G01N INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q (; testing electrophoretic developer properties G03G 15/0848; controlling or regulating non-electric variables G05D; measuring degree of ionisation of ionised gases, i.e. plasma H05H 1/0006))

NOTES
1. 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.
2. Attention is drawn to the Notes following the title of class G01.
3. 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.

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
G01N

2001/1445 . . . . [Overpressure, pressurisation at sampling point]
2001/1454 . . . . [Positive displacement, piston]
2001/1463 . . . . [Injector; Air-lift]
2001/1472 . . . . [Devices not actuated by pressure difference]
2001/1481 . . . . [Archimedian screw; Auger]
2001/149 . . . . [Capillaries; Sponges]
1/16 . . . . with provision for intake at several levels
1/18 . . . . with provision for splitting samples into portions
1/20 . . . . for flowing or falling materials
1/2007 . . . . [Flow conveyors]
1/2014 . . . . [Pneumatic conveyors]
1/2021 . . . . [falling under gravity]
1/2028 . . . . [Belts]
1/2035 . . . . [by deviating part of a fluid stream, e.g. by
drawing-off or tapping]
1/2042 . . . . [using a piston actuated by the pressure of
the liquid to be sampled]
1/205 . . . . [using a valve]
1/2057 . . . . [Sample chamber in a valve/piston]
1/2064 . . . . [using a by-pass loop]
1/2071 . . . . [Removable sample bottle]
1/2078 . . . . [Pre-evacuated bottle]
1/2085 . . . . [Non-pre-evacuated septum closed bottles]
1/2092 . . . . [Cross-cut sampling]
1/22 . . . . in the gaseous state [specially adapted for
biological material G01N 33/497; measuring
breath flow A61B 5/087]
1/2202 . . . . [involving separation of sample components
during sampling]
1/2205 . . . . [with filters]
1/2208 . . . . [with impactors]
1/2211 . . . . [with cyclones]
1/2214 . . . . [by sorption]
1/20217 . . . . [using a liquid]
1/2022 . . . . [Other features]
1/20223 . . . . [aerosol sampling devices]
1/2226 . . . . [Sampling from a closed space, e.g. food
package, head space]
1/2229 . . . . [Headspace sampling, i.e. vapour over
liquid]
1/2232 . . . . [using a membrane, i.e. pervaporation]
1/2235 . . . . [over a melt, e.g. furnace]
1/2238 . . . . [the gas being compressed or pressurized]
1/2241 . . . . [purpose-built sampling enclosure for
emissions]
1/2244 . . . . [Exhaled gas, e.g. alcohol detecting]
1/2247 . . . . [Sampling from a flowing stream of gas]
1/225 . . . . [isokinetic, same flow rate for sample and
bulk gas]
1/2252 . . . . [in a vehicle exhaust]
1/2255 . . . . [with dilution of the sample]
1/2258 . . . . [in a stack or chimney]
2001/2261 . . . . [preventing condensation (heating lines)]
2001/2264 . . . . [with dilution]
2001/2267 . . . . [separating gas from liquid, e.g. bubbles]
2001/227 . . . . [separating gas from solid, e.g. filter]
1/2273 . . . . [Atmospheric sampling]
2001/2276 . . . . [Personal monitors]
2001/2279 . . . . [high altitude, e.g. rockets, balloons]
2001/2282 . . . . [with cooling means]
2001/2285 . . . . [Details of probe structures]
2001/2288 . . . . [Filter arrangements]
2001/2291 . . . . [Movable probes, e.g. swelling, swinging]
1/2294 . . . . [Sampling soil gases or the like]
2001/2297 . . . . [Timing devices]
1/24 . . . . [Suction devices (G01N 1/22 - G01N 1/2294
take precedence)]
2001/241 . . . . [Bells]
2001/242 . . . . [Injectors or ejectors]
2001/244 . . . . [using critical flow orifices]
2001/245 . . . . [Fans]
2001/247 . . . . [Syringes]
2001/248 . . . . [Evacuated containers]
1/26 . . . . with provision for intake from several spaces
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 21/24; means
for supporting the objects or the materials to be
analysed in electron microscopes H01L 37/20);
laboratory gas handling apparatus B01L 5/00)]
1/2806 . . . . [Means for preparing replicas of specimens, e.g.
for microscopical analysis]
1/2813 . . . . [Producing thin layers of samples on a substrate,
e.g. smearing, spinning-on (G01N 1/30 takes
precedence)]
2001/282 . . . . [with mapping; Identification of areas; Spatial
related pattern]
2001/2826 . . . . [Collecting by adsorption or absorption]
2001/2833 . . . . [Collecting samples on a sticky, tacky,
adshesive surface]
2001/284 . . . . [using local activation of adhesive, i.e. Laser
Capture Microdissection]
2001/2846 . . . . [Cytocentrifuge method]
1/2853 . . . . [Shadowing samples]
1/286 . . . . [involving mechanical work, e.g. chopping,
disintegrating, compacting, homogenising
microtomes G01N 1/06; pulverising in general
B02C; mixing in general B01F)]
2001/2866 . . . . [Grinding or homogenising]
2001/2873 . . . . [Cutting or cleaving]
2001/288 . . . . [Filter punches]
2001/2886 . . . . [Laser cutting, e.g. tissue catapult]
2001/2893 . . . . [Preparing calibration standards]
1/30 . . . . Staining; Impregnating [Fixation; Dehydration;
Multistep processes for preparing samples of
tissue, cell or nucleic acid material and the like
for analysis]
2001/302 . . . . [Stain compositions]
2001/305 . . . . [Fixative compositions]
2001/307 . . . . [non-toxic, no Hg, no formaldehyde]
1/31 . . . . Apparatus therefor
1/312 . . . . [for samples mounted on planar substrates]
2001/315 . . . . [Basket-type carriers for tissues]
2001/317 . . . . [spraying liquids onto surfaces]
Investigating strength properties of solid materials by application of mechanical stress

