otherwise provided for
G01N 2030/88	..	Integrated analysis systems specially adapted therefor, not covered by a single one of the groups <a href="#">G01N 30/04</a> to <a href="#">G01N 30/86</a> ( signal analysis systems per se <a href="#">G06F</a> , <a href="#">G06G</a> )
G01N 2030/8804	...	automated systems
G01N 2030/8809	...	analysis specially adapted for the sample
G01N 2030/8813	....	biological materials
G01N 2030/8818	.....	involving amino acids
G01N 2030/8822	.....	involving blood
G01N 2030/8827	.....	involving nucleic acids
G01N 2030/8831	.....	involving peptides or proteins

G01N 2030/8836	.....	involving saccharides
G01N 2030/884	....	organic compounds
G01N 2030/8845	.....	involving halogenated organic compounds
G01N 2030/885	.....	involving polymers
G01N 2030/8854	.....	involving hydrocarbons
G01N 2030/8859	....	inorganic compounds
G01N 2030/8863	.....	Fullerenes
G01N 2030/8868	....	elemental analysis ; e.g. isotope dilution analysis
G01N 2030/8872	....	impurities
G01N 2030/8877	....	optical isomers
G01N 2030/8881	...	Modular construction, specially adapted therefor
G01N 2030/8886	...	Analysis of industrial production processes
G01N 2030/889	...	monitoring the quality of the stationary phase ; column performance
G01N 2030/8895	...	Independent juxtaposition of embodiments ; Reviews
G01N 2030/90	.	Plate chromatography, e.g. thin layer or paper chromatography
G01N 2030/903	..	centrifugal chromatography
G01N 2030/906	..	pressurised fluid phase
G01N 2030/94	..	Development
G01N 2030/945	...	Application of reagents to undeveloped plate
G01N 2030/96	.	using ion-exchange ( <a href="#">G01N 30/02</a> , <a href="#">G01N 30/90</a> take precedence )
G01N 2030/965	..	suppressor columns
<b>G01N 2033/00</b>		<b>Investigating or analysing materials by specific methods not covered by the preceding groups</b>
G01N 2033/0003	.	Composite materials
G01N 2033/0004	.	{ Gaseous mixtures, e.g. polluted air ( gaseous biological material <a href="#">G01N 33/497</a> ; exhaust gas of internal combustion engines <a href="#">G01M 15/102</a> ) }
G01N 2033/0009	..	{ General constructional details of gas analysers, e.g. portable test equipment ( <a href="#">G01N 1/22</a> takes precedence ) }
G01N 2033/0011	...	{ Sample conditioning ( in general <a href="#">G01N 1/28</a> ) }
G01N 2033/0019	....	by preconcentration
G01N 2033/0062	...	{ concerning the measuring method, e.g. intermittent, or the display, e.g. digital }
G01N 2033/0068	....	using a computer specifically programmed
G01N 2033/007	...	{ Arrangements to check the analyser ( calibrating <a href="#">G01N 33/0006</a> ) }
G01N 2033/0072	....	by generating a test gas
G01N 2033/0077	.	testing material properties on individual granules or tablets
G01N 2033/0078	.	testing material properties on manufactured objects
G01N 2033/008	..	sport articles ( balls, skis, rackets )
G01N 2033/0081	..	containers ; packages ; bottles



- G01N 2033/0083 . . vehicle parts
- G01N 2033/0085 . . . wheels
- G01N 2033/0086 . . clothes ; hosiery
- G01N 2033/0088 . . other articles
- G01N 2033/009 . . . seals
  
- G01N 2033/0091 . Powders
  
- G01N 2033/0093 . radioactive materials
  
- G01N 2033/0095 . Semiconductive materials
  
- G01N 2033/0096 . testing material properties on thin layers or coatings
  
- G01N 2033/02 . food
- G01N 2033/10 . . starch-containing substances, e.g. dough
- G01N 2033/105 . . . Pasta
  
- G01N 2033/18 . Water { ( [treatment of water C02F](#) ) }
- G01N 2033/1826 . . { [organic contamination in water](#) }
- G01N 2033/184 . . . herbicides, pesticides, fungicides, insecticides, or the like
- G01N 2033/1873 . . ice or snow
  
- G01N 2033/24 . earth materials ( [G01N 33/42 takes precedence](#); { [testing the nature of borehole walls, formation testing E21B 49/00](#) ; [investigation of foundation soil in situ E02D 1/00](#) ; [geophysics, e.g. prospecting G01V](#) } )
- G01N 2033/243 . . for determining biological parameters concerning composting, biodegradability or bioavailability
- G01N 2033/245 . . for agricultural purposes
- G01N 2033/248 . . related to manure as a biological product, i.e. excluding artificial fertilizers
  
- G01N 2033/48 . biological material, e.g. blood, urine ( [G01N 33/02 to G01N 33/14](#) , [G01N 33/26](#) , [G01N 33/44](#) , [G01N 33/46 take precedence](#); [determining the germinating capacity of seeds A01C 1/02](#) ) ; Haemocytometers ( [counting blood corpuscles distributed over a surface by scanning the surface G06M 11/02](#) )
  
- G01N 2033/483 . . Physical analysis of biological material
- G01N 2033/497 . . . of gaseous biological material, e.g. breath { ( [for evaluating respiratory organs A61B 5/08](#) ) }
- G01N 2033/4975 . . . . other than oxygen, carbon dioxide or alcohol, e.g. organic vapours
- G01N 2033/4977 . . . . metabolic gass from microbes, cell cultures, plant tissues and the like
- G01N 2033/50 . . Chemical analysis of biological material, e.g. blood, urine ; Testing involving biospecific ligand binding methods ; Immunological testing ( [measuring or testing processes involving enzymes or micro-organisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes C12Q](#) )

**NOTE**

The expression "involving", when used in relation to a material includes the testing for the material as well as employing the material as a determinant or

reactant in a test for a different material.

In groups [G01N 33/52](#) to [G01N 33/96](#), in the absence of an indication to the contrary, an invention is also classified in the last appropriate place.

Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group

G01N 2033/53	...	Immunoassay ; Biospecific binding assay ( <a href="#">preparations containing antigens or antibodies for therapeutic purposes A61K 39/00</a> ; haptens in general, see the relevant places in class <a href="#">C07</a> ; proteins in general <a href="#">C07K</a> )
G01N 2033/574	....	for cancer

#### **NOTE**

In this group:

- relevant features relating to a specifically defined cancer are only classified in groups [G01N 33/57407](#) to [G01N 33/57449](#)
- relevant features describing cancer markers related to multiple forms of cancer are classified in groups [G01N 33/57484](#) to [G01N 33/57496](#)

<a href="#">G01N 2033/57403</a>	.....	of breast
<a href="#">G01N 2033/57453</a>	.....	of lung
<a href="#">G01N 2033/57457</a>	.....	of skin
<a href="#">G01N 2033/57461</a>	.....	of liver, pancreas or kidney
<a href="#">G01N 2033/57465</a>	.....	of stomach or intestine

**G01N 2035/00**      **Automatic analysis not limited to methods or materials provided for in any single one of groups [G01N 1/00](#) to [G01N 33/00](#) ; Handling materials therefor**

G01N 2035/00009	.	{ <a href="#">provided with a sample supporting tape, e.g. with absorbent zones</a> }
<a href="#">G01N 2035/00019</a>	..	cassette structures
G01N 2035/00029	.	{ <a href="#">provided with flat sample substrates, e.g. slides ( <a href="#">G01N 35/028</a> takes precedence )</a> }
<a href="#">G01N 2035/00039</a>	..	Transport arrangements specific to flat sample substrates, e.g. pusher blade
<a href="#">G01N 2035/00049</a>	...	for loading/unloading a carousel
<a href="#">G01N 2035/00059</a>	...	vacuum chucks
<a href="#">G01N 2035/00079</a>	..	Evaporation covers for slides
<a href="#">G01N 2035/00089</a>	..	Magazines
<a href="#">G01N 2035/00099</a>	..	Characterised by type of test elements
<a href="#">G01N 2035/00108</a>	...	Test strips, e.g. paper
<a href="#">G01N 2035/00118</a>	....	for multiple tests
<a href="#">G01N 2035/00128</a>	....	with pressing or squeezing devices

G01N 2035/00138	...	Slides
G01N 2035/00148	...	Test cards, e.g. Biomerieux or McDonnell multiwell test cards
G01N 2035/00158	...	Elements containing microarrays, i.e. "biochip"
G01N 2035/00168	..	Manufacturing or preparing test elements
G01N 2035/00178	.	Special arrangements of analysers
G01N 2035/00188	..	the analyte being in the solid state
G01N 2035/00198	...	Dissolution analysers
G01N 2035/00207	..	Handling bulk quantities of analyte
G01N 2035/00217	...	involving measurement of weight
G01N 2035/00227	...	Monitoring a process (online)
G01N 2035/00237	..	Handling micro-quantities of analyte, e.g. micro-valves, capillary networks
G01N 2035/00247	...	Microvalves
G01N 2035/00257	....	Capillary stop flow circuits
G01N 2035/00267	....	Meltable plugs
G01N 2035/00277	..	Special precautions to avoid contamination ( e.g. enclosures, glove- boxes, sealed sample carriers, disposal of contaminated material )
G01N 2035/00287	...	movable lid/cover for sample or reaction tubes
G01N 2035/00297	...	Antistatic arrangements
G01N 2035/00306	..	Housings, cabinets, control panels (details)
G01N 2035/00316	...	Detecting door closure
G01N 2035/00326	..	Analysers with modular structure
G01N 2035/00336	...	Analysers adapted for operation in microgravity, i.e. spaceflight
G01N 2035/00346	.	Heating or cooling arrangements
G01N 2035/00356	..	Holding samples at elevated temperature (incubation)
G01N 2035/00366	...	Several different temperatures used
G01N 2035/00376	...	Conductive heating, e.g. heated plates
G01N 2035/00386	...	using fluid heat transfer medium
G01N 2035/00396	....	where the fluid is a liquid
G01N 2035/00405	...	Microwaves
G01N 2035/00415	...	Other radiation
G01N 2035/00425	..	Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature
G01N 2035/00435	..	Refrigerated reagent storage
G01N 2035/00445	..	Other cooling arrangements
G01N 2035/00455	..	Controlling humidity in analyser
G01N 2035/00465	.	Separating and mixing arrangements
G01N 2035/00475	..	Filters
G01N 2035/00485	...	combined with sample carriers
G01N 2035/00495	..	Centrifuges
G01N 2035/00504	...	combined with carousels
G01N 2035/00514	..	Stationary mixing elements

G01N 2035/00524	..	Mixing by agitating sample carrier
G01N 2035/00534	..	Mixing by a special element, e.g. stirrer
G01N 2035/00544	...	using fluid flow
G01N 2035/00554	...	using ultrasound
G01N 2035/00564	..	Handling or washing solid phase elements, e.g. beads
G01N 2035/00574	...	Means for distributing beads
G01N 2035/00584	.	{ Control arrangements for automatic analysers }
G01N 2035/00594	..	{ Quality control, including calibration or testing of components of the analyser }
G01N 2035/00613	...	{ Quality control }
G01N 2035/00623	....	{ of instruments }
G01N 2035/00633	.....	logging process history of individual samples
G01N 2035/00643	.....	detecting malfunctions in conveying systems
G01N 2035/00653	.....	statistical methods comparing labs or apparatuses
G01N 2035/00663	....	{ of consumables }
G01N 2035/00673	.....	of reagents
G01N 2035/00683	.....	of detectors
G01N 2035/00693	...	{ Calibration }
G01N 2035/00702	....	Curve-fitting ; Parameter matching ; Calibration constants
G01N 2035/00722	..	{ Communications; Identification }
G01N 2035/00732	...	{ Identification of carriers, materials or components in automatic analysers }
G01N 2035/00742	....	Type of codes
G01N 2035/00752	.....	bar codes
G01N 2035/00762	.....	magnetic code
G01N 2035/00772	.....	mechanical or optical code other than bar code
G01N 2035/00782	.....	reprogrammable code
G01N 2035/00792	....	Type of components bearing the codes, other than sample carriers
G01N 2035/00801	.....	Holders for sample carriers, e.g. trays, carroussel, racks
G01N 2035/00811	.....	consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells
G01N 2035/00821	....	nature of coded information
G01N 2035/00831	.....	identification of the sample, e.g. patient identity, place of sampling
G01N 2035/00841	.....	results of the analyses
G01N 2035/00851	.....	process control parameters
G01N 2035/00861	....	printing and sticking of identifiers
G01N 2035/00871	...	{ Communications between instruments or with remote terminals }
G01N 2035/00881	....	network configurations
G01N 2035/00891	...	Displaying information to the operator
G01N 2035/009	....	alarms, e.g. audible
G01N 2035/0091	....	GUI ( graphical user interfaces )
G01N 2035/0092	..	{ Scheduling }
G01N 2035/0093	...	random access not determined by physical position
G01N 2035/0094	...	optimisation ; experiment design