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

- Details
- Chucks
- Special adaptations of indicating or recording means
- [with mechanical indicating or recording means]
- [using continuous plastic film to mount sample]
- [using resins, epoxy]
- [Mounting multiple samples in one block, e.g. TMA [Tissue Microarrays]]
- Diluting, dispersing or mixing samples
- [by membrane diffusion; Permeation tubes]
- [using pistons of different sections]
- [collecting and diluting in a flow of liquid]
- [diluting by adsorbing a fraction of the sample]
- [Other diluting or mixing processes]
- [mixing by blowing a gas, bubbling]
- [mixing the sample with a tracer]
- [by transferring a selected component through a membrane]
- [being a ion-exchange membrane]
- [being a selective membrane, e.g. dialysis or osmosis]
- [by thermal techniques; Phase changes]
- [evaporation leaving a concentrated sample]
- [sample concentrated on a cold spot, e.g. condensation or distillation]
- [electric methods, e.g. electromigration, electrophoresis, ionisation]
- [by chemical techniques; Digestion; Chemical decomposition]
- [by adsorption or absorption]
- [by solubility techniques]
- [Solvent extraction]
- [using difference of solubility between liquid and gas, e.g. bubbling, scrubbing or sparging]
- [membraneless transfer of a component between two parallel laminar flows of fluid]
- [by other techniques involving separation of suspended solids]
- [sedimentation]
- [filtration]
- [using ultrasound]
- Low-temperature sample treatment, e.g. cryofixation
- Sample treatment involving radiation, e.g. heat
- [with hydraulic indicating or recording means]
- [with electrical indicating or recording means]
- [with optical indicating or recording means]
- by applying steady tensile or compressive forces (G01N 3/28 takes precedence)
- generated by pneumatic or hydraulic pressure (G01N 3/18 takes precedence)
- Pressure testing
- generated by dead weight, e.g. pendulum; generated by springs tension (G01N 3/18 takes precedence)
- applied through gearing (G01N 3/18 takes precedence)
- [generated by rotation, i.e. centrifugal force (for testing structures or apparatus G01M 99/004)]
- Performing tests at high or low temperatures
- by applying steady bending forces (G01N 3/26, G01N 3/28 take precedence)
- by applying steady torsional forces (G01N 3/26, G01N 3/28 take precedence)
- by applying steady shearing forces (G01N 3/26, G01N 3/28 take precedence)
- Investigating twisting or coiling properties
- Investigating ductility, e.g. suitability of sheet metal for deep-drawing or spinning
- by applying a single impulsive force, e.g. by falling weight
- generated only by free-falling weight
- generated by a compressed or tensile-stressed spring; generated by pneumatic or hydraulic means
- generated by a rotating fly-wheel
- generated by explosives
- generated by electromagnetic means
- by applying repeated or pulsating forces
- generated by mechanical means, e.g. hammer blows
- generated by pneumatic or hydraulic means
- generated by electromagnetic means
- Investigating hardness or rebound hardness
- [by determining the vibration frequency of a sensing element in contact with the specimen]
- by performing impressions under a steady load by indentors, e.g. sphere, pyramid (G01N 3/54 takes precedence)
- the indentors being put under a minor load and a subsequent major load, i.e. Rockwell system
- the indentors performing a scratching movement
- by performing impressions under impulsive load by indentors, e.g. falling ball (G01N 3/54 takes precedence)
- by measuring rolling friction, e.g. by rocking pendulum (G01N 3/54 takes precedence)
- by measuring extent of rebound of a striking body (G01N 3/54 takes precedence)
- Performing tests at high or low temperatures
- Investigating resistance to wear or abrasion
- [using radioactive tracers]
- [of granular or particulate material]
Analysing materials by weighing, e.g. weighing small particles separated from a gas or liquid (G01N 9/00 takes precedence ; weighing per se G01G)

Analysing materials by measuring the pressure or volume of a gas or vapour

Analysing density or specific gravity of materials; Analysing materials by determining density or specific gravity

Investigating flow properties of materials, e.g. viscosity, plasticity; Analysing materials by determining flow properties
11/12 . . by measuring rising or falling speed of the body; by measuring penetration of wedged gauges (G01N 11/16 takes precedence)
11/14 . . by using rotary bodies, e.g. vane (G01N 11/16 takes precedence)
11/142 . . . [Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer]
2011/145 . . . . [both members rotating]
11/147 . . . [Magnetic coupling]
11/16 . . . by measuring damping effect upon oscillatory body
11/162 . . . [Oscillations being torsional, e.g. produced by rotating bodies]
11/165 . . . . [Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer]
11/167 . . . . [Sample holder oscillates, e.g. rotating crucible]
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)
2013/003 . . . [Diffusion; diffusivity between liquids]
2013/006 . . . [Dissolution of tablets or the like]
13/02 . . . Investigating surface tension of liquids
2013/0208 . . . . [by measuring contact angle]
2013/0216 . . . . [by measuring skin friction or shear force]
2013/0225 . . . . [of liquid metals or solder]
2013/0233 . . . . [Langmuir troughs; thin-film balances]
2013/0241 . . . . [bubble, pendant drop, sessile drop methods]
2013/025 . . . . [Measuring foam stability]
2013/0258 . . . . [Oscillating drop methods]
2013/0266 . . . . [Bubble methods]
2013/0275 . . . . [involving surface-active agents]
2013/0283 . . . . [methods of calculating surface tension]
2013/0291 . . . . [Wilhelmy plate]
13/04 . . . Investigating osmotic effects
15/00 Investigating characteristics of particles; Investigating permeability, pore-volume, or surface-area of porous materials (identification of microorganisms C12Q)
2015/0003 . . . . [Determining electric mobility, velocity profile, average speed or velocity of a plurality of particles]
2015/0007 . . . . [Investigating dispersion of gas]
2015/0011 . . . . [in liquids, e.g. bubbles]
2015/0015 . . . . [in solids]
2015/0019 . . . . [Means for transferring or separating particles prior to analysis, e.g. hoppers or particle conveyors]
2015/0023 . . . . [Investigating dispersion of liquids]
2015/0026 . . . . [in gas, e.g. fog]
2015/003 . . . . [in liquids, e.g. emulsion]
2015/0034 . . . . [in solids]
2015/0038 . . . . [Investigating nanoparticles]
2015/0042 . . . . [Investigating dispersion of solids]
2015/0046 . . . . [in gas, e.g. smoke]
2015/0049 . . . . [of filaments in gas]
2015/0053 . . . . [in liquids, e.g. trouble]
2015/0057 . . . . [of filaments in liquids]
2015/0061 . . . . [in solids, e.g. petrography]
2015/0065 . . . . [biological, e.g. blood]
15/0069 . . . . [with lysing, e.g. of erythrocyts]
2015/0073 . . . . [Red blood cells]
2015/0076 . . . . [Reticulocytes]
2015/008 . . . . [White cells]
2015/0084 . . . . [Platelets]
2015/0088 . . . . [Biological contaminants; Fouling]
2015/0092 . . . . [Monitoring flocculation or agglomeration]
2015/0096 . . . . [Investigating consistency of powders, dustability, dustiness]
15/02 . . . Investigating particle size or size distribution (G01N 15/04; G01N 15/10 take precedence; by measuring osmotic pressure G01N 7/10)
15/0205 . . . . [by optical means, e.g. by light scattering, diffraction, holography or imaging]
15/0211 . . . . [Investigating a scatter or diffraction pattern]
2015/0216 . . . . [from fluctuations of diffraction pattern]
2015/0222 . . . . [from dynamic light scattering, e.g. photon correlation spectroscopy]
15/0227 . . . . [using imaging, e.g. a projected image of suspension; using holography]
2015/0233 . . . . [using holography]
2015/0238 . . . . [Single particle scatter]
2015/0244 . . . . [with cutting-out molecular scatter]
2015/025 . . . . [Methods for single or grouped particles]
15/0255 . . . . [with mechanical, e.g. inertial, classification, and investigation of sorted collections (with centrifuges G01N 15/04/23)]
2015/0261 . . . . [using impactors]
15/0266 . . . . [with electrical classification]
15/0272 . . . . [with screening; with classification by filtering (B01D takes precedence)]
2015/0277 . . . . [Average size only]
2015/0283 . . . . [using control of suspension concentration]
2015/0288 . . . . [Sorting the particles]
2015/0294 . . . . [Particle shape]
2015/03 . . . . [Electro-optical investigation of a plurality of particles, the analyser being characterised by the optical arrangement]
2015/035 . . . . [the optical arrangement forming an integrated apparatus with the sample container]
15/04 . . . Investigating sedimentation of particle suspensions
15/042 . . . . [by centrifuging and investigating centrifugates (centrifuges per se B04B)]
2015/045 . . . . [by optical analysis]
2015/047 . . . . . [by static multidetectors]
15/05 . . . . in blood
2015/055 . . . . . [for hematocrite determination]
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 23/20;
- by measuring impedance: G01N 27/02, e.g. G01N 27/06, G01N 27/22;
Investigating individual particles of porous materials, e.g. by electrochemical means: G01N 27/00; by measuring absorption of sonic or ultrasonic vibrations: G01N 29/00; by measuring electrical or magnetic effects thereof, e.g. on conductivity or capacity (using nanoscale size effects, other than for sizing or counting, by translocation through nanopores G01N 33/48721; involving the use of Coulter counters G01N 15/12).

15/0626  .  .  .  (counting the particles by other than electro-optical means (by electro-optical means G01N 15/1486)).

15/0668  .  .  .  Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers.

15/0675  .  .  .  (Determining speed or velocity of a particle).

15/0681  .  .  .  (Comparing properties of sample and carrier fluid, e.g. oil in water).

15/0687  .  .  .  (in solutions, e.g. non volatile residue).

15/0693  .  .  .  (by optical means, e.g. by integrated nephelometry).

15/08  .  .  .  Investigating permeability, pore-volume, or surface area of porous materials.

15/0806  .  .  .  (Details, e.g. sample holders, mounting samples for testing).

15/0813  .  .  .  (Measuring intrusion, e.g. of mercury).

15/082  .  .  .  (Investigating permeability by forcing a fluid through a sample).

15/0826  .  .  .  (and measuring fluid flow rate, i.e. permeation rate or pressure change).

15/0833  .  .  .  (Pore surface area).

15/084  .  .  .  (Testing filters).

15/0846  .  .  .  (by use of radiation, e.g. transmitted or reflected light).

15/0853  .  .  .  (by electrical capacitance measurement).

15/086  .  .  .  (of films, membranes or pellicules).

15/0866  .  .  .  (Sorption).

15/0873  .  .  .  (Dynamic sorption, e.g. with flow control means).

15/088  .  .  .  (Investigating volume, surface area, size or distribution of pores; Porosimetry).

15/0886  .  .  .  (Mercury porosimetry).

15/0893  .  .  .  (by measuring weight or volume of sorbed fluid, e.g. B.E.T. method).

15/10  .  .  .  Investigating individual particles.

15/1006  .  .  .  (for cytology).

15/1012  .  .  .  (Calibrating particle analysers; References therefor).

15/1018  .  .  .  (Constitution of reference particles).

15/1025  .  .  .  (Particle flow simulating, e.g. liquid crystal cell).

15/1031  .  .  .  (by measuring electrical or magnetic effects thereof, e.g. on conductivity or capacity (using nanoscale size effects, other than for sizing or counting, by translocation through nanopores G01N 33/48721; involving the use of Coulter counters G01N 15/12)).

15/1037  .  .  .  (Associating coulter-counter and optical flow cytometer [OFC]).

15/1043  .  .  .  (Measuring mass of individual particles).

15/105  .  .  .  (Other than optical measurement of deformation of individual particles (optical measurement G01N 15/1495)).

15/1056  .  .  .  (Microstructural devices for other than electro-optical measurement (for electro-optical measurement G01N 15/1484)).

15/1062  .  .  .  (counting the particles by other than electro-optical means (by electro-optical means G01N 15/1486)).

15/1068  .  .  .  (Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers).

15/1075  .  .  .  (Determining speed or velocity of a particle).

15/1081  .  .  .  (Sorting the particles).