- G01N 2035/0096 . . . post analysis management of samples, e.g. marking, removing, storing
- G01N 2035/0097 . . monitoring reactions as a function of time
- G01N 2035/02 . using a plurality of sample containers moved by a conveyer system past one or more treatment or analysis stations { ( [G01N 35/0098](#) and [G01N 35/0099](#) take precedence ) }
- G01N 2035/021 . . { having a flexible chain, e.g. "cartridge belt", conveyer for reaction cells or cuvettes }
- G01N 2035/023 . . . forming cuvettes in situ, e.g. from plastic strip
- G01N 2035/04 . . Details of the conveyer system { ( [G01N 35/021](#) to [G01N 35/028](#) take precedence ) }
- G01N 2035/0401 . . . Sample carriers, cuvettes or reaction vessels
- G01N 2035/0403 . . . . Sample carriers with closing or sealing means
- G01N 2035/0405 . . . . . manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers
- G01N 2035/0406 . . . . Individual bottles or tubes
- G01N 2035/0408 . . . . . connected in a flexible chain
- G01N 2035/041 . . . . . lifting items out of a rack for access
- G01N 2035/0412 . . . . Block or rack elements with a single row of samples
- G01N 2035/0413 . . . . . moving in one dimension
- G01N 2035/0415 . . . . . moving in two dimensions in a horizontal plane
- G01N 2035/0417 . . . . . forming an endless chain in a vertical plane
- G01N 2035/0418 . . . . Plate elements with several rows of samples
- G01N 2035/042 . . . . . moved independently, e.g. by fork manipulator
- G01N 2035/0422 . . . . . carried on a linear conveyer
- G01N 2035/0424 . . . . . . Two or more linear conveyers
- G01N 2035/0425 . . . . . Stacks, magazines or elevators for plates
- G01N 2035/0427 . . . . nestable or stockable
- G01N 2035/0429 . . . . Sample carriers adapted for special purposes
- G01N 2035/0431 . . . . . characterised by material of construction
- G01N 2035/0432 . . . . . integrated with measuring devices
- G01N 2035/0434 . . . . . in the form of a syringe or pipette tip
- G01N 2035/0436 . . . . . with pre-packaged reagents, i.e. test-packs
- G01N 2035/0437 . . . . Cleaning cuvettes or reaction vessels
- G01N 2035/0439 . . . Rotary sample carriers, i.e. carousels
- G01N 2035/0441 . . . . for samples
- G01N 2035/0443 . . . . for reagents
- G01N 2035/0444 . . . . for cuvettes or reaction vessels
- G01N 2035/0446 . . . . Combinations of the above
- G01N 2035/0448 . . . . . composed of interchangeable ring elements
- G01N 2035/0449 . . . . . using centrifugal transport of liquid
- G01N 2035/0451 . . . . composed of interchangeable sectors
- G01N 2035/0453 . . . . Multiple carousels working in parallel
- G01N 2035/0455 . . . . . Coaxial carousels

G01N 2035/0456	....	Spiral tracks
G01N 2035/0458	....	Multiple concentric rows of wells
G01N 2035/046	...	General conveyer features
G01N 2035/0462	....	Buffers (FIFO) or stacks (LIFO) for holding carriers between operations
G01N 2035/0463	.....	in incubators
G01N 2035/0465	....	Loading or unloading the conveyer
G01N 2035/0467	....	Switching points ("aiguillages")
G01N 2035/0468	.....	converging, e.g. selecting carriers from multiple incoming streams
G01N 2035/047	.....	diverging, e.g. sending carriers to different analysers
G01N 2035/0472	.....	for selective recirculation of carriers
G01N 2035/0474	...	Details of actuating means for conveyers or pipettes
G01N 2035/0475	....	electric, e.g. stepper motor, solenoid
G01N 2035/0477	....	Magnetic
G01N 2035/0479	....	hydraulic or pneumatic
G01N 2035/0481	.....	Pneumatic tube conveyors ; Tube mails ; "Rohrpost"
G01N 2035/0482	....	Transmission
G01N 2035/0484	.....	Belt or chain
G01N 2035/0486	.....	Gearing, cams
G01N 2035/0487	.....	Helix or lead screw
G01N 2035/0489	....	Self-propelled units
G01N 2035/0491	....	Position sensing, encoding ; closed-loop control
G01N 2035/0493	.....	Locating samples ; identifying different tube sizes
G01N 2035/0494	.....	Detecting or compensating positioning errors
G01N 2035/0496	...	Other details
G01N 2035/0498	....	Drawers used as storage or dispensing means for vessels or cuvettes
G01N 2035/10	.	Devices for transferring samples { or any liquids } to, in, or from, the analysis apparatus, e.g. suction devices, injection devices { ( <a href="#">G01N 35/0099</a> takes precedence ) }
G01N 2035/1004	..	{ <a href="#">Cleaning sample transfer devices ( cleaning laboratory glassware <a href="#">B01L 11/00D</a> )</a> }
G01N 2035/1006	...	Rinsing only the inside of the tip
G01N 2035/1009	..	{ <a href="#">Characterised by arrangements for controlling the aspiration or dispense of liquids</a> }
G01N 2035/1011	...	{ <a href="#">Control of the position or alignment of the transfer device</a> }
G01N 2035/1013	....	Confirming presence of tip
G01N 2035/1016	...	{ <a href="#">Control of the volume dispensed or introduced</a> }
G01N 2035/1018	....	Detecting inhomogeneities, e.g. foam, bubbles, clots
G01N 2035/102	....	Preventing or detecting loss of fluid by dripping
G01N 2035/1023	.....	using a valve in the tip or nozzle
G01N 2035/1025	...	Fluid level sensing
G01N 2035/1027	..	General features of the devices
G01N 2035/103	...	using disposable tips
G01N 2035/1032	...	Dilution or aliquotting

G01N 2035/1034	...	Transferring microquantities of liquid
G01N 2035/1037	....	Using surface tension, e.g. pins or wires
G01N 2035/1039	....	Micro-pipettes, e.g. microcapillary tubes
G01N 2035/1041	....	Ink-jet like dispensers
G01N 2035/1044	....	Using pneumatic means
G01N 2035/1046	....	Levitated, suspended drops
G01N 2035/1048	...	using the transfer device for another function
G01N 2035/1051	....	for transporting containers, e.g. retained by friction
G01N 2035/1053	....	for separating part of the liquid, e.g. filters, extraction phase
G01N 2035/1055	....	for immobilising reagents, e.g. dried reagents
G01N 2035/1058	....	for mixing
G01N 2035/106	.....	by sucking and blowing
G01N 2035/1062	....	for testing the liquid while it is in the transfer device
G01N 2035/1065	..	{ Multiple transfer devices }
G01N 2035/1067	...	{ for transfer to or from containers having different spacing }
G01N 2035/1069	....	by adjusting the spacing between multiple probes of a single transferring head
G01N 2035/1076	...	plurality or independently movable heads
G01N 2035/1081	..	{ characterised by the means for relatively moving the transfer device and the containers in an horizontal plane ( <a href="#">G01N 35/1011</a> takes precedence ) }
G01N 2035/1083	...	{ with one horizontal degree of freedom }
G01N 2035/1086	....	Cylindrical, e.g. variable angle
G01N 2035/1088	.....	Coaxial with a carousel
G01N 2035/109	...	{ with two horizontal degrees of freedom }
G01N 2035/1093	....	Cylindrical, e.g. variable radius and angle

#### Guidance heading:

#### **G01N 2201/00**      **Features of devices classified in [G01N 21/00](#)**

G01N 2201/02	.	Mechanical
G01N 2201/021	..	Special mounting in general
G01N 2201/0212	...	Liquid borne ; swimming apparatus
G01N 2201/0214	...	Airborne
G01N 2201/0216	...	Vehicle borne
G01N 2201/0218	...	Submersible, submarine
G01N 2201/022	..	Casings
G01N 2201/0221	...	Portable ; cableless ; compact ; hand-held
G01N 2201/0222	...	Pocket size
G01N 2201/0224	...	Pivoting casing
G01N 2201/0225	...	Part of casing being slidable, telescopic
G01N 2201/0227	...	Sealable enclosure
G01N 2201/0228	...	Moulded parts



G01N 2201/023	..	Controlling conditions in casing
G01N 2201/0231	...	Thermostating
G01N 2201/0233	...	Gas purge
G01N 2201/0235	....	with gas filters in casing
G01N 2201/0236	...	Explosion proof
G01N 2201/0238	...	Moisture monitoring or controlling
G01N 2201/024	..	Modular construction
G01N 2201/0245	...	with insertable-removable part
G01N 2201/025	..	Mechanical control of operations
G01N 2201/0253	...	Switches mounted at the casing
G01N 2201/0256	...	Sensor for insertion of sample, cuvette, test strip
G01N 2201/04	.	Batch operation ; multisample devices
G01N 2201/0407	..	with multiple optical units, e.g. one per sample
G01N 2201/0415	..	Carrusel, sequential
G01N 2201/0423	...	with rotating optics
G01N 2201/043	....	optics constituted by optical fibre multiplex selector
G01N 2201/0438	..	Linear motion, sequential
G01N 2201/0446	..	Multicell plate, sequential
G01N 2201/0453	..	Multicell sequential and multitest, e.g. multiwavelength
G01N 2201/0461	..	Simultaneous, e.g. video imaging
G01N 2201/0469	..	One cell, sequential, e.g. successive samples
G01N 2201/0476	..	Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding
G01N 2201/0484	..	Computer controlled
G01N 2201/0492	..	Automatised microscope
G01N 2201/06	.	Illumination ; Optics
G01N 2201/061	..	Sources
G01N 2201/06106	...	Plural sources used for calibration
G01N 2201/06113	...	Coherent sources ; lasers
G01N 2201/0612	....	Laser diodes
G01N 2201/06126	...	Large diffuse sources
G01N 2201/06133	....	Light tables
G01N 2201/0614	....	Diffusing light tube with sample within
G01N 2201/06146	...	Multisources for homogeneisation, as well sequential as simultaneous operation
G01N 2201/06153	....	the sources being LED`s
G01N 2201/0616	...	Ambient light is used
G01N 2201/06166	...	Line selective sources
G01N 2201/06173	....	IR sources from heated molecular species
G01N 2201/0618	....	Halogene sources
G01N 2201/06186	...	Resistance heated ; wire sources ; lamelle sources
G01N 2201/06193	...	Secondary <u>in-situ</u> sources, e.g. fluorescent particles

G01N 2201/062	..	LED`s
G01N 2201/0621	...	Supply
G01N 2201/0622	...	Use of a compensation LED
G01N 2201/0623	...	Use of a reference LED
G01N 2201/0624	...	Compensating variation in output of LED source
G01N 2201/0625	...	Modulated LED
G01N 2201/0626	...	Use of several LED`s for spatial resolution
G01N 2201/0627	...	Use of several LED`s for spectral resolution
G01N 2201/0628	...	Organic LED (OLED)
G01N 2201/063	..	Illuminating optical parts
G01N 2201/0631	...	Homogeneising elements
G01N 2201/0632	....	homogeneising by integrating sphere
G01N 2201/0633	...	Directed, collimated illumination
G01N 2201/0634	...	Diffuse illumination
G01N 2201/0635	...	Structured illumination, e.g. with grating
G01N 2201/0636	...	Reflectors
G01N 2201/0637	....	Elliptic
G01N 2201/0638	...	Refractive parts
G01N 2201/0639	....	Sphere lens
G01N 2201/064	..	Stray light conditioning
G01N 2201/0642	...	Light traps ; baffles
G01N 2201/0644	....	Simple baffled tube construction
G01N 2201/0646	...	Light seals
G01N 2201/0648	...	Shutters
G01N 2201/065	..	Integrating spheres
G01N 2201/0655	...	Hemispheres
G01N 2201/066	..	Modifiable path ; multiple paths in one sample
G01N 2201/0662	...	Comparing measurements on two or more paths in one sample
G01N 2201/0664	...	Using two ways, i.e. two devices in same path in one sample
G01N 2201/0666	...	Selectable paths ; insertable multiple sources
G01N 2201/0668	...	Multiple paths ; optimisable path length
G01N 2201/067	..	Electro-optic, magneto-optic, acousto-optic elements
G01N 2201/0675	...	SLM
G01N 2201/068	..	Optics, miscellaneous
G01N 2201/0683	...	Brewster plate ; polarisation controlling elements
G01N 2201/0686	...	Cold filter ; IR filter
G01N 2201/069	..	Supply of sources
G01N 2201/0691	...	Modulated ( not pulsed supply )
G01N 2201/0692	...	Regulated sources ; stabilised supply
G01N 2201/0693	...	Battery powered circuitry
G01N 2201/0694	...	Microprocessor controlled supply
G01N 2201/0695	...	Supply to maintain constant beam intensity

G01N 2201/0696	...	Pulsed
G01N 2201/0697	....	Pulsed lasers
G01N 2201/0698	....	Using reference pulsed source
G01N 2201/0699	....	Randomly pulsed source
G01N 2201/08	.	Optical fibres ; light guides
G01N 2201/0806	..	Light rod
G01N 2201/0813	..	Arrangement of collimator tubes, glass or empty
G01N 2201/082	..	Fibres for a reference path
G01N 2201/0826	..	Fibre array at source, distributing
G01N 2201/0833	..	Fibre array at detector, resolving
G01N 2201/084	..	Fibres for remote transmission
G01N 2201/0846	..	Fibre interface with sample, e.g. for spatial resolution
G01N 2201/0853	..	Movable fibre optical member, e.g. for scanning or selecting
G01N 2201/086	..	Modular construction, e.g. disconnectable fibre parts
G01N 2201/0866	..	Use of GRIN elements
G01N 2201/0873	..	Using optically integrated constructions
G01N 2201/088	..	Using a sensor fibre
G01N 2201/0886	...	and using OTDR
G01N 2201/0893	..	Using fibres for resolution in time
G01N 2201/10	.	Scanning
G01N 2201/101	..	Scanning measuring head
G01N 2201/102	..	Video camera
G01N 2201/103	..	Scanning by mechanical motion of stage
G01N 2201/1035	...	3D motion
G01N 2201/104	..	Mechano-optical scan, i.e. object and beam moving
G01N 2201/1042	...	X, Y scan, i.e. object moving in X, beam in Y
G01N 2201/1045	...	Spiral scan
G01N 2201/1047	...	with rotating optics and moving stage
G01N 2201/105	..	Purely optical scan
G01N 2201/1053	...	System of scan mirrors for composite motion of beam
G01N 2201/1056	...	Prism scan, diasporameter
G01N 2201/106	..	Acousto-optical scan
G01N 2201/107	..	CRT flying spot scan
G01N 2201/108	..	Miscellaneous
G01N 2201/1082	...	Descanning
G01N 2201/1085	...	Using optical fibre array and scanner
G01N 2201/1087	...	Focussed scan beam, e.g. laser
G01N 2201/11	..	Monitoring and controlling the scan
G01N 2201/112	...	Grating pulse time encoder
G01N 2201/115	...	Optical equalisation of scan intensity
G01N 2201/117	...	Indexed, memorised or programmed scan