15/1087  .  .  .  (Particle size).

15/1093  .  .  .  (Particle shape).

15/12  .  .  .  Coulter-counters.

15/1209  .  .  .  (Details).

15/1218  .  .  .  (concerning the aperture).

15/1227  .  .  .  (Circuits).

15/1236  .  .  .  (Flow forming).

15/1245  .  .  .  (Devices using more than one aperture).

15/1254  .  .  .  (Electrodes).

15/1263  .  .  .  (Scanning electrodes).

15/1272  .  .  .  (Cleaning).

15/1281  .  .  .  (Detecting blocking debris).

15/129  .  .  .  (measuring the ratio of AC/DC impedances).

15/14  .  .  .  Electro-optical investigation, e.g. flow cytometers.

15/1402  .  .  .  (Data analysis by thresholding or gating operations performed on the acquired signals or stored data).

15/1404  .  .  .  (Fluid conditioning in flow cytometers, e.g. flow cells; Supply; Control of flow).

15/1406  .  .  .  (Control of droplet point).

15/1409  .  .  .  (Control of supply of sheaths fluid, e.g. sample injection control).

15/1411  .  .  .  (Features of sheath fluids).

15/1413  .  .  .  (Hydrodynamic focussing).

15/1415  .  .  .  (Control of particle position).

15/1418  .  .  .  (Eliminating clogging of debris).

15/142  .  .  .  (Acoustic or ultrasonic focussing).

15/1422  .  .  .  (Electrical focussing).

15/1425  .  .  .  (using an analyser being characterised by its control arrangement).

15/1427  .  .  .  (with the synchronisation of components, a time gate for operation of components, or suppression of particle coincidences).

15/1429  .  .  .  (using an analyser being characterised by its signal processing).

15/1431  .  .  .  (the electronics being integrated with the analyser, e.g. hand-held devices for on-site investigation).

15/1434  .  .  .  (using an analyser being characterised by its optical arrangement).
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

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- 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

NOTE

This group does not cover the investigation of spectral properties of light 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. Those subjects are covered by group G011 3/00.

Arrangements or apparatus for facilitating the optical investigation
- [General arrangement of respective parts]
- [Apparatus in one mechanical, optical or electronic block]
- [Apparatus with remote processing]
- [with stored program or instructions]
- [being externally stored]
- [with PC or the like]
Cuvette constructions

21/03 . . . . . . . . . . . . . . . . . . . Cuvette constructions
21/0303 . . . . . . . . . . . . . . . . . . . [Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment (G01N 21/03 - G01N 21/15 take precedence)]
21/0307 . . . . . . . . . . . . . . . . . . . [Insert part in cell]
21/0309 . . . . . . . . . . . . . . . . . . . [Multipass arrangements]
21/0314 . . . . . . . . . . . . . . . . . . . [Double pass, autocollimated path]
21/0317 . . . . . . . . . . . . . . . . . . . [High pressure cuvettes; (G01N 21/032 - G01N 21/15 take precedence)]
21/0321 . . . . . . . . . . . . . . . . . . . [One time use cells, e.g. integrally moulded]
21/0325 . . . . . . . . . . . . . . . . . . . [Cells for testing reactions, e.g. containing reagents]
21/0328 . . . . . . . . . . . . . . . . . . . [Arrangement of two or more cells having different functions for the measurement of reactions]
21/0332 . . . . . . . . . . . . . . . . . . . [with temperature control (control of temperature G05D 23/00; cryostats F17C 3/08)]
21/0335 . . . . . . . . . . . . . . . . . . . [Refrigiration of cells; Cold stages]
21/0339 . . . . . . . . . . . . . . . . . . . [Holders for solids, powders]
21/0342 . . . . . . . . . . . . . . . . . . . [Solid sample being immersed, e.g. equiindex fluid]
21/0346 . . . . . . . . . . . . . . . . . . . [Capillary cells; Microcells]
21/035 . . . . . . . . . . . . . . . . . . . [Supports for sample drops]
21/0353 . . . . . . . . . . . . . . . . . . . [Conveyor of successive sample drops]
21/0357 . . . . . . . . . . . . . . . . . . . [Sets of cuvettes]
21/036 . . . . . . . . . . . . . . . . . . . [transformable, modifyable]
21/0364 . . . . . . . . . . . . . . . . . . . [flexible, compressible]
21/0367 . . . . . . . . . . . . . . . . . . . [Supports of cells, e.g. pivotable]
21/0371 . . . . . . . . . . . . . . . . . . . [Supports combined with sample intake]
21/0375 . . . . . . . . . . . . . . . . . . . [Slidable cells]
21/0378 . . . . . . . . . . . . . . . . . . . [Shapes]
21/0382 . . . . . . . . . . . . . . . . . . . [Frustoconical, tapered cell]
21/0385 . . . . . . . . . . . . . . . . . . . [Diffusing membrane; Semipermeable membrane]
21/0389 . . . . . . . . . . . . . . . . . . . [Windows]
21/0392 . . . . . . . . . . . . . . . . . . . [Nonplanar windows]
21/0396 . . . . . . . . . . . . . . . . . . . [Oblique incidence]
21/05 . . . . . . . . . . . . . . . . . . . [Flow-through cuvettes (G01N 21/09 takes precedence; handling fluid samples G01N 1/10)]
21/052 . . . . . . . . . . . . . . . . . . . [Tubular type; cavity type; multireflective]
21/054 . . . . . . . . . . . . . . . . . . . [Bubble trap; Debubbling]
21/056 . . . . . . . . . . . . . . . . . . . [Laminated construction]
21/058 . . . . . . . . . . . . . . . . . . . [Flat flow cell]
different wavelengths or wavelength bands

effect of material on the light at two or more

Colour; Spectral properties, i.e. comparison of

Polarisation-affecting properties (G01N 21/19

Dichroism

[Ellipsometry (optical thickness measurement

G01B 11/06)]

[Arrangement with total internal reflection]

[Spectrometric ellipsometry]

[Variangle incidence arrangement]

[Brewster incidence arrangement]

[using circular polarised light]

[Measuring depolarisation or comparing

polarised and depolarised parts of light]

[Measuring properties of electrooptical or

magnetooptical media]

Bi-refringence

Colour; Spectral properties, i.e. comparison of
effect of material on the light at two or more
different wavelengths or wavelength bands

[Colorimeters; Construction thereof]

[for batch operation, i.e. multisample

apparatus (analytical automats G01N 35/00)]

[Details, e.g. use of specially adapted sources,

lighting or optical systems]

[Arrangements using two alternating lights and

one detector]

[Surface plasmon spectroscopy, e.g. micro- or

nanoparticles in suspension]

using photo-electric detection (G01N 21/31

takes precedence) ; circuits for computing

concentration (logarithmic circuits G06G 7/24;

photometric circuits in general G01J)

[Time resolved]

[stroboscopic; pulse gated; time range gated]

[Remote sensing]

[Atmospheric mapping of gases]

[in landscape, e.g. crops]

[Dichroism

Polarisation-affecting properties (G01N 21/19

takes precedence)

[Ellipsometry (optical thickness measurement

G01B 11/06)]

[Arrangement with total internal reflection]

[Spectrometric ellipsometry]

[Variangle incidence arrangement]

[Brewster incidence arrangement]

[using circular polarised light]

[Measuring depolarisation or comparing

polarised and depolarised parts of light]

[Measuring properties of electrooptical or

magnetooptical media]

Bi-refringence

Colour; Spectral properties, i.e. comparison of
effect of material on the light at two or more
different wavelengths or wavelength bands

[Colorimeters; Construction thereof]

[for batch operation, i.e. multisample

apparatus (analytical automats G01N 35/00)]

[Details, e.g. use of specially adapted sources,

lighting or optical systems]

[Arrangements using two alternating lights and

one detector]

[Surface plasmon spectroscopy, e.g. micro- or

nanoparticles in suspension]

using photo-electric detection (G01N 21/31

takes precedence) ; circuits for computing

concentration (logarithmic circuits G06G 7/24;

photometric circuits in general G01J)]

[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 G01J 1/44)]

[Jittering, dithering, optical path modulation]

[A physical transformation being implied in the

method, e.g. a phase change]

[Gas to liquid phase change]

[Method using an image detector and processing

of image signal]

[using photographic film]

[Detector of the video camera type]

[Array detector]

[Line array detector]

[Colour camera]

[IIT [intensified image tube]]

[Methods for obtaining spatial resolution of the

property being measured]

[In-depth resolution]

[Three dimensional]

[Tomographic, i.e. computerised

reconstruction from projective

measurements]

[Time resolved]

[stroboscopic; pulse gated; time range gated]

[Remote sensing]

[Atmospheric mapping of gases]

[in landscape, e.g. crops]
NOTE
This group also covers devices without instrumental sources, e.g. radiometric-type devices using ambient infra-red light.

21/3554 . . . . . . . . for determining moisture content
21/3559 . . . . . . . . in sheets, e.g. in paper
21/3563 . . . . . . . . for analysing solids; Preparation of samples therefor
21/3568 . . . . . . . . [applied to semiconductors, e.g. Silicon]
21/3572 . . . . . . . . [Preparation of samples, e.g. salt matrices]
21/3577 . . . . . . . . for analysing liquids, e.g. polluted water
21/3581 . . . . . . . . using far infra-red light; using Terahertz radiation
21/3586 . . . . . . . . by Terahertz time domain spectroscopy [THz-TDS]
21/359 . . . . . . . . using near infra-red light
21/3595 . . . . . . . . [using FTIR]
21/37 . . . . . . . . using pneumatic detection [opto-acoustic detection G01N 21/1702]
21/39 . . . . . . . . using tunable lasers
21/391 . . . . . . . . [Intracavity sample]
21/392 . . . . . . . . [Measuring radiation; e.g. fluorescence, backscatter]
21/393 . . . . . . . . [and using a spectral variation of the interaction of the laser beam and the sample]
21/394 . . . . . . . . [DIAL method]
21/395 . . . . . . . . [using a topographic target]
21/396 . . . . . . . . [Type of laser source]
21/397 . . . . . . . . [Dye laser]
21/398 . . . . . . . . [CO2 laser]
21/399 . . . . . . . . [Diode laser]
21/41 . . . . . . . . Refractivity; Phase-affecting properties, e.g. optical path length (G01N 21/21 takes precedence)
21/4106 . . . . . . . . [Atmospheric distortion; Turbulence]
21/4113 . . . . . . . . [Atmospheric dispersion]
21/412 . . . . . . . . [Index profiling of optical fibres]
21/4126 . . . . . . . . [Index of thin films]
21/4133 . . . . . . . . [Refractometers, e.g. differential]
21/414 . . . . . . . . [Correcting temperature effect in refractometers]
21/4146 . . . . . . . . [Differential cell arrangements]
21/4153 . . . . . . . . [Measuring the deflection of light in refractometers]
21/416 . . . . . . . . [Visualising flow by index measurement]
21/4166 . . . . . . . . [Methods effecting a waveguide mode enhancement through the property being measured]
21/4173 . . . . . . . . [Phase distribution]
21/418 . . . . . . . . [Frequency/phase diagrams]
21/4186 . . . . . . . . [Phase modulation imaging]
21/4193 . . . . . . . . [using a PSD]
21/43 . . . . . . . . by measuring critical angle
21/431 . . . . . . . . [Dip refractometers, e.g. using optical fibres]
21/432 . . . . . . . . [comprising optical fibres]
21/433 . . . . . . . . [with an unclad part on the fibre]
21/434 . . . . . . . . [Dipping block in contact with sample, e.g. prism]
21/435 . . . . . . . . [Sensing drops on the contact surface]
21/436 . . . . . . . . [Sensing resonant reflection]
21/437 . . . . . . . . [with investigation of angle]
21/438 . . . . . . . . [with investigation of wavelength]
21/45 . . . . . . . . using interferometric methods; using Schlieren methods
21/451 . . . . . . . . [for determining the optical absorption]
21/453 . . . . . . . . [Holographic interferometry (for dimensional measurements G01B 9/021 - G01B 9/029)]
21/455 . . . . . . . . [Schlieren methods, e.g. for gradient index determination; Shadowgraph]
21/456 . . . . . . . . [Moiré deflectometry]
21/458 . . . . . . . . [using interferential sensor, e.g. sensor fibre, possibly on optical waveguide]
21/47 . . . . . . . . Scattering, i.e. diffuse reflection (G01N 21/25, G01N 21/41 take precedence [G01N 21/55 takes precedence])
21/4702 . . . . . . . . [Global scatter; Total scatter, excluding reflections]
21/4704 . . . . . . . . [Angular selective]
21/4707 . . . . . . . . [Forward scatter; Low angle scatter]
21/4709 . . . . . . . . [Backscatter]
21/4711 . . . . . . . . [Multiangle measurement]
21/4714 . . . . . . . . [Continuous plural angles]
21/4716 . . . . . . . . [Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor]
21/4719 . . . . . . . . [using a optical fibre array]
21/4721 . . . . . . . . [using a PSD]
21/4723 . . . . . . . . [Scanning scatter angles]
21/4726 . . . . . . . . [Detecting scatter at 90°]
21/4728 . . . . . . . . [Optical definition of scattering volume]
21/473 . . . . . . . . [Compensating for unwanted scatter, e.g. reliefs, marks]
21/4733 . . . . . . . . [Discriminating different types of scatterers]
21/4735 . . . . . . . . [Solid samples, e.g. paper, glass]
21/4738 . . . . . . . . [Diffuse reflection (precedence is given to G01N 21/55 - G01N 21/57 if specular component is taken into consideration), e.g. also for testing fluids, fibrous materials]
Specular reflectivity