G01N 2201/12	. Circuits of general importance ; Signal processing
G01N 2201/121	.. Correction signals
G01N 2201/1211	... for temperature
G01N 2201/1212	.... and switch-off from upwarming
G01N 2201/1214	... for humidity
G01N 2201/1215	... for interfering gases
G01N 2201/1217	... for index of solution, carrying fluids
G01N 2201/1218	... for pressure variations
G01N 2201/122	.. Kinetic analysis ; determining reaction rate
G01N 2201/1222	... Endpoint determination ; reaction time determination
G01N 2201/1224	... Polymerisation
G01N 2201/1226	... Relaxation methods, e.g. temperature jump, field jump
G01N 2201/1228	... Reading time being controlled, e.g. by microprocessor
G01N 2201/123	.. Conversion circuit
G01N 2201/1232	... Log representation, e.g. for low transmittance
G01N 2201/1235	... Measuring or displaying selectably absorbance or density
G01N 2201/1237	... Measuring extrema
G01N 2201/124	.. Sensitivity
G01N 2201/1241	... Multirange
G01N 2201/1242	... Validating, e.g. range invalidation, suspending operation
G01N 2201/1244	... Ambient light detector, e.g. for invalidating
G01N 2201/1245	... Averaging several measurements
G01N 2201/1247	... Thresholding
G01N 2201/1248	... Validating from signal shape, slope, peak
G01N 2201/125	.. Digital circuitry
G01N 2201/126	.. Microprocessor processing
G01N 2201/1263	... Microprocessor is used as variant to separate part circuits
G01N 2201/1266	... Interface card
G01N 2201/127	.. Calibration ; base line adjustment ; drift compensation
G01N 2201/12707	... Pre-test of apparatus, e.g. dark test, sensor test
G01N 2201/12715	... Zero adjustment, i.e. to verify calibration
G01N 2201/12723	... Self check capacity ; automatic, periodic step of checking
G01N 2201/1273	... Check triggered by sensing conditions, e.g. ambient changes
G01N 2201/12738	... Selectively initiating check
G01N 2201/12746	... Calibration values determination
G01N 2201/12753	.... and storage
G01N 2201/12761	.... Precalibration, e.g. for a given series of reagents
G01N 2201/12769	.... and adjusting controls, e.g. zero and 100 %
G01N 2201/12776	.... Automatic scaling up
G01N 2201/12784	.... Base line obtained from computation, histogram
G01N 2201/12792	... Compensating own radiation in apparatus

G01N 2201/128	..	Alternating sample and standard or reference part in one path
G01N 2201/1281	...	Reflecting part, i.e. for autocollimation
G01N 2201/1283	...	Opaque part
G01N 2201/1285	...	Standard cuvette
G01N 2201/1286	....	More than one cuvette
G01N 2201/1288	...	Calibration medium periodically inserted in one cell
G01N 2201/129	..	Using chemometrical methods
G01N 2201/1293	...	resolving multicomponent spectra
G01N 2201/1296	...	using neural networks
G01N 2201/13	..	Standards, constitution

### Guidance heading:

### **G01N 2203/00**      **Investigating strength properties of solid materials by application of mechanical stress**

G01N 2203/0001	.	Type of application of the stress
G01N 2203/0003	..	Steady
G01N 2203/0005	..	Repeated or cyclic
G01N 2203/0007	...	Low frequencies up to 100 Hz
G01N 2203/0008	...	High frequencies from 10 000 Hz
G01N 2203/001	..	Impulsive
G01N 2203/0012	..	Constant speed test
G01N 2203/0014	.	Type of force applied
G01N 2203/0016	..	Tensile or compressive
G01N 2203/0017	...	Tensile
G01N 2203/0019	...	Compressive
G01N 2203/0021	..	Torsional
G01N 2203/0023	..	Bending
G01N 2203/0025	..	Shearing
G01N 2203/0026	..	Combination of several types of applied forces
G01N 2203/0028	...	Rotation and bending
G01N 2203/003	.	Generation of the force
G01N 2203/0032	..	using mechanical means
G01N 2203/0033	...	Weight
G01N 2203/0035	...	Spring
G01N 2203/0037	...	involving a rotating movement e.g. gearing, cam, eccentric, or centrifuge effects
G01N 2203/0039	...	Hammer or pendulum
G01N 2203/0041	...	Human or animal power
G01N 2203/0042	..	Pneumatic or hydraulic means
G01N 2203/0044	...	Pneumatic means

G01N 2203/0046	....	Vacuum
G01N 2203/0048	...	Hydraulic means
G01N 2203/005	..	Electromagnetic means
G01N 2203/0051	...	Piezoelectric means
G01N 2203/0053	..	Cutting or drilling tools
G01N 2203/0055	..	using mechanical waves, e.g. acoustic
G01N 2203/0057	..	using stresses due to heating e.g. conductive heating, radiative heating
G01N 2203/0058	.	Kind of property studied
G01N 2203/006	..	Crack, flaws, fracture or rupture
G01N 2203/0062	...	Crack or flaws
G01N 2203/0064	....	Initiation of crack
G01N 2203/0066	....	Propagation of crack
G01N 2203/0067	...	Fracture or rupture
G01N 2203/0069	..	Fatigue, creep, strain-stress relations or elastic constants
G01N 2203/0071	...	Creep
G01N 2203/0073	...	Fatigue
G01N 2203/0075	...	Strain-stress relations or elastic constants
G01N 2203/0076	..	Hardness, compressibility or resistance to crushing
G01N 2203/0078	...	using indentation
G01N 2203/008	....	Residual indentation measurement
G01N 2203/0082	....	Indentation characteristics measured during load
G01N 2203/0083	...	Rebound strike or reflected energy
G01N 2203/0085	...	Compressibility
G01N 2203/0087	...	Resistance to crushing
G01N 2203/0089	..	Biorheological properties
G01N 2203/0091	..	Peeling or tearing
G01N 2203/0092	..	Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
G01N 2203/0094	...	Visco-elasticity
G01N 2203/0096	..	Fibre-matrix interaction in composites
G01N 2203/0098	.	Tests specified by its name e.g. Charpy, Brinell, Mullen
G01N 2203/02	.	Details not specific for a particular testing method
G01N 2203/0202	..	Control of the test
G01N 2203/0204	...	Safety arrangements e.g. remote control, emergency stop
G01N 2203/0206	...	Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
G01N 2203/0208	...	Specific programs of loading e.g. incremental loading or pre-loading
G01N 2203/021	...	Treatment of the signal ; Calibration
G01N 2203/0212	...	Theories, calculations
G01N 2203/0214	....	Calculations a priori without experimental data
G01N 2203/0216	....	Finite elements

G01N 2203/0218	....	Calculations based on experimental data
G01N 2203/022	..	Environment of the test
G01N 2203/0222	...	Temperature
G01N 2203/0224	....	Thermal cycling
G01N 2203/0226	....	High temperature ; Heating means
G01N 2203/0228	....	Low temperature ; Cooling means
G01N 2203/023	...	Pressure
G01N 2203/0232	....	High pressure
G01N 2203/0234	....	Low pressure ; Vacuum
G01N 2203/0236	...	Other environments
G01N 2203/0238	....	Inert
G01N 2203/024	....	Corrosive
G01N 2203/0242	....	With circulation of a fluid
G01N 2203/0244	...	Tests performed "in situ" or after "in situ" use
G01N 2203/0246	....	Special simulation of "in situ" conditions, scale models or dummies
G01N 2203/0248	...	Tests "on-line" during fabrication
G01N 2203/025	..	Geometry of the test
G01N 2203/0252	...	Monoaxial, i.e. the forces being applied along a single axis of the specimen
G01N 2203/0254	...	Biaxial, the forces being applied along two normal axes of the specimen
G01N 2203/0256	...	Triaxial, i.e. the forces being applied along three normal axes of the specimen
G01N 2203/0258	...	Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen
G01N 2203/026	..	Specifications of the specimen
G01N 2203/0262	...	Shape of the specimen
G01N 2203/0264	....	Beam
G01N 2203/0266	....	Cylindrical specimens
G01N 2203/0268	....	Dumb-bell specimens
G01N 2203/027	....	Specimens with holes or notches
G01N 2203/0272	....	Cruciform specimens
G01N 2203/0274	....	Tubular or ring-shaped specimens
G01N 2203/0276	....	Spherical specimens
G01N 2203/0278	....	Thin specimens
G01N 2203/028	.....	One dimensional, e.g. filaments, wires, ropes or cables
G01N 2203/0282	.....	Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes
G01N 2203/0284	...	Bulk material, e.g. powders
G01N 2203/0286	...	Miniature specimen ; Testing on micro-regions of a specimen
G01N 2203/0288	...	Springs
G01N 2203/029	....	Leaf spring
G01N 2203/0292	....	Coil spring
G01N 2203/0294	....	Airs-spring, air bag spring or bellows
G01N 2203/0296	...	Welds
G01N 2203/0298	...	Manufacturing or preparing specimens



G01N 2203/04	..	Chucks, fixtures, jaws, holders or anvils
G01N 2203/0405	...	Features allowing alignment between specimen and chucks
G01N 2203/0411	...	using pneumatic or hydraulic pressure
G01N 2203/0417	...	using vacuum
G01N 2203/0423	...	using screws
G01N 2203/0429	...	using adhesive bond ; Gluing
G01N 2203/0435	...	modifying the type of the force applied e.g. the chuck transforms a compressive machine for applying a bending test
G01N 2203/0441	...	with dampers or shock absorbing means
G01N 2203/0447	...	Holders for quick insertion/removal of test pieces
G01N 2203/0452	...	Cushioning layer between test piece and grip
G01N 2203/0458	...	characterised by their material
G01N 2203/0464	...	with provisions for testing more than one specimen at the time
G01N 2203/047	....	in series
G01N 2203/0476	....	in parallel
G01N 2203/0482	...	comprising sensing means
G01N 2203/0488	....	Diamond anvil cells
G01N 2203/0494	....	Clamping ring, "whole periphery" clamping
G01N 2203/06	..	Indicating or recording means ; Sensing means
G01N 2203/0605	...	Mechanical indicating, recording or sensing means
G01N 2203/0611	...	Hydraulic or pneumatic indicating, recording or sensing means
G01N 2203/0617	...	Electrical or magnetic indicating, recording or sensing means
G01N 2203/0623	....	using piezo-electric gauges
G01N 2203/0629	....	using thin films, paintings
G01N 2203/0635	....	using magnetic properties
G01N 2203/0641	...	using optical, X-ray, ultra-violet, infrared or similar detectors
G01N 2203/0647	....	Image analysis
G01N 2203/0652	....	using contrasting ink, painting, staining
G01N 2203/0658	...	using acoustic or ultrasonic detectors
G01N 2203/0664	...	using witness specimens
G01N 2203/067	...	Parameter measured for estimating the property
G01N 2203/0676	....	Force, weight, load, energy, speed or acceleration
G01N 2203/0682	....	Spatial dimension e.g. length, area, angle
G01N 2203/0688	....	Time or frequency
G01N 2203/0694	....	Temperature

## **G01N 2223/00 Investigating materials by wave or particle radiation**

G01N 2223/01	.	by radioactivity, nuclear decay
G01N 2223/03	.	by transmission
G01N 2223/04	..	and measuring absorption
G01N 2223/041	...	X-ray absorption fine structure (EXAFS)

- G01N 2223/043 . . . gamma ray resonance absorption ( [Mossbauer effect](#) )
- G01N 2223/045 . combination of at least 2 measurements ( [transmission and scatter](#) )
- G01N 2223/05 . by diffraction, scatter or reflection
- G01N 2223/051 . . correcting for scatter
- G01N 2223/052 . . reflection
- G01N 2223/053 . . back scatter
- G01N 2223/054 . . small angle scatter
- G01N 2223/055 . . scatter raster collimator
- G01N 2223/056 . . diffraction
- G01N 2223/0561 . . . diffraction cameras
- G01N 2223/0563 . . . measure of energy-dispersion spectrum of diffracted radiation
- G01N 2223/0565 . . . diffraction of electrons, e.g. LEED
- G01N 2223/0566 . . . analysing diffraction pattern
- G01N 2223/0568 . . . spectro-diffractometry
- G01N 2223/063 . . inelastic scatter, e.g. Compton effect
- G01N 2223/064 . . interference of radiation, e.g. Borrmann effect
- G01N 2223/07 . secondary emission
- G01N 2223/071 . . combination of measurements, at least 1 secondary emission
- G01N 2223/072 . . combination of measurements, 2 kinds of secondary emission
- G01N 2223/073 . . use of a laser
- G01N 2223/074 . . activation analysis
- G01N 2223/0745 . . . neutron-gamma activation analysis
- G01N 2223/076 . . X-ray fluorescence
- G01N 2223/0763 . . . Compton background correcting
- G01N 2223/0766 . . . X-ray fluorescence with indicator, tags
- G01N 2223/079 . . incident electron beam and measuring excited X-rays
- G01N 2223/08 . . incident electron beam and measuring cathode luminescence (U.V.)
- G01N 2223/081 . . incident ion beam, e.g. proton
- G01N 2223/0813 . . . incident ion beam and measuring X-rays (PIXE)
- G01N 2223/0816 . . . incident ion beam and measuring secondary ion beam (SIMS)
- G01N 2223/084 . . photo-electric effect
- G01N 2223/085 . . photo-electron spectrum ( [ESCA, XPS](#) )
- G01N 2223/086 . . Auger electrons
- G01N 2223/09 . . exo-electron emission
- G01N 2223/095 . . tribo-emission
- G01N 2223/10 . Different kinds of radiation or particles
- G01N 2223/1003 . . monochromatic
- G01N 2223/1006 . . different radiations, e.g. X and alpha
- G01N 2223/101 . . electromagnetic radiation
- G01N 2223/1013 . . . gamma