21/474 . . . . . {Details of optical heads therefor, e.g. using optical fibres}

21/4742 . . . . . {comprising optical fibres}

21/4745 . . . . . {Fused bundle, i.e. for backscatter}

21/4747 . . . . . {Concentric bundles}

21/475 . . . . . {Bifurcated bundle}

21/4752 . . . . . {Geometry}

21/4754 . . . . . {Diffuse illumination}

21/4757 . . . . . {Geometry 0/45° or 45/0°}

21/4759 . . . . . {Annular illumination}

21/4761 . . . . . {Mirror arrangements, e.g. in IR range}

21/4764 . . . . . {Special kinds of physical applications}

21/4766 . . . . . {Sample containing fluorescent brighteners}

21/4769 . . . . . {Fluid samples, e.g. slurries, granulates; Compressible powdery of fibrous samples}

21/4771 . . . . . {Matte surfaces with reflecting particles}

21/4773 . . . . . {Partly or totally translucent samples}

21/4776 . . . . . {Miscellaneous in diffuse reflection devices}

21/4778 . . . . . {Correcting variations in front distance}

21/478 . . . . . {Application in testing analytical test strips}

21/4783 . . . . . {Examining under varying incidence; Angularly adjustable head}

21/4785 . . . . . {Standardising light scatter apparatus; Standards therefor}

21/4788 . . . . . {Diffraction (for sizing particles G01N 15/0205)}

21/479 . . . . . {Speckle}

21/4792 . . . . . {Polarisation of scatter light}

21/4795 . . . . . {spatially resolved investigating of object in scattering medium (in vivo A61B)}

21/4797 . . . . . {time resolved, e.g. analysis of ballistic photons}

21/49 . . . . . within a body or fluid

21/495 . . . . . {the fluid being adsorbed, e.g. in porous medium}

21/51 . . . . . inside a container, e.g. in an ampoule (G01N 21/53 takes precedence)

21/513 . . . . . {Cuvettes for scattering measurements}

21/516 . . . . . {Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays}

21/53 . . . . . within a flowing fluid, e.g. smoke

21/532 . . . . . {with measurement of scattering and transmission}

21/534 . . . . . {by measuring transmission alone, i.e. determining opacity}

21/536 . . . . . {Measurement device mounted at stack}

21/538 . . . . . {for determining atmospheric attenuation and visibility}

21/55 . . . Specular reflectivity

21/551 . . . . . {Retroreflectance}

21/552 . . . . . {Attenuated total reflection}

21/553 . . . . . {and using surface plasmons (fluorescence excitation G01N 21/648; enhanced Raman G01N 21/658)}

21/554 . . . . . {detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}

21/555 . . . . . {Measuring total reflection power, i.e. scattering and specular}

2021/556 . . . . . {Measuring separately scattering and specular}

2021/557 . . . . . {Detecting specular reflective parts on sample}

2021/558 . . . . . {Measuring reflectivity and transmission}

2021/559 . . . . . {Determining variation of specular reflection within diffusively reflecting sample}

21/57 . . . . . Measuring gloss

21/575 . . . . . {Photogoniometry}

21/59 . . . . . Transmissivity (G01N 21/25 takes precedence)

21/5903 . . . . . {using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}

21/5907 . . . . . {Densitometers}

21/5911 . . . . . {of the scanning type (scanning per se G02B)}

21/5915 . . . . . {Processing scan data in densitometry}

21/5919 . . . . . {Determining total density of a zone}

21/5923 . . . . . {Determining zones of density; quantitating spots}

21/5926 . . . . . {Isodensitometers}

21/593 . . . . . {Correcting from the background density}

21/5934 . . . . . {Averaging on a zone}

21/5938 . . . . . {Features of monitor, display}

21/5942 . . . . . {for dot area ratio in printing applications}

21/5946 . . . . . {for binary signal}

21/5949 . . . . . {Correcting nonlinearity of signal, e.g. in measurement of photomedium}