G01N 2223/1016	...	X-ray
G01N 2223/102	..	beta or electrons
G01N 2223/104	..	ions
G01N 2223/1045	...	alpha
G01N 2223/105	..	molecular or atomic beams
G01N 2223/106	..	neutrons
G01N 2223/1063	...	fast
G01N 2223/1066	...	thermal
G01N 2223/107	..	protons
G01N 2223/108	..	positrons ; electron-positron annihilation
G01N 2223/11	..	neutrino
G01N 2223/20	.	Sources of radiation
G01N 2223/201	..	betatron
G01N 2223/202	..	isotopes
G01N 2223/203	..	synchrotron
G01N 2223/204	..	source created from radiated target
G01N 2223/205	..	natural source
G01N 2223/206	..	sources operating at different energy levels
G01N 2223/30	.	Accessories, mechanical or electrical features
G01N 2223/301	..	portable apparatus
G01N 2223/302	..	comparative arrangements
G01N 2223/303	..	calibrating, standardising
G01N 2223/3032	...	periodic calibration, e.g. with filter wheel
G01N 2223/3035	...	phantom
G01N 2223/3037	...	standards (constitution)
G01N 2223/304	..	electric circuits, signal processing
G01N 2223/305	..	computer simulations
G01N 2223/306	..	computer control
G01N 2223/307	..	cuvettes-sample holders
G01N 2223/3075	...	correcting for the properties of the container, e.g. empty
G01N 2223/308	..	support of radiation source
G01N 2223/309	..	support of sample holder
G01N 2223/31	..	temperature control
G01N 2223/3103	...	cooling, cryostats
G01N 2223/3106	...	heating, furnaces
G01N 2223/311	..	high pressure testing, anvil cells
G01N 2223/312	..	powder preparation
G01N 2223/313	..	filters, rotating filter disc
G01N 2223/314	..	chopper
G01N 2223/315	..	monochromators
G01N 2223/316	..	collimators

G01N 2223/317	..	windows
G01N 2223/318	..	protective films
G01N 2223/319	..	using opaque penetrant medium
G01N 2223/32	..	adjustments of elements during operation
G01N 2223/321	..	manipulator for positioning a part
G01N 2223/322	..	immersed detecting head
G01N 2223/323	..	irradiation range monitor, e.g. light beam
G01N 2223/33	..	scanning, i.e. relative motion for measurement of successive object-parts
G01N 2223/3301	...	beam is modified for scan, e.g. moving collimator
G01N 2223/3302	...	object and detector fixed
G01N 2223/3303	...	object fixed ; source and detector move
G01N 2223/3304	...	helical scan
G01N 2223/3305	...	detector fixed ; source and body moving
G01N 2223/3306	...	object rotates
G01N 2223/3307	...	source and detector fixed ; object moves
G01N 2223/3308	...	object translates
G01N 2223/331	..	rocking curve analysis
G01N 2223/335	..	electronic scanning
G01N 2223/34	..	sensing means for gap between source and detector
G01N 2223/345	..	mathematical transformations on beams or signals, e.g. Fourier
G01N 2223/348	..	ellipsoidal collector
G01N 2223/351	..	prohibiting charge accumulation on sample substrate
G01N 2223/40	.	Imaging
G01N 2223/401	..	image processing
G01N 2223/402	..	mapping distribution of elements
G01N 2223/403	..	mapping with false colours
G01N 2223/404	..	contrast medium
G01N 2223/405	..	mapping of a material property
G01N 2223/406	..	fluoroscopic image
G01N 2223/407	..	stimulable phosphor sheet
G01N 2223/408	..	display on monitor
G01N 2223/409	..	embedding or impregnating the object
G01N 2223/41	..	imaging specifically internal structure
G01N 2223/411	..	tv imaging from fluorescent screen
G01N 2223/412	..	use of image converter tube (PMT)
G01N 2223/413	..	sensor array (CCD)
G01N 2223/414	..	stereoscopic system
G01N 2223/415	..	radiographic film
G01N 2223/416	..	wrap around
G01N 2223/417	..	recording with co-ordinate markings
G01N 2223/418	..	electron microscope

- G01N 2223/419 .. computed tomograph
- G01N 2223/42 .. image digitised, -enhanced in an image processor
- G01N 2223/421 .. digitised image, analysed in real time ( [recognition algorithms](#) )
- G01N 2223/422 .. windows within the image
- G01N 2223/423 .. multispectral imaging-multiple energy imaging
- G01N 2223/424 .. energy subtraction image processing ( [dual energy processing](#) )
- G01N 2223/425 .. temporal ( [time difference](#) ) subtraction processing
- G01N 2223/426 .. image comparing, unknown with known substance
- G01N 2223/427 .. stepped imaging ( [selected area of sample is changed](#) )
  
- G01N 2223/50 . Detectors
  - G01N 2223/501 .. array
    - G01N 2223/5015 ... linear array
  - G01N 2223/502 .. ionisation chamber
  - G01N 2223/503 .. auxiliary reference detector
  - G01N 2223/504 .. pin-diode
  - G01N 2223/505 .. scintillation
    - G01N 2223/5055 ... scintillation crystal coupled to PMT
  - G01N 2223/506 .. time-of-flight
  - G01N 2223/507 .. secondary-emission detector
  - G01N 2223/508 .. photo-acoustic
  - G01N 2223/509 .. infra-red
  
- G01N 2223/60 . Specific applications or type of materials
  - G01N 2223/601 .. density profile
  - G01N 2223/602 .. crystal growth
  - G01N 2223/603 .. superlattices
  - G01N 2223/604 .. monocrystal
  - G01N 2223/605 .. phases
  - G01N 2223/606 .. texture
  - G01N 2223/607 .. strain
  - G01N 2223/608 .. superconductors
  - G01N 2223/61 .. thin films, coatings
    - G01N 2223/611 .. patterned objects ; electronic devices
      - G01N 2223/6113 ... printed circuit board (PCB)
      - G01N 2223/6116 ... semiconductor wafer
  - G01N 2223/612 .. biological material
    - G01N 2223/6123 ... bone mineral
    - G01N 2223/6126 ... tissue
  - G01N 2223/613 .. moisture
  - G01N 2223/614 .. road surface
  - G01N 2223/615 .. composite materials, multilayer laminates
  - G01N 2223/616 .. earth materials

G01N 2223/617	..	ash in coal
G01N 2223/618	..	food
G01N 2223/619	..	wood
G01N 2223/62	..	powders
G01N 2223/621	..	tobacco
G01N 2223/622	..	paper
G01N 2223/623	..	plastics
G01N 2223/624	..	steel, castings
G01N 2223/625	..	nuclear fuels, laser imploded targets
G01N 2223/626	..	radioactive material
G01N 2223/6265	...	sample with radioactive tracer, tag, label
G01N 2223/627	..	tyres
G01N 2223/628	..	tubes, pipes
G01N 2223/629	..	welds, bonds, sealing compounds
G01N 2223/63	..	turbine blades
G01N 2223/631	..	large structures, walls
G01N 2223/632	..	residual life, life expectancy
G01N 2223/633	..	thickness, density, surface weight ( unit area )
G01N 2223/634	..	wear behaviour, roughness
G01N 2223/635	..	fluids, granulates
G01N 2223/636	..	fluid sample with radioactive sources
G01N 2223/637	..	liquid
G01N 2223/638	..	gas
G01N 2223/639	..	material in a container
G01N 2223/64	..	multiple-sample chamber, multiplicity of materials
G01N 2223/641	..	particle sizing
G01N 2223/642	..	moving sheet, web
G01N 2223/6425	...	correcting for web flutter
G01N 2223/643	..	object on conveyer
G01N 2223/645	..	quality control
G01N 2223/646	..	flaws, defects
G01N 2223/6462	...	microdefects
G01N 2223/6464	...	radioactive substance into defect site
G01N 2223/6466	...	flaws comparing to predetermined standards
G01N 2223/6468	...	at different temperatures
G01N 2223/647	..	leak detection
G01N 2223/648	..	voids
G01N 2223/649	..	porosity
G01N 2223/65	..	cavitation pits
G01N 2223/651	..	dust
G01N 2223/652	..	impurities, foreign matter, trace amounts
G01N 2223/66	..	multiple steps inspection, e.g. coarse/fine

**G01N 2291/00****Indexing codes associated with group [G01N 29/00](#)**

- G01N 2291/01 . Indexing codes associated with the measuring variable
- G01N 2291/011 .. Velocity or travel time
- G01N 2291/012 .. Phase angle
- G01N 2291/014 .. Resonance or resonant frequency
- G01N 2291/015 .. Attenuation, scattering
- G01N 2291/017 .. Doppler techniques
- G01N 2291/018 .. Impedance
  
- G01N 2291/02 . Indexing codes associated with the analysed material
- G01N 2291/021 .. Gases
  - G01N 2291/0212 ... Binary gases
  - G01N 2291/0215 ... Mixtures of three or more gases, e.g. air
  - G01N 2291/0217 ... Smoke, combustion gases
- G01N 2291/022 .. Liquids
  - G01N 2291/0222 ... Binary liquids
  - G01N 2291/0224 ... Mixtures of three or more liquids
  - G01N 2291/0226 ... Oils, e.g. engine oils
  - G01N 2291/0228 ... Aqueous liquids
- G01N 2291/023 .. Solids
  - G01N 2291/0231 ... Composite or layered materials
  - G01N 2291/0232 ... Glass, ceramics, concrete or stone
  - G01N 2291/0234 ... Metals, e.g. steel
  - G01N 2291/0235 ... Plastics ; polymers ; soft materials, e.g. rubber
  - G01N 2291/0237 ... Thin materials, e.g. paper, membranes, thin films
  - G01N 2291/0238 ... Wood
- G01N 2291/024 .. Mixtures
  - G01N 2291/02408 ... Solids in gases, e.g. particle suspensions
  - G01N 2291/02416 ... Solids in liquids
  - G01N 2291/02425 ... Liquids in gases, e.g. sprays
  - G01N 2291/02433 ... Gases in liquids, e.g. bubbles, foams
  - G01N 2291/02441 ... Liquids in porous solids
  - G01N 2291/0245 ... Gases in porous solids
  - G01N 2291/02458 ... Solids in solids, e.g. granules
  - G01N 2291/02466 ... Biological material, e.g. blood
  - G01N 2291/02475 ... Tissue characterisation
  - G01N 2291/02483 ... Other human or animal parts, e.g. bones
  - G01N 2291/02491 ... Materials with nonlinear acoustic properties
- G01N 2291/025 .. Change of phase or condition
  - G01N 2291/0251 ... Solidification, icing, curing composites, polymerisation
  - G01N 2291/0252 ... Melting, molten solids



G01N 2291/0253	...	Condensation
G01N 2291/0254	...	Evaporation
G01N 2291/0255	...	(Bio)chemical reactions, e.g. on biosensors
G01N 2291/0256	...	Adsorption, desorption, surface mass change, e.g. on biosensors
G01N 2291/0257	....	with a layer containing at least one organic compound
G01N 2291/0258	...	Structural degradation, e.g. fatigue of composites, ageing of oils
G01N 2291/028	..	Material parameters
G01N 2291/02809	...	Concentration of a compound, e.g. measured by a surface mass change
G01N 2291/02818	...	Density, viscosity
G01N 2291/02827	...	Elastic parameters, strength or force
G01N 2291/02836	...	Flow rate, liquid level
G01N 2291/02845	...	Humidity, wetness
G01N 2291/02854	...	Length, thickness
G01N 2291/02863	...	Electric or magnetic parameters
G01N 2291/02872	...	Pressure
G01N 2291/02881	...	Temperature
G01N 2291/0289	...	Internal structure, e.g. defects, grain size, texture
G01N 2291/04	.	Wave modes and trajectories
G01N 2291/042	..	Wave modes
G01N 2291/0421	...	Longitudinal waves
G01N 2291/0422	...	Shear waves, transverse waves, horizontally polarised waves
G01N 2291/0423	...	Surface waves, e.g. Rayleigh waves, Love waves
G01N 2291/0425	...	Parallel to the surface, e.g. creep waves
G01N 2291/0426	...	Bulk waves, e.g. quartz crystal microbalance, torsional waves
G01N 2291/0427	...	Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever
G01N 2291/0428	...	Mode conversion
G01N 2291/043	..	Complex trajectories
G01N 2291/044	..	Internal reflections (echoes), e.g. on walls or defects
G01N 2291/045	..	External reflections, e.g. on reflectors
G01N 2291/048	..	Transmission, i.e. analysed material between transmitter and receiver
G01N 2291/051	..	Perpendicular incidence, perpendicular propagation
G01N 2291/052	..	Perpendicular incidence, angular propagation
G01N 2291/055	..	Angular incidence, perpendicular propagation
G01N 2291/056	..	Angular incidence, angular propagation
G01N 2291/057	..	Angular incidence, parallel to surface propagation
G01N 2291/10	.	Number of transducers
G01N 2291/101	..	one transducer
G01N 2291/102	..	one emitter, one receiver
G01N 2291/103	..	one emitter, two or more receivers
G01N 2291/104	..	two or more emitters, one receiver
G01N 2291/105	..	two or more emitters, two or more receivers

G01N 2291/106	..	one or more transducer arrays
G01N 2291/26	.	Scanned objects
G01N 2291/262	..	Linear objects
G01N 2291/2623	...	Rails ; Railroads
G01N 2291/2626	...	Wires, bars, rods
G01N 2291/263	..	Surfaces
G01N 2291/2632	...	flat
G01N 2291/2634	...	cylindrical from outside
G01N 2291/2636	...	cylindrical from inside
G01N 2291/2638	...	Complex surfaces
G01N 2291/265	..	Spherical objects
G01N 2291/267	..	Welds
G01N 2291/2672	...	Spot welding
G01N 2291/2675	...	Seam, butt welding
G01N 2291/2677	...	Lapp welding
G01N 2291/269	..	Various geometry objects
G01N 2291/2691	...	Bolts, screws, heads
G01N 2291/2692	...	Tyres
G01N 2291/2693	...	Rotor or turbine parts
G01N 2291/2694	...	Wings or other aircraft parts
G01N 2291/2695	...	Bottles, containers
G01N 2291/2696	...	Wheels, Gears, Bearings
G01N 2291/2697	...	Wafer or (micro)electronic parts
G01N 2291/2698	...	Other discrete objects, e.g. bricks

**G01N 2333/00**      **Assays involving biological materials from specific organisms or of a specific nature**

**NOTE**

In groups [G01N 2333/47](#) to [G01N 2333/994](#) indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism.

G01N 2333/001	.	by chemical synthesis
G01N 2333/003	..	of Peptide-nucleic acids (PNAs)
G01N 2333/005	.	from viruses
G01N 2333/01	..	DNA viruses
G01N 2333/015	...	Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus
G01N 2333/02	...	Hepadnaviridae, e.g. hepatitis B virus
G01N 2333/025	...	Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
G01N 2333/03	...	Herpetoviridae, e.g. pseudorabies virus
G01N 2333/032	....	Pseudorabies virus, i.e. Aujeszky virus

G01N 2333/035	....	Herpes simplex virus I or II
G01N 2333/04	....	Varicella-zoster virus
G01N 2333/045	.....	Cytomegalovirus
G01N 2333/05	....	Epstein-Barr virus
G01N 2333/055	....	Marek`s disease virus
G01N 2333/06	....	Infectious bovine rhinotracheitis virus
G01N 2333/065	...	Poxviridae, e.g. avipoxvirus
G01N 2333/07	....	Vaccinia virus ; Variola virus
G01N 2333/075	...	Adenoviridae
G01N 2333/08	..	RNA viruses
G01N 2333/085	...	Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
G01N 2333/09	....	Foot-and-mouth disease virus
G01N 2333/095	....	Rhinovirus
G01N 2333/10	....	Hepatitis A virus
G01N 2333/105	....	Poliovirus
G01N 2333/11	...	Orthomyxoviridae, e.g. influenza virus
G01N 2333/115	...	Paramyxoviridae, e.g. parainfluenza virus
G01N 2333/12	....	Mumps virus ; Measles virus
G01N 2333/125	....	Newcastle disease virus
G01N 2333/13	....	Canine distemper virus
G01N 2333/135	....	Respiratory syncytial virus
G01N 2333/14	...	Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
G01N 2333/145	...	Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus
G01N 2333/15	...	Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus
G01N 2333/155	....	Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
G01N 2333/16	.....	HIV-1, HIV-2
G01N 2333/161	.....	gag-pol, e.g. p55, p24/25, p17/18, p.7, p6, p66/68, p51/52, p31/34, p32, p40
G01N 2333/162	.....	env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site
G01N 2333/163	.....	Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx
G01N 2333/165	...	Coronaviridae, e.g. avian infectious bronchitis virus
G01N 2333/17	....	Porcine transmissible gastroenteritis virus
G01N 2333/175	...	Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus
G01N 2333/18	...	Togaviridae ; Flaviviridae
G01N 2333/181	....	Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus ( <a href="#">rubella virus G01N 2333/19</a> )
G01N 2333/183	....	Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus ( <a href="#">hog cholera virus</a> ) or border disease virus
G01N 2333/185	.....	Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue
G01N 2333/186	.....	Hepatitis C ; Hepatitis NANB

G01N 2333/188	.....	Hepatitis G ; Hepatitis NANBNCNDNE
G01N 2333/19	....	Rubella virus
G01N 2333/195	.	from bacteria

**NOTE**

In groups [G01N 2333/20](#) to [G01N 2333/365](#) , where appropriate, after the bacteria terminology, the indication of the order (O), family (F) or genus (G) of the bacteria is given in brackets.

G01N 2333/20	..	from Spirochaetales (O), e.g. Treponema, Leptospira
G01N 2333/205	..	from Campylobacter (G)
G01N 2333/21	..	from Pseudomonadaceae (F)
G01N 2333/212	...	Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter
G01N 2333/215	..	from Halobacteriaceae (F)
G01N 2333/22	..	from Neisseriaceae (F), e.g. Acinetobacter
G01N 2333/225	..	from Alcaligenes (G)
G01N 2333/23	..	from Brucella (G)
G01N 2333/235	..	from Bordetella (G)
G01N 2333/24	..	from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
G01N 2333/245	...	Escherichia (G)
G01N 2333/25	...	Shigella (G)
G01N 2333/255	...	Salmonella (G)
G01N 2333/26	...	Klebsiella (G)
G01N 2333/265	...	Enterobacter (G)
G01N 2333/27	...	Erwinia (G)
G01N 2333/275	...	Hafnia (G)
G01N 2333/28	..	from Vibrionaceae (F)
G01N 2333/285	..	from Pasteurellaceae (F), e.g. Haemophilus influenza
G01N 2333/29	..	from Rickettsiales (o)
G01N 2333/295	..	from Chlamydiales (o)
G01N 2333/30	..	from Mycoplasmatales, e.g. Pleuropneumonia-like organisms (PPLO)
G01N 2333/305	..	from Micrococcaceae (F)
G01N 2333/31	...	from Staphylococcus (G)
G01N 2333/315	..	from Streptococcus (G), e.g. Enterococci
G01N 2333/3153	...	Streptokinase
G01N 2333/3156	...	from Streptococcus pneumoniae ( <a href="#">Pneumococcus</a> ) ( <a href="#">Streptokinase G01N 2333/3153</a> )
G01N 2333/32	..	from Bacillus (G)
G01N 2333/325	...	Bacillus thuringiensis crystal protein (delta-endotoxin)
G01N 2333/33	..	from Clostridium (G)
G01N 2333/335	..	from Lactobacillus (G)
G01N 2333/34	..	from Corynebacterium (G)

G01N 2333/345	..	from Brevibacterium (G)
G01N 2333/35	..	from Mycobacteriaceae (F)
G01N 2333/355	..	from Nocardia (G)
G01N 2333/36	..	from Actinomyces ; from Streptomyces (G)
G01N 2333/365	..	from Actinoplanes (G)
G01N 2333/37	.	from fungi
G01N 2333/375	..	from Basidiomycetes
G01N 2333/38	..	from Aspergillus
G01N 2333/385	..	from Penicillium
G01N 2333/39	..	from yeasts
G01N 2333/395	...	from Saccharomyces
G01N 2333/40	...	from Candida
G01N 2333/405	.	from algae
G01N 2333/41	.	from lichens
G01N 2333/415	.	from plants
G01N 2333/42	..	Lectins, e.g. concanavalin, phytohaemagglutinin
G01N 2333/425	..	Zeins
G01N 2333/43	..	Sweetening agents, e.g. thaumatin, monellin
G01N 2333/435	.	from animals ; from humans
G01N 2333/43504	..	from invertebrates
G01N 2333/43508	...	from crustaceans
G01N 2333/43513	...	from arachnidae
G01N 2333/43517	....	from spiders
G01N 2333/43521	....	from scorpions
G01N 2333/43526	...	from worms
G01N 2333/4353	....	from nematodes
G01N 2333/43534	.....	from Caenorhabditis
G01N 2333/43539	....	from cestodes
G01N 2333/43543	.....	from Taenia
G01N 2333/43547	....	from trematodes
G01N 2333/43552	...	from insects
G01N 2333/43556	....	from ticks
G01N 2333/4356	....	from wasps
G01N 2333/43565	....	from bees
G01N 2333/43569	....	from flies
G01N 2333/43573	.....	from Drosophila
G01N 2333/43578	....	from silkworm
G01N 2333/43582	....	from mites
G01N 2333/43586	....	from fleas

G01N 2333/43591	....	from mosquitoes
G01N 2333/43595	...	from coelenteratae, e.g. medusae
G01N 2333/44	..	from protozoa
G01N 2333/445	...	Plasmodium
G01N 2333/45	...	Toxoplasma
G01N 2333/455	...	Eimeria
G01N 2333/46	..	from vertebrates
G01N 2333/4603	...	from fish
G01N 2333/4606	...	from amphibians
G01N 2333/4609	...	from reptiles
G01N 2333/4613	....	Snake venom
G01N 2333/4616	.....	from Russell's viper
G01N 2333/462	.....	from Agkistrodon sp., e.g. acutase, ACTE
G01N 2333/4623	.....	from Agkistrodon rhodostoma ( <a href="#">Malayan pit viper</a> ) ; Arvin (R) ; Batroboxin ; Ancrod
G01N 2333/4626	.....	from Agkistrodon contortrix contortrix ( <a href="#">copperhead snake</a> ) ; Protac (R)
G01N 2333/463	.....	from Crocodylus adamanteus ( <a href="#">Eastern Diamondback rattlesnake</a> ) ; Crotoxin
G01N 2333/4633	.....	from Echis carinatus ; Ecarin
G01N 2333/4636	.....	from Bothrops sp.
G01N 2333/464	.....	from Bothrops atrox ; Reptilase ; Atroxin
G01N 2333/4643	.....	from Bothrops jararaca ; Botrocetin
G01N 2333/4646	.....	from Oxyuranus scutellatus ( <a href="#">Taipan snake of Elapidae family</a> )
G01N 2333/465	...	from birds

**NOTE**

In groups [G01N 2333/47](#) to [G01N 2333/994](#) indexing codes are assigned irrespective to the source of the indicated proteins.

G01N 2333/47	...	Assays involving proteins of known structure or function as defined in the subgroups
G01N 2333/4701	....	( not used )
G01N 2333/4703	.....	Regulators ; Modulating activity
G01N 2333/4704	.....	Inhibitors ; Suppressors
G01N 2333/4706	.....	stimulating, promoting or activating activity
G01N 2333/4707	.....	Guanosine triphosphatase activating protein, GAP
G01N 2333/4709	.....	Amyloid plaque core protein
G01N 2333/471	.....	Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein
G01N 2333/4712	.....	Muscle proteins, e.g. myosin, actin, protein
G01N 2333/4713	.....	Plasma globulins, lactoglobulin
G01N 2333/4715	.....	Cytokine-induced proteins
G01N 2333/4716	.....	Complement proteins, e.g. anaphylatoxin, C3a, C5a

G01N 2333/4718	.....	Lipocortins
G01N 2333/4719	.....	G-proteins
G01N 2333/4721	.....	Cationic antimicrobial peptides, e.g. defensins
G01N 2333/4722	.....	Proteoglycans, e.g. aggrecan
G01N 2333/4724	.....	Lectins
G01N 2333/4725	.....	Mucins, e.g. human intestinal mucin
G01N 2333/4727	.....	Calcium binding proteins, e.g. calmodulin
G01N 2333/4728	.....	alpha-Glycoproteins
G01N 2333/473	.....	Recognins, e.g. malignin
G01N 2333/4731	.....	Casein
G01N 2333/4733	.....	Acute pancreatitis-associated protein
G01N 2333/4734	.....	Villin
G01N 2333/4736	.....	Retinoblastoma protein
G01N 2333/4737	.....	C-reactive protein
G01N 2333/4739	.....	Cyclin ; Prad 1
G01N 2333/474	.....	Pancreatic thread protein ; Reg protein
G01N 2333/4742	.....	Keratin ; Cytokeratin
G01N 2333/4743	.....	Bactericidal/Permeability-increasing protein BPI
G01N 2333/4745	.....	Insulin-like growth factor binding protein
G01N 2333/4746	.....	Cancer-associated SCM-recognition factor, CRISPP
G01N 2333/4748	.....	p53
G01N 2333/475	..	Assays involving growth factors
G01N 2333/4753	...	Hepatocyte growth factor ; Scatter factor ; Tumor cytotoxic factor II
G01N 2333/4756	...	Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor
G01N 2333/48	...	Nerve growth factor (NGF)
G01N 2333/485	...	Epidermal growth factor (EGF) (urogastrone)
G01N 2333/49	...	Platelet-derived growth factor (PDGF)
G01N 2333/495	...	Transforming growth factor (TGF)
G01N 2333/50	...	Fibroblast growth factors (FGF)
G01N 2333/501	....	acidic FGF (aFGF)
G01N 2333/503	....	basic FGF (bFGF)
G01N 2333/505	...	Erythropoietin (EPO)
G01N 2333/51	...	Bone morphogenetic factor ; Osteogenins ; Osteogenic factor ; Bone-inducing factor
G01N 2333/515	...	Angiogenesis factors ; Angiogenin
G01N 2333/52	..	Assays involving cytokines
G01N 2333/521	...	{ Chemokines }
G01N 2333/522	....	Alpha-chemokines, e.g. NAP-2, ENA-78, GRO-alpha/MGSA/NAP-3, GRO-beta/MIP-2alpha, GRO-gamma/MIP-2beta, IP-10, GCP-2, MIG, PBSF, PF-4 or KC
G01N 2333/523	....	Beta-chemokines, e.g. RANTES, I-309/TCA-3, MIP-1alpha, MIP-1beta/ACT-2/LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1or LDCF-2



G01N 2333/524	...	Thrombopoietin, i.e. C-MPL ligand
G01N 2333/525	...	Tumor necrosis factor (TNF)
G01N 2333/5255	....	Lymphotoxin (LT)
G01N 2333/53	...	Colony-stimulating factor (CSF)
G01N 2333/535	....	Granulocyte CSF ; Granulocyte-macrophage CSF
G01N 2333/54	...	Interleukins (IL)
G01N 2333/5403	....	IL-3
G01N 2333/5406	....	IL-4
G01N 2333/5409	....	IL-5
G01N 2333/5412	....	IL-6
G01N 2333/5415	....	Leukaemia inhibitory factor (LIF)
G01N 2333/5418	....	IL-7
G01N 2333/5421	....	IL-8
G01N 2333/5425	....	IL-9
G01N 2333/5428	....	IL-10
G01N 2333/5431	....	IL-11
G01N 2333/5434	....	IL-12
G01N 2333/5437	....	IL-13
G01N 2333/544	....	IL-14
G01N 2333/5443	....	IL-15
G01N 2333/5446	....	IL-16
G01N 2333/545	....	IL-1
G01N 2333/55	....	IL-2
G01N 2333/555	...	Interferons (IFN)
G01N 2333/56	....	IFN-alpha
G01N 2333/565	....	IFN-beta
G01N 2333/57	....	IFN-gamma
G01N 2333/575	..	Hormones ( <a href="#">derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin</a> <a href="#">G01N 2333/665</a> , <a href="#">corticotropin</a> <a href="#">G01N 2333/695</a> )
G01N 2333/5751	...	Corticotropin releasing factor (CRF) (Urotensin)
G01N 2333/5752	...	Placental lactogen ; Chorionic Somatomammotropin
G01N 2333/5753	...	Calcitonin gene related peptide
G01N 2333/5754	...	Endothelin, vasoactive intestinal contractor (VIC)
G01N 2333/5755	...	Neuropeptide Y
G01N 2333/5756	...	Prolactin
G01N 2333/5757	...	Vasoactive intestinal peptide (VIP) or related peptides
G01N 2333/5758	...	Gastrin releasing peptide
G01N 2333/5759	...	Thymosin or related peptides
G01N 2333/58	...	Atrial natriuretic factor complex ; Atriopeptin ; Atrial natriuretic peptide (ANP) ; Brain natriuretic peptide ( <a href="#">BNP</a> , <a href="#">proBNP</a> ) ; Cardionatrin ; Cardiodilatin
G01N 2333/585	...	Calcitonins
G01N 2333/59	...	Follicle-stimulating hormone (FSH) ; Chorionic gonadotropins, e.g. HCG ; Luteinising hormone (LH) ; Thyroid-stimulating hormone (TSH)