21/5953 . . . . . {for detecting a spatial spectrum}

21/5957 . . . . . {using an image detector type detector, e.g. CCD}

21/5961 . . . . . {using arrays of sources and detectors}

21/5965 . . . . . {using selected detectors in an array}

21/5969 . . . . . {Scanning of a tube, a cuvette, a volume of sample}

21/5973 . . . . . {where the cuvette or tube is moved}

21/5976 . . . . . {Image projected and scanning projected image}

21/5978 . . . . . {Features of mounting, adjusting}

21/5984 . . . . . {height adjustable}

21/5988 . . . . . {Fluid mounting or the like, e.g. vortex}

21/5992 . . . . . {Double pass}

21/5996 . . . . . {Positioning the head}

21/61 . . . . . Non-dispersive gas analysers (G01N 21/3504 takes precedence)

21/62 . . . . . Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light

21/625 . . . . . {Excitation by energised particles such as metastable molecules}

21/63 . . . . . optically excited

21/631 . . . . . {using photolysis and investigating photolysed fragments}

21/632 . . . . . {Predissociation, e.g. for fluorescence of transient excited radicals}

21/633 . . . . . {Photoinduced grating used for analysis}

21/634 . . . . . {Photochromic material analysis}

21/635 . . . . . {Photosynthetic material analysis, e.g. chlorophyll}

21/636 . . . . . {using an arrangement of pump beam and probe beam; using the measurement of optical non-linear properties; (non-linear optics per se G02F 1/33)}

21/637 . . . . . {Lasing effect used for analysis}

21/638 . . . . . {Brillouin effect, e.g. stimulated Brillouin effect}
21/64 . . . . . . Fluorescence; Phosphorescence
21/6402 . . . . . . [Atomic fluorescence; Laser induced fluorescence]
21/6404 . . . . . . (Atomic fluorescence)
2021/6406 . . . . . . {multi-element}
21/6408 . . . . . . [with measurement of decay time, time resolved fluorescence]
2021/641 . . . . . . [Phosphorimetry, gated]
2021/6413 . . . . . . [Distinction short and delayed fluorescence or phosphorescence]
2021/6415 . . . . . . [with two excitations, e.g. strong pump/probe flash]
2021/6417 . . . . . . [Spectrofluorimetric devices]
2021/6419 . . . . . . [Excitation at two or more wavelengths]
2021/6421 . . . . . . [Measuring at two or more wavelengths]
2021/6423 . . . . . . [Spectral mapping, video display]
2021/6426 . . . . . . [Determining Fraunhofer lines]
2021/6428 . . . . . . [Measuring fluorescence of fluorescent products of reactions of or of fluorochrome labelled reactive substances, e.g. measuring quenching effects, using measuring "optrodes" (in vivo A61B 5/00; immunoassay G01N 33/53)]
21/643 . . . . . . [non-biological material]
2021/6432 . . . . . . [Quenching]
2021/6434 . . . . . . [Optrodes]
2021/6436 . . . . . . [for analysing tapes]
2021/6439 . . . . . . [with indicators, stains, dyes, tags, labels, marks]
2021/6441 . . . . . . [with two or more labels]
2021/6443 . . . . . . [Fluorimetric titration]
2021/6445 . . . . . . [Measuring fluorescence polarisation]
2021/6447 . . . . . . [by visual observation]
2021/645 . . . . . . [Specially adapted constructive features of fluorimeters]
2021/6452 . . . . . . [Individual samples arranged in a regular 2D-array, e.g. multowell plates]
2021/6454 . . . . . . [using an integrated detector array]
2021/6456 . . . . . . [Spatial resolved fluorescence measurements; Imaging]
2021/6458 . . . . . . [Fluorescence microscopy (fluorescence microscopes per se G02B 21/0076 and G02B 21/16)]
2021/646 . . . . . . [Detecting fluorescent inhomogeneities at a position, e.g. for detecting defects]
2021/6463 . . . . . . [Optics]
2021/6465 . . . . . . [Angular discrimination]
2021/6467 . . . . . . [Axial flow and illumination]
2021/6469 . . . . . . [Cavity, e.g. ellipsoid]
2021/6471 . . . . . . [Special filters, filter wheel]
2021/6473 . . . . . . [In-line geometry]
2021/6476 . . . . . . [Front end, i.e. backscatter, geometry]
2021/6478 . . . . . . [Special lenses]
2021/648 . . . . . . [using evanescent coupling or surface plasmon coupling for the excitation of fluorescence]
2021/6482 . . . . . . [Sample cells, cuvettes]
2021/6484 . . . . . . [Optical fibres]
2021/6486 . . . . . . [Measuring fluorescence of biological material, e.g. DNA, RNA, cells (G01N 21/6428 takes precedence)]
2021/6489 . . . . . . [Photoluminescence of semiconductors]
G01N

2021/772 . . . . . . . {Tip coated light guide}
2021/7723 . . . . . . . {Swelling part, also for adsorption sensor, i.e. without chemical reaction}
2021/7726 . . . . . . . {Porous glass}
2021/773 . . . . . . . {Porous polymer jacket; Polymer matrix with indicator}
2021/7733 . . . . . . . {Reservoir, liquid reagent}
2021/7736 . . . . . . . {Exposed, cladding free}
21/774 . . . . . . . . . [the reagent being on a grating or periodic structure]
21/7743 . . . . . . . . . [the reagent-coated grating coupling light in or out of the waveguide]
21/7746 . . . . . . . . . [the waveguide coupled to a cavity resonator]
2021/775 . . . . . . . {Indicator and selective membrane}
2021/7753 . . . . . . . {Reagent layer on photoelectrical transducer}
2021/7756 . . . . . . . {Sensor type}
2021/7759 . . . . . . . {Dipstick; Test strip}
2021/7763 . . . . . . . {Sample through flow}
2021/7766 . . . . . . . {Capillary fill}
2021/7769 . . . . . . . {Measurement method of reaction-produced change in sensor}
2021/7773 . . . . . . . {Reflection}
2021/7776 . . . . . . . {Index}
2021/7779 . . . . . . . {Interferometric}
2021/7783 . . . . . . . {Transmission, loss}
2021/7786 . . . . . . . {Fluorescence}
2021/7789 . . . . . . . {Cavity or resonator}
2021/7793 . . . . . . . {Sensor comprising plural indicators}
2021/7796 . . . . . . . {Special mountings, packaging of indicators}
21/78 . . . . . . . producing a change of colour
21/783 . . . . . . . for analysing gases
2021/786 . . . . . . . {with auxiliary heating for reaction}
21/79 . . . . . . . Photometric titration
21/80 . . . . . . . Indicating pH value
21/81 . . . . . . . Indicating humidity
21/82 . . . . . . . producing a precipitate or turbidity
2021/825 . . . . . . . {Agglutination}
21/83 . . . . . . . Turbidimetric titration
21/84 . . . Systems specially adapted for particular applications
2021/8405 . . . . {Application to two-phase or mixed materials, e.g. gas dissolved in liquids}
2021/8411 . . . . {Application to online plant, process monitoring}
2021/8416 . . . . {and process controlling, not otherwise provided for}
21/8422 . . . . . . . {Investigating thin films, e.g. matrix isolation method}
2021/8427 . . . . . . . {Coatings}
2021/8433 . . . . . . . {Comparing coated/uncoated parts}
2021/8438 . . . . . . . {Mutilayers}
2021/8444 . . . . . . . {Fibrous material}
2021/845 . . . . . . . {Objects on a conveyor}
2021/8455 . . . . . . . {and using position detectors}
2021/8461 . . . . . . . {Investigating impurities in semiconductor, e.g. Silicon}
2021/8466 . . . . . . . {Investigation of vegetal material, e.g. leaves, plants, fruits}
2021/8472 . . . . . . . {Investigation of composite materials}
2021/8477 . . . . . . . {Investigating crystals, e.g. liquid crystals}
21/8483 . . . . . . . {Investigating reagent band (test-element handling not specific to a test method}