G01N 2333/595	...	Gastrins ; Cholecystokinins (CCK)
G01N 2333/60	...	Growth-hormone releasing factors (GH-RF) (Somatoliberin)
G01N 2333/605	...	Glucagons
G01N 2333/61	...	Growth hormones (GH) (Somatotropin)
G01N 2333/62	...	Insulins
G01N 2333/63	...	Motilins
G01N 2333/635	...	Parathyroid hormone (parathormone) ; Parathyroid hormone-related peptides
G01N 2333/64	...	Relaxins
G01N 2333/645	...	Secretins
G01N 2333/65	...	Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
G01N 2333/655	...	Somatostatins
G01N 2333/66	...	Thymopoietins
G01N 2333/665	..	Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
G01N 2333/67	...	Lipotropins, e.g. beta, gamma lipotropin
G01N 2333/675	...	beta-Endorphins
G01N 2333/68	...	Melanocyte-stimulating hormone (MSH)
G01N 2333/685	....	alpha-Melanotropin
G01N 2333/69	....	beta-Melanotropin
G01N 2333/695	...	Corticotropin (ACTH)
G01N 2333/70	...	Enkephalins
G01N 2333/705	..	Assays involving receptors, cell surface antigens or cell surface determinants
G01N 2333/70503	...	Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3
G01N 2333/70507	....	C2D
G01N 2333/7051	....	T-cell receptor (TcR)-CD3 complex
G01N 2333/70514	....	CD4
G01N 2333/70517	....	CD8
G01N 2333/70521	....	CD28, CD152
G01N 2333/70525	....	ICAM molecules, e.g. CD50, CD54, CD102
G01N 2333/70528	....	CD58
G01N 2333/70532	....	B7 molecules, e.g. CD80, CD86
G01N 2333/70535	....	Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)
G01N 2333/70539	....	MHC-molecules, e.g. HLA-molecules
G01N 2333/70542	....	CD106
G01N 2333/70546	...	Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM
G01N 2333/7055	....	Integrin beta1-subunit-containing molecules, e.g. CD29, CD49
G01N 2333/70553	....	Integrin beta2-subunit-containing molecules, e.g. CD11, CD18
G01N 2333/70557	....	Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61
G01N 2333/7056	...	Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
G01N 2333/70564	....	Selectins, e.g. CD62
G01N 2333/70567	...	Nuclear receptors, e.g. retinoic acid receptor (RAR), RXR, nuclear orphan receptors
G01N 2333/70571	...	for neuromediators, e.g. serotonin receptor, dopamine receptor

G01N 2333/70575	...	NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 ( <a href="#">NGF G01N 2333/48</a> , <a href="#">TNF G01N 2333/525</a> )
G01N 2333/70578	...	NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 ( <a href="#">NGF-receptor G01N 2333/71</a> , <a href="#">TNF-receptor G01N 2333/7151</a> )
G01N 2333/70582	...	CD71
G01N 2333/70585	...	CD44
G01N 2333/70589	...	CD45
G01N 2333/70592	...	CD52
G01N 2333/70596	...	Molecules with a "CD"-designation not provided for elsewhere in <a href="#">G01N 2333/705</a>
G01N 2333/71	...	for growth factors ; for growth regulators
G01N 2333/715	...	for cytokines ; for lymphokines ; for interferons
G01N 2333/7151	....	for tumor necrosis factor (TNF) ; for lymphotoxin (LT)
G01N 2333/7153	....	or colony-stimulating factors (CSF)
G01N 2333/7155	....	for interleukins (IL)
G01N 2333/7156	....	for interferons (IFN)
G01N 2333/7158	....	for chemokines
G01N 2333/72	...	for hormones ( <a href="#">for neuromediators G01N 2333/70571</a> )
G01N 2333/723	....	Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor
G01N 2333/726	....	G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH
G01N 2333/745	..	Assays involving non-enzymic blood coagulation factors
G01N 2333/7452	...	Thrombomodulin
G01N 2333/7454	...	Tissue factor ( <a href="#">tissue thromboplastin, Factor III</a> )
G01N 2333/7456	...	Factor V
G01N 2333/7458	...	Protein S
G01N 2333/75	...	Fibrin ; Fibrinogen
G01N 2333/755	...	Factors VIII, e.g. factor VIII C (AHF), factor VIII Ag (VWF)
G01N 2333/76	..	Assays involving albumins other than in routine use for blocking surfaces or for anchoring haptens during immunisation
G01N 2333/765	...	Serum albumin, e.g. HSA
G01N 2333/77	...	Ovalbumin
G01N 2333/775	..	Apolipopptides
G01N 2333/78	..	Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin (CIG)
G01N 2333/785	..	Alveolar surfactant peptides ; Pulmonary surfactant peptides
G01N 2333/79	..	Transferrins, e.g. lactoferrins, ovotransferrins
G01N 2333/795	..	Porphyrin- or corrin-ring-containing peptides
G01N 2333/80	..	Cytochromes
G01N 2333/805	..	Haemoglobins ; Myoglobins
G01N 2333/81	..	Protease inhibitors
G01N 2333/8103	..	Exopeptidase ( <a href="#">E.C. 3.4.11-19</a> ) inhibitors

G01N 2333/8107	..	Endopeptidase ( E.C. 3.4.21-99 ) inhibitors
G01N 2333/811	...	Serine protease ( E.C. 3.4.21 ) inhibitors
G01N 2333/8114	....	Kunitz type inhibitors
G01N 2333/8117	.....	Bovine/basic pancreatic trypsin inhibitor ( BPTI, aprotinin )
G01N 2333/8121	....	Serpins
G01N 2333/8125	.....	Alpha-1-antitrypsin
G01N 2333/8128	.....	Antithrombin III
G01N 2333/8132	.....	Plasminogen activator inhibitors
G01N 2333/8135	....	Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid
G01N 2333/8139	...	Cysteine protease ( E.C. 3.4.22 ) inhibitors, e.g. cystatin
G01N 2333/8142	...	Aspartate protease ( E.C. 3.4.23 ) inhibitors, e.g. HIV protease inhibitors
G01N 2333/8146	...	Metalloprotease ( E.C. 3.4.24 ) inhibitors, e.g. tissue inhibitor of metalloproteinase, TIMP
G01N 2333/815	..	from leeches, e.g. hirudin, eglin
G01N 2333/82	.	Translation products from oncogenes
G01N 2333/825	.	Metallothioneins
G01N 2333/90	.	Enzymes ; Proenzymes

**NOTE**

Enzymes are generally categorised below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

G01N 2333/9005	..	Enzymes with nucleic acid structure ; e.g. ribozymes
G01N 2333/901	..	Antibodies with enzymatic activity ; e.g. abzymes
G01N 2333/9015	..	Ligases (6)
G01N 2333/902	..	Oxidoreductases (1.)
G01N 2333/90203	...	acting on the aldehyde or oxo group of donors (1.2)
G01N 2333/90206	...	acting on the CH-CH group of donors (1.3)
G01N 2333/90209	...	acting on NADH or NADPH (1.6), e.g. those with a heme protein as acceptor (1.6.2) (general), Cytochrome-b5 reductase (1.6.2.2) or NADPH-cytochrome P450 reductase (1.6.2.4)
G01N 2333/90212	...	acting on a sulfur group of donors (1.8)
G01N 2333/90216	...	acting on a heme group of donors (1.9)
G01N 2333/90219	...	acting on diphenols and related substances as donors (1.10)
G01N 2333/90222	....	with oxygen as acceptor (1.10.3) in general
G01N 2333/90225	.....	with a definite EC number (1.10.3.-)
G01N 2333/90229	.....	Catechol oxidase, i.e. Tyrosinase (1.10.3.1)
G01N 2333/90232	.....	Laccase (1.10.3.2)
G01N 2333/90235	.....	Ascorbate oxidase (1.10.3.3)
G01N 2333/90238	...	acting on hydrogen as donor (1.12)
G01N 2333/90241	...	acting on single donors with incorporation of molecular oxygen, i.e. oxygenases

	(1.13)	
G01N 2333/90245	...	acting on paired donors with incorporation of molecular oxygen (1.14)
G01N 2333/90248	....	with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13
G01N 2333/90251	.....	with a definite EC number (1.14.13.-)
G01N 2333/90254	.....	Nitric-oxide synthase ( <a href="#">NOS</a> ; 1.14.13.39 )
G01N 2333/90258	....	with a reduced iron-sulfur protein as one donor (1.14.15) in general
G01N 2333/90261	.....	with a definite EC number (1.14.15.-)
G01N 2333/90264	.....	Steroid 11 beta monooxygenase ( <a href="#">P-450 protein</a> ) (1.14.15.4)
G01N 2333/90267	.....	[Cholesterol monooxygenase ( <a href="#">cytochrome P 450scc</a> ) (1.14.15.6)
G01N 2333/9027	....	Miscellaneous (1.14.99) ( <a href="#">not used</a> )
G01N 2333/90274	.....	with a definite EC number (1.14.99.-) ( <a href="#">not used</a> )
G01N 2333/90277	.....	Steroid 17 alpha-monooxygenase (1.14.99.9)
G01N 2333/9028	.....	Steroid 21-monooxygenase (1.14.99.10)
G01N 2333/90283	...	acting on superoxide radicals as acceptor (1.15)
G01N 2333/90287	...	oxidising metal ions (1.16)
G01N 2333/9029	...	acting on -CH2- groups (1.17)
G01N 2333/90293	...	acting on reduced ferredoxin as donor (1.18)
G01N 2333/90296	...	acting on reduced flavodoxin as donor (1.19)
G01N 2333/904	...	acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)
G01N 2333/906	...	acting on nitrogen containing compounds as donors ( <a href="#">1.4</a> , <a href="#">1.5</a> , <a href="#">1.7</a> )
G01N 2333/90605	....	acting on the CH-NH2 group of donors (1.4)
G01N 2333/90611	.....	with NAD or NADP as acceptor (1.4.1) in general
G01N 2333/90616	.....	with a definite EC number (1.4.1.-)
G01N 2333/90622	.....	Phenylalanine dehydrogenase (1.4.1.20)
G01N 2333/90627	.....	with a cytochrome as acceptor (1.4.2)
G01N 2333/90633	.....	with oxygen as acceptor (1.4.3) in general
G01N 2333/90638	.....	with a definite EC number (1.4.3.-)
G01N 2333/90644	.....	D-Amino acid oxidase (1.4.3.3)
G01N 2333/9065	....	acting on CH-NH groups of donors (1.5)
G01N 2333/90655	.....	with NAD or NADP as acceptor (1.5.1) in general
G01N 2333/90661	.....	with a definite EC number (1.5.1.-)
G01N 2333/90666	.....	Dihydrofolate reductase (DHFR) (1.5.1.3)
G01N 2333/90672	.....	with oxygen as acceptor (1.5.3) in general
G01N 2333/90677	.....	with a definite EC number (1.5.3.-)
G01N 2333/90683	.....	Sarcosine oxidase (1.5.3.1)
G01N 2333/90688	....	acting on other nitrogen compounds as donors (1.7)
G01N 2333/90694	.....	with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
G01N 2333/908	...	acting on hydrogen peroxide as acceptor (1.11)
G01N 2333/91	..	Transferases (2.)
G01N 2333/91005	...	transferring one-carbon groups (2.1)
G01N 2333/91011	....	Methyltransferases (general) (2.1.1.)

G01N 2333/91017	.....	with definite EC number (2.1.1.-)
G01N 2333/91022	.....	Catecholmethyltransferases (2.1.1.6)
G01N 2333/91028	....	Hydroxymethyl-, formyl-transferases (2.1.2)
G01N 2333/91034	....	Carboxyl- and carbamoyl transferases (2.1.3)
G01N 2333/9104	...	Aldehyde and ketone transferases (2.2)
G01N 2333/91045	...	Acyltransferases (2.3)
G01N 2333/91051	....	Acyltransferases other than aminoacyltransferases (general) (2.3.1)
G01N 2333/91057	.....	with definite EC number (2.3.1.-)
G01N 2333/91062	.....	Chloramphenicol-acetyltransferases (2.3.1.28)
G01N 2333/91068	.....	Chalcone synthases (2.3.1.74)
G01N 2333/91074	....	Aminoacyltransferases (general) (2.3.2)
G01N 2333/9108	.....	with definite EC number (2.3.2.-)
G01N 2333/91085	.....	Transglutaminases ; Factor XIIIq (2.3.2.13)
G01N 2333/91091	...	Glycosyltransferases (2.4)
G01N 2333/91097	....	Hexosyltransferases (general) (2.4.1)
G01N 2333/91102	.....	with definite EC number (2.4.1.-)
G01N 2333/91108	.....	Levansucrases (2.4.1.10)
G01N 2333/91114	.....	Cellulose synthases (2.4.1.12)
G01N 2333/9112	.....	Sucrose synthases (2.4.1.13)
G01N 2333/91125	.....	Sucrose phosphate synthases (2.4.1.14)
G01N 2333/91131	.....	Glucan branching enzymes (2.4.1.18)
G01N 2333/91137	.....	Cyclomalto dextrin glucano transferases (2.4.1.19)
G01N 2333/91142	....	Pentosyltransferases (2.4.2)
G01N 2333/91148	....	transferring other glycosyl groups (2.4.99)
G01N 2333/91154	....	transferring alkyl or aryl groups other than methyl groups (2.5)
G01N 2333/9116	...	transferring alkyl or aryl groups other than methyl groups (2.5)
G01N 2333/91165	....	general (2.5.1)
G01N 2333/91171	.....	with definite EC number (2.5.1.-)
G01N 2333/91177	.....	Glutathione transferases (2.5.1.18)
G01N 2333/91182	.....	Enolpyruvylshikimate-phosphate synthases (2.5.1.19)
G01N 2333/91188	...	transferring nitrogenous groups (2.6)
G01N 2333/91194	...	transferring sulfur containing groups (2.8)
G01N 2333/912	...	transferring phosphorus containing groups, e.g. kinases (2.7)
G01N 2333/91205	....	Phosphotransferases in general
G01N 2333/9121	.....	with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases
G01N 2333/91215	.....	with a definite EC number (2.7.1.-)
G01N 2333/9122	.....	Thymidine kinase (2.7.1.21)
G01N 2333/91225	....	with a carboxyl group as acceptor (2.7.2)
G01N 2333/9123	.....	with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases
G01N 2333/91235	.....	with a phosphate group as acceptor (2.7.4)
G01N 2333/9124	.....	Diphosphotransferases (2.7.6)

G01N 2333/91245	.....	Nucleotidyltransferases (2.7.7)
G01N 2333/9125	.....	with a definite EC number (2.7.7.-)
G01N 2333/91255	.....	DNA-directed RNA polymerase (2.7.7.6)
G01N 2333/9126	.....	DNA-directed DNA polymerase (2.7.7.7)
G01N 2333/91265	.....	Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)
G01N 2333/9127	.....	DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)
G01N 2333/91275	.....	RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)
G01N 2333/9128	.....	RNA-directed DNA polymerases, e.g. RT (2.7.7.49)
G01N 2333/91285	.....	RNA uridyltransferases (2.7.7.52)
G01N 2333/9129	.....	Transferases for other substituted phosphate groups (2.7.8)
G01N 2333/91295	.....	with paired acceptors (2.7.9)
G01N 2333/914	..	Hydrolases (3)
G01N 2333/916	...	acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)
G01N 2333/918	....	Carboxylic ester hydrolases (3.1.1)
G01N 2333/92	.....	Triglyceride splitting, e.g. by means of lipase
G01N 2333/922	....	Ribonucleases (RNAses) ; Deoxyribonucleases (DNAses)
G01N 2333/924	...	acting on glycosyl compounds (3.2)
G01N 2333/926	....	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase
G01N 2333/928	.....	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase
G01N 2333/93	.....	Fungal source
G01N 2333/932	.....	alpha-amylase from plant source
G01N 2333/934	.....	Glucoamylase
G01N 2333/936	....	acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme
G01N 2333/938	....	acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase
G01N 2333/94	....	acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase
G01N 2333/942	....	acting on beta-1, 4-glucosidic bonds, e.g. cellulase
G01N 2333/944	....	acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
G01N 2333/946	.....	Dextranase
G01N 2333/948	...	acting on peptide bonds (3.4)
G01N 2333/95	....	Proteinases, i.e. endopeptidases (3.4.21-3.4.99)
G01N 2333/9506	.....	derived from viruses
G01N 2333/9513	.....	derived from RNA viruses
G01N 2333/952	.....	derived from bacteria
G01N 2333/954	.....	bacteria being Bacillus
G01N 2333/956	.....	Bacillus subtilis or Bacillus licheniformis
G01N 2333/958	.....	derived from fungi
G01N 2333/96	.....	from yeast
G01N 2333/962	.....	from Aspergillus



G01N 2333/964	.....	derived from animal tissue
G01N 2333/96402	.....	from non-mammals
G01N 2333/96405	.....	in general ( not used )
G01N 2333/96408	.....	with EC number ( not used )
G01N 2333/96411	.....	Serine endopeptidases (3.4.21)
G01N 2333/96413	.....	Cysteine endopeptidases (3.4.22)
G01N 2333/96416	.....	Aspartic endopeptidases (3.4.23)
G01N 2333/96419	.....	Metalloendopeptidases (3.4.24)
G01N 2333/96422	.....	from snakes
G01N 2333/96425	.....	from mammals
G01N 2333/96427	.....	in general ( not used )
G01N 2333/9643	.....	with EC number ( not used )
G01N 2333/96433	.....	Serine endopeptidases (3.4.21)
G01N 2333/96436	.....	Granzymes
G01N 2333/96438	.....	Dibasic site splicing serine proteases, e.g. furin
G01N 2333/96441	.....	with definite EC number ( not used )
G01N 2333/96444	.....	Factor X (3.4.21.6)
G01N 2333/96447	.....	Factor VII (3.4.21.21)
G01N 2333/9645	.....	Factor IX (3.4.21.22)
G01N 2333/96452	.....	Factor XI (3.4.21.27)
G01N 2333/96455	.....	Kallikrein ( 3.4.21.34; 3.4.21.35 )
G01N 2333/96458	.....	Factor XII (3.4.21.38)
G01N 2333/96461	.....	Protein C (3.4.21.69)
G01N 2333/96463	.....	Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
G01N 2333/96466	.....	Cysteine endopeptidases (3.4.22)
G01N 2333/96469	.....	Interleukin 1-beta convertase-like enzymes
G01N 2333/96472	.....	Aspartic endopeptidases (3.4.23)
G01N 2333/96475	.....	with definite EC number ( not used )
G01N 2333/96477	.....	Pepsin ( 3.4.23.1; 3.4.23.2; 3.4.23.3 )
G01N 2333/9648	.....	Chymosin, i.e. rennin (3.4.23.4)
G01N 2333/96483	.....	Renin (3.4.23.15)
G01N 2333/96486	.....	Metalloendopeptidases (3.4.24)
G01N 2333/96488	.....	Phosphoramidon sensitive endothelin converting enzymes
G01N 2333/96491	.....	with definite EC number ( not used )
G01N 2333/96494	.....	Matrix metalloproteases, e. g. 3.4.24.7
G01N 2333/96497	.....	Enkephalinase (3.4.24.11)
G01N 2333/966	....	Elastase
G01N 2333/968	....	Plasmin, i.e. fibrinolysin
G01N 2333/972	....	Plasminogen activators
G01N 2333/9723	.....	Urokinase
G01N 2333/9726	.....	Tissue plasminogen activator

G01N 2333/974	....	Thrombin
G01N 2333/976	....	Trypsin ; Chymotrypsin
G01N 2333/978	...	acting on carbon to nitrogen bonds other than peptide bonds (3.5)
G01N 2333/98	....	acting on amide bonds in linear amides (3.5.1)
G01N 2333/982	.....	Asparaginase
G01N 2333/984	.....	Penicillin amidase
G01N 2333/986	....	acting on amide bonds in cyclic amides (3.5.2), e.g. beta-lactamase ( <a href="#">penicillinase, 3.5.2.6</a> ) , creatinine amidohydrolase ( <a href="#">creatininase, EC 3.5.2.10</a> ) , N-methylhydantoinase (3.5.2.6)
G01N 2333/988	..	Lyases (4.), e.g. aldolases, heparinase, enolases, fumarase
G01N 2333/99	..	Isomerases (5.)
G01N 2333/992	...	Glucose isomerase ; Xylose isomerase ; Glucose-6-phosphate isomerase
G01N 2333/994	..	Pancreatin
<b>G01N 2400/00</b>		<b>Assays, e.g. immunoassays or enzyme assays, involving carbohydrates</b>
G01N 2400/02	.	involving antibodies to sugar part of glycoproteins ( <a href="#">lectins from plants G01N 2333/42</a> , <a href="#">lectins from mammals G01N 2333/4724</a> )
G01N 2400/10	.	Polysaccharides, i.e. having more than five saccharide radicals attached to each other by glycosidic linkages ; Derivatives thereof, e.g. ethers, esters
G01N 2400/12	..	Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar
G01N 2400/14	...	alpha-D-Glucans, i.e. having alpha 1,n (n=3,4,6) linkages between saccharide units, e.g. pullulan
G01N 2400/16	....	Starch, amylose, amylopectin
G01N 2400/18	....	Cyclodextrin
G01N 2400/22	....	Dextran
G01N 2400/24	...	beta-D-Glucans, i.e. having beta 1,n (n=3,4,6) linkages between saccharide units, e.g. xanthan
G01N 2400/26	....	Cellulose
G01N 2400/28	....	Chitin, chitosan
G01N 2400/32	...	Galactans, e.g. agar, agarose, agaropectin, carrageenan
G01N 2400/34	...	alpha-D-Galacturonans, e.g. pectin
G01N 2400/36	...	beta-D-Fructofuranans, e.g. levan, insulin
G01N 2400/38	..	Heteroglycans, i.e. polysaccharides having more than one sugar residue in the main chain in either alternating or less regular sequence, e.g. gluco- or galactomannans, e.g. Konjac gum, Locust bean gum, Guar gum ( <a href="#">proteoglycans G01N 2333/4722</a> )
G01N 2400/40	...	Glycosaminoglycans, i.e. GAG or mucopolysaccharides, e.g. chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparin, heparan sulfate, and related sulfated polysaccharides
G01N 2400/44	...	Gluromannuronans, e.g. alginic acid
G01N 2400/46	..	Pectin
G01N 2400/48	..	Reserve carbohydrates, e.g. glycogen
G01N 2400/50	..	Lipopolysaccharides ; LPS

<b>G01N 2405/00</b>	<b>Assays, e.g. immunoassays or enzyme assays, involving lipids ( <a href="#">lipopolysaccharides G01N 2400/50</a> )</b>
G01N 2405/02	. Triacylglycerols
G01N 2405/04	. Phospholipids, i.e. phosphoglycerides
G01N 2405/06	. . Glycophospholipids, e.g. phosphatidyl inositol
G01N 2405/08	. Sphingolipids
G01N 2405/10	. . Glycosphingolipids, e.g. cerebroside, gangliosides
<b>G01N 2407/00</b>	<b>Assays, e.g. immunoassays or enzyme assays, involving terpenes</b>
G01N 2407/02	. Taxol ; Taxanes
<b>G01N 2410/00</b>	<b>Assays, e.g. immunoassays or enzyme assays, involving peptides of less than 20 amino acids</b>
G01N 2410/02	. Angiotensins ; Related peptides
G01N 2410/04	. Oxytocins ; Vasopressins ; Related peptides
G01N 2410/06	. Kallidins ; Bradykinins ; Related peptides
G01N 2410/08	. Cyclosporins and related peptides
G01N 2410/10	. Valinomycins and derivatives thereof
<b>G01N 2415/00</b>	<b>Assays, e.g. immunoassays or enzyme assays, involving penicillins or cephalosporins</b>
<b>G01N 2430/00</b>	<b>Assays, e.g. immunoassays or enzyme assays, involving synthetic organic compounds as analytes</b>
G01N 2430/10	. Insecticides
G01N 2430/12	. . Pyrethroids
G01N 2430/20	. Herbicides, e.g. DDT
G01N 2430/30	. Polychlorinated biphenyls (PCBs)
G01N 2430/40	. Dioxins
G01N 2430/50	. Polyaromatic hydrocarbons (PAHs)
G01N 2430/60	. Synthetic polymers other than synthetic polypeptides as analytes
<b>G01N 2440/00</b>	<b>Post-translational modifications [PTMs] in chemical analysis of biological material</b>

- G01N 2440/10 . acylation, e.g. acetylation, formylation, lipoylation, myristoylation, palmitoylation
- G01N 2440/12 . alkylation, e.g. methylation, (iso-)prenylation, farnesylation
- G01N 2440/14 . phosphorylation
- G01N 2440/16 . (de-)amidation
- G01N 2440/18 . citrullination
- G01N 2440/20 . formation of disulphide bridges
- G01N 2440/22 . iodination
- G01N 2440/24 . hydroxylation
- G01N 2440/26 . nitrosylation
- G01N 2440/28 . PEGylation
- G01N 2440/30 . sulphation
- G01N 2440/32 . biotinylation
- G01N 2440/34 . addition of amino acid(s), e.g. arginylation, (poly-)glutamylolation, (poly-)glycylation
- G01N 2440/36 . addition of addition of other proteins or peptides, e.g. SUMOylation, ubiquitination
- G01N 2440/38 . addition of carbohydrates, e.g. glycosylation, glycation
- G01N 2440/40 . addition of nucleotides or derivatives, e.g. adenylation, flavin attachment

#### **G01N 2446/00 Magnetic particle immunoreagent carriers**

- G01N 2446/10 . the magnetic material being used to coat a pre-existing polymer particle but not being present in the particle core
- G01N 2446/20 . the magnetic material being present in the particle core
- G01N 2446/30 . the magnetic material being dispersed in the polymer composition before their conversion into particulate form
- G01N 2446/40 . the magnetic material being dispersed in the monomer composition prior to polymerisation
- G01N 2446/60 . the magnetic material being dispersed in a medium other than the main solvent prior to incorporation into the polymer particle
- G01N 2446/62 . . . Magnetic material dispersed in water drop
- G01N 2446/64 . . . Magnetic material dispersed in oil drop
- G01N 2446/66 . . . Magnetic material dispersed in surfactant

- G01N 2446/80 . characterised by the agent used to coat the magnetic particles, e.g. lipids
- G01N 2446/84 . . Polymer coating, e.g. gelatin
- G01N 2446/86 . . the coating being pre-functionalised for attaching immunoreagents, e.g. aminodextran
- G01N 2446/90 . . characterised by small molecule linker used to couple immunoreagents to magnetic particles

#### **G01N 2458/00 Labels used in chemical analysis of biological material**

- G01N 2458/10 . Oligonucleotides as tagging agents for labelling antibodies
- G01N 2458/15 . Non-radioactive isotope labels, e.g. for detection by mass spectrometry
- G01N 2458/20 . Labels for detection by gas chromatography, e.g. haloaryl systems
- G01N 2458/30 . Electrochemically active labels
- G01N 2458/40 . Rare earth chelates

#### **G01N 2469/00 Immunoassays for the detection of microorganisms**

- G01N 2469/10 . Detection of antigens from microorganism in sample from host
- G01N 2469/20 . Detection of antibodies in sample from host which are directed against antigens from microorganisms

#### **G01N 2496/00 Reference solutions for assays of biological material**

- G01N 2496/05 . containing blood cells or plasma
- G01N 2496/10 . containing particles to mimic blood cells
- G01N 2496/15 . containing dyes to mimic optical absorption of e.g. hemoglobin
- G01N 2496/25 . containing added polymers to stabilise biological material against degradation or maintain viscosity or density, e.g. gelatin, polyacrylamides, polyvinyl alcohol ( [casein G01N 2333/4731](#) , [albumins G01N 2333/76](#) , [polysaccharides G01N 2400/10](#) )
- G01N 2496/30 . . Polyethylene glycol, e.g. PEG
- G01N 2496/35 . . Polyvinylpyrrolidone, e.g. PVP
- G01N 2496/45 . containing protease inhibitors, e.g. sulfonylfluorides, chloromethylketones, organophosphates ( [peptide-based protease inhibitors G01N 2333/81](#) )
- G01N 2496/70 . Blood gas control solutions containing dissolved oxygen, bicarbonate and the like
- G01N 2496/80 . Multi-analyte reference solutions containing cholesterol, glucose and the like

#### **G01N 2500/00 Screening for compounds of potential therapeutic value**

- G01N 2500/02 . Screening involving studying the effect of compounds C on the interaction between interacting molecules A and B ( e.g. A = enzyme and B = substrate for A, or A = receptor and B = ligand for the receptor )
- G01N 2500/04 . Screening involving studying the effect of compounds C directly on molecule A ( e.g. C are potential ligands ( agonists or antagonists ) for a receptor A, or potential substrates for an enzyme A )
- G01N 2500/10 . involving cells
- G01N 2500/20 . cell-free systems

**G01N 2510/00 Detection of programmed cell death, i.e. apoptosis**

**G01N 2520/00 Use of whole organisms as detectors of pollution**

**G01N 2550/00 Electrophoretic profiling, e.g. for proteome analysis**

**G01N 2560/00 Chemical aspects of mass spectrometric analysis of biological material**

**NOTE**

1. Analysis of proteins, peptides or amino acids by mass spectrometry is classified in [G01N 33/6848](#) and [G01N 33/6851](#) .
2. Analysis of nucleic acids by mass spectrometry is classified in [C12Q 1/6872](#) , [C12Q 2563/167](#) and [C12Q 2565/627](#) .

**G01N 2570/00 Omics, e.g. proteomics, glycomics or lipidomics ; Methods of analysis focusing on the entire complement of classes of biological molecules or subsets thereof , i.e. focusing on proteomes, glycomes or lipidomes**

**G01N 2600/00 Assays involving molecular imprinted polymers/polymers created around a molecular template**

**G01N 2610/00 Assays involving self-assembled monolayers [SAMs]**

**G01N 2650/00 Assays involving polymers whose constituent monomers bore biological functional groups before polymerization, i.e. vinyl, acryl derivatives of amino acids, sugars**

**G01N 2800/00 Detection or diagnosis of diseases**

**NOTE**

1. The indexing codes [G01N 2800/02](#) - [G01N 2800/44](#) are based on The Merck Manual of Diagnosis and Therapy (17th. Edition, Mark Beers and Robert Berkow).

2. For diseases caused by micro-organism where the microorganism is detected, which subject matter is classified in [G01N 33/569](#) and subgroups, [G01N 33/571](#) or [G01N 33/576](#), the present indexing scheme is not used. 3. For cancers, which subject matter is classified in [G01N 33/574](#) and subgroups, the present indexing scheme is not used. 4. When indexing in the following scheme, the organ takes precedence, e.g. inflammation of the skin is indexed with dermatological disorders and not with immunology or allergic disorders, asthma with pulmonary disorders and not with immunology or allergic disorders. Exception is made for thrombosis which is indexed with haematological disorders.

- [G01N 2800/02](#) . Nutritional disorders
- [G01N 2800/04](#) . Endocrine or metabolic disorders
  - [G01N 2800/042](#) . . Disorders of carbohydrate metabolism, e.g. diabetes, glucose metabolism
  - [G01N 2800/044](#) . . Hyperlipemia or hypolipemia, e.g. dyslipidaemia, obesity
  - [G01N 2800/046](#) . . Thyroid disorders
  - [G01N 2800/048](#) . . Pituitary or hypothalamic - pituitary relationships, e.g. vasopressin or ADH related
- [G01N 2800/06](#) . Gastro-intestinal diseases
  - [G01N 2800/062](#) . . Gastritis or peptic ulcer disease
  - [G01N 2800/065](#) . . Bowel diseases, e.g. Crohn, ulcerative colitis, IBS
  - [G01N 2800/067](#) . . Pancreatitis or colitis
- [G01N 2800/08](#) . Hepato-biliary disorders other than hepatitis
  - [G01N 2800/085](#) . . Liver diseases, e.g. portal hypertension, fibrosis, cirrhosis, bilirubin
- [G01N 2800/10](#) . Musculoskeletal or connective tissue disorders
  - [G01N 2800/101](#) . . Diffuse connective tissue disease, e.g. Sjögren, Wegener's granulomatosis
  - [G01N 2800/102](#) . . . Arthritis ; Rheumatoid arthritis, i.e. inflammation of peripheral joints
  - [G01N 2800/104](#) . . . Lupus erythematosus [SLE]
  - [G01N 2800/105](#) . . Osteoarthritis, e.g. cartilage alteration, hypertrophy of bone
  - [G01N 2800/107](#) . . Crystal induced conditions ; Gout
  - [G01N 2800/108](#) . . Osteoporosis
- [G01N 2800/12](#) . Pulmonary diseases
  - [G01N 2800/122](#) . . Chronic or obstructive airway disorders, e.g. asthma COPD
  - [G01N 2800/125](#) . . Adult respiratory distress syndrome
  - [G01N 2800/127](#) . . Bronchitis
- [G01N 2800/14](#) . Disorders of ear, nose or throat
- [G01N 2800/16](#) . Ophthalmology
  - [G01N 2800/162](#) . . Conjunctival disorders, e.g. conjunctivitis
  - [G01N 2800/164](#) . . Retinal disorders, e.g. retinopathy
  - [G01N 2800/166](#) . . Cataract



<a href="#">G01N 2800/168</a>	.. Glaucoma
<a href="#">G01N 2800/18</a>	. Dental and oral disorders
<a href="#">G01N 2800/20</a>	. Dermatological disorders
<a href="#">G01N 2800/202</a>	.. Dermatitis
<a href="#">G01N 2800/205</a>	.. Scaling palmar diseases, e.g. psoriasis, pityriasis
<a href="#">G01N 2800/207</a>	.. Pigmentation disorders
<a href="#">G01N 2800/22</a>	. Haematology
<a href="#">G01N 2800/222</a>	.. Platelet disorders
<a href="#">G01N 2800/224</a>	.. Haemostasis or coagulation
<a href="#">G01N 2800/226</a>	.. Thrombotic disorders, i.e. thrombo-embolism irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis
<a href="#">G01N 2800/228</a>	.. Disorders of the spleen, e.g. splenic rupture, splenomegaly
<a href="#">G01N 2800/24</a>	. Immunology or allergic disorders ( <a href="#">SLE <a href="#">G01N 2800/104</a></a> )
<a href="#">G01N 2800/245</a>	.. Transplantation related diseases, e.g. graft versus host disease
<a href="#">G01N 2800/26</a>	. Infectious diseases, e.g. generalised sepsis Note: Indexing code <a href="#">G01N 2800/26</a> is not used for documents already classified in one or more of groups <a href="#">G01N 33/569</a> and subgroups, <a href="#">G01N 33/571</a> or <a href="#">G01N 33/576</a> and subgroups
<a href="#">G01N 2800/28</a>	. Neurological disorders
<a href="#">G01N 2800/2807</a>	.. Headache ; Migraine
<a href="#">G01N 2800/2814</a>	.. Dementia ; Cognitive disorders
<a href="#">G01N 2800/2821</a>	... Alzheimer
<a href="#">G01N 2800/2828</a>	... Prion diseases
<a href="#">G01N 2800/2835</a>	.. Movement disorders, e.g. Parkinson, Huntington, Tourette
<a href="#">G01N 2800/2842</a>	.. Pain, e.g. neuropathic pain, psychogenic pain
<a href="#">G01N 2800/285</a>	.. Demyelinating diseases ; Multiple sclerosis
<a href="#">G01N 2800/2857</a>	.. Seizure disorders ; Epilepsy
<a href="#">G01N 2800/2864</a>	.. Sleep disorders
<a href="#">G01N 2800/2871</a>	.. Cerebrovascular disorders, e.g. stroke, cerebral infarct, cerebral haemorrhage, transient ischaemic event
<a href="#">G01N 2800/2878</a>	.. Muscular dystrophy
<a href="#">G01N 2800/2885</a>	... Duchenne dystrophy
<a href="#">G01N 2800/2892</a>	... Myotonic dystrophy
<a href="#">G01N 2800/30</a>	. Psychoses ; Psychiatry
<a href="#">G01N 2800/301</a>	.. Anxiety or phobic disorders
<a href="#">G01N 2800/302</a>	.. Schizophrenia
<a href="#">G01N 2800/303</a>	.. Eating disorders, e.g. anorexia, bulimia
<a href="#">G01N 2800/304</a>	.. Mood disorders, e.g. bipolar, depression
<a href="#">G01N 2800/305</a>	.. Attention deficit disorder ; Hyperactivity
<a href="#">G01N 2800/306</a>	.. Chronic fatigue syndrome

G01N 2800/307	..	Drug dependency, e.g. alcoholism
G01N 2800/308	..	Psychosexual disorders, e.g. sexual arousal disorder
G01N 2800/32	.	Cardiovascular disorders
G01N 2800/321	..	Arterial hypertension
G01N 2800/322	..	Orthostatic hypertension or syncope
G01N 2800/323	..	Arteriosclerosis, Stenosis
G01N 2800/324	..	Coronary artery diseases, e.g. angina pectoris, myocardial infarction
G01N 2800/325	..	Heart failure or cardiac arrest, e.g. cardiomyopathy, congestive heart failure
G01N 2800/326	..	Arrhythmias, e.g. ventricular fibrillation, tachycardia, atrioventricular block, torsade de pointes
G01N 2800/327	..	Endocarditis
G01N 2800/328	..	Vasculitis, i.e. inflammation of blood vessels
G01N 2800/329	..	Diseases of the aorta or its branches, e.g. aneurysms, aortic dissection
G01N 2800/34	.	Genitourinary disorders
G01N 2800/341	..	Urinary incontinence
G01N 2800/342	..	Prostate diseases, e.g. BPH, prostatitis
G01N 2800/344	..	Disorders of the penis and the scrotum and erectile dysfunction
G01N 2800/345	..	Urinary calculi
G01N 2800/347	..	Renal failures ; Glomerular diseases ; Tubulointerstitial diseases, e.g. nephritic syndrome, glomerulonephritis ; Renovascular diseases, e.g. renal artery occlusion, nephropathy
G01N 2800/348	..	Urinary tract infections
G01N 2800/36	.	Gynecology or obstetrics
G01N 2800/361	..	Menstrual abnormalities or abnormal uterine bleeding, e.g. dysmenorrhea
G01N 2800/362	..	Menopause
G01N 2800/364	..	Endometriosis, i.e. non-malignant disorder in which functioning endometrial tissue is present outside the uterine cavity
G01N 2800/365	..	Breast disorders, e.g. mastalgia, mastitis, Paget's disease
G01N 2800/367	..	Infertility, e.g. sperm disorder, ovulatory dysfunction
G01N 2800/368	..	Pregnancy complicated by disease or abnormalities of pregnancy, e.g. preeclampsia, preterm labour
G01N 2800/38	.	Pediatrics
G01N 2800/382	..	Cystic fibrosis
G01N 2800/385	..	Congenital anomalies
G01N 2800/387	...	Down syndrome ; Trisomy 18 ; Trisomy 13
G01N 2800/40	.	Disorders due to exposure to physical agents, e.g. heat disorders, motion sickness, radiation injuries, altitude sickness, decompression illness
G01N 2800/42	.	Poisoning, e.g. from bites or stings
G01N 2800/44	.	Multiple drug resistance
G01N 2800/50	.	Determining the risk of developing a disease

- G01N 2800/52 . Predicting or monitoring the response to treatment ; Prognosis
- G01N 2800/54 . Determining the risk of relapse
- G01N 2800/56 . Staging of a disease ; Further complications associated with the disease
- G01N 2800/60 . Complex ways of combining multiple protein biomarkers for diagnosis
- G01N 2800/70 . Mechanisms involved in disease identification ( [G01N 2800/02](#) - [G01N 2800/44](#) take precedence )
- G01N 2800/7004 .. Stress
- G01N 2800/7009 ... Oxidative stress
- G01N 2800/7014 .. (Neo)vascularisation - Angiogenesis
- G01N 2800/7019 .. Ischaemia
- G01N 2800/7023 .. (Hyper)proliferation
- G01N 2800/7028 ... Cancer
- G01N 2800/7033 .. Non-proliferative mechanisms
- G01N 2800/7038 .. Hypoxia
- G01N 2800/7042 .. Aging, e.g. cellular aging
- G01N 2800/7047 .. Fibrils-Filaments-Plaque formation
- G01N 2800/7052 .. Fibrosis
- G01N 2800/7057 .. (Intracellular) signaling and trafficking pathways
- G01N 2800/7061 ... Endoplasmic reticulum to Golgi trafficking
- G01N 2800/7066 ... Metabolic pathways
- G01N 2800/7071 .... Carbohydrate metabolism, e.g. glycolysis, gluconeogenesis
- G01N 2800/7076 .... Amino acid metabolism
- G01N 2800/708 .... Nitrogen metabolism, e.g. urea cycle
- G01N 2800/7085 .... Lipogenesis or lipolysis, e.g. fatty acid metabolism
- G01N 2800/709 .. Toxin induced
- G01N 2800/7095 .. Inflammation