2021/8488 . . . . . . . [the band presenting reference patches]
2021/8494 . . . . . . . {Measuring or storing parameters of the band}
21/85 . . . Investigating moving fluids or granular solids
21/8507 . . . {Probe photometers, i.e. with optical measuring part dipped into fluid sample}
2021/8514 . . . . . . . {with immersed mirror}
2021/8521 . . . . . . . {with a combination mirror cell-cuvette}
2021/8528 . . . . . . . {Immerged light conductor}
2021/8535 . . . . . . . {Presenting a cut}
2021/8542 . . . . . . . {Presenting an exposed part of the core}
2021/855 . . . . . . . {Underground probe, e.g. with provision of a penetration tool}
2021/8557 . . . . . . . {Special shaping of flow, e.g. using a by-pass line, jet flow, curtain flow}
2021/8564 . . . . . . . {Sample as drops}
2021/8571 . . . . . . . {Using filtering of sample fluid}
2021/8578 . . . . . . . {Gaseous flow (IR analysers G01N 21/8578)}
2021/8585 . . . . . . . {Using porous sheets, e.g. for separating aerosols}
2021/8592 . . . . . . . {Grain or other flowing solid samples}
21/86 . . . Investigating moving sheets (G01N 21/89 takes precedence)
2021/8609 . . . . . . . {Optical head specially adapted}
2021/8618 . . . . . . . {With an optically integrating part, e.g. hemisphere}
2021/8627 . . . . . . . {With an illuminator over the whole width}
2021/8636 . . . . . . . {Detecting arrangement therefore, e.g. collimators, screens}
2021/8645 . . . . . . . {Using multidoctectors, detector array}
2021/8654 . . . . . . . {Mechanical support; Mounting of sheet}
2021/8663 . . . . . . . {Paper, e.g. gloss, moisture content (inspecting the presence of flaws in moving materials, e.g. paper G01N 21/8663; measurement of gloss in general G01N 21/57)}
2021/8672 . . . . . . . {Paper formation parameter}
2021/8681 . . . . . . . {Paper fibre orientation}
2021/869 . . . . . . . {Plastics or polymeric material, e.g. polymers orientation in plastic, adhesive imprinted bands}
21/87 . . . Investigating jewels (G01N 21/88 takes precedence)
21/88 . . . Investigating the presence of flaws or contamination
21/8803 . . . . . . . {Visual inspection (measuring projectors G01B 9/08)}
21/8806 . . . . . . . {Specially adapted optical and illumination features}
2021/8809 . . . . . . . {Adjustment for highlighting flaws}
2021/8812 . . . . . . . {Diffuse illumination, e.g. "sky"}
2021/8816 . . . . . . . {By using multiple sources, e.g. LEDs}
2021/8819 . . . . . . . {By using retroreflecting screen}
2021/8822 . . . . . . . {Dark field detection}
2021/8825 . . . . . . . {Separate detection of dark field and bright field}
2021/8829 . . . . . . . {Shadow projection or structured background, e.g. for deflectometry (three-dimensional metrology of surfaces G01B 11/25)}
G01N

2021/8832 . . . . . [Structured background, e.g. for transparent objects]

2021/8835 . . . . . . [Adjustable illumination, e.g. software adjustable screen]

2021/8838 . . . . . . [Stroboscopic illumination; synchronised illumination]

2021/8841 . . . . . . [Illumination and detection on two sides of object]

2021/8845 . . . . . . [Multiple wavelengths of illumination or detection]

2021/8848 . . . . . . [Polarisation of light]

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 - G01N 21/95692 take precedence; optical measurement of dimensions G01B 1/100; 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)]

2021/8854 . . . . . . [Grading and classifying of flaws]

2021/8858 . . . . . . [Flaw counting]

2021/8861 . . . . . . [Determining coordinates of flaws]

2021/8864 . . . . . . [Mapping zones of defects]

2021/8867 . . . . . . [using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing]

2021/887 . . . . . . [the measurements made in two or more directions, angles, positions]

2021/8874 . . . . . . [Taking dimensions of defect into account]

2021/8877 . . . . . . [Proximity analysis, local statistics]

2021/888 . . . . . . [Marking defects]

2021/8883 . . . . . . [involving the calculation of gauges, generating models]

2021/8887 . . . . . . [based on image processing techniques]

2021/8889 . . . . . . [providing a bare video image, i.e. without visual measurement aids]

2021/8893 . . . . . . [providing a video image and a processed signal for helping visual decision]

2021/8896 . . . . . . [Circuits specially adapted for system specific signal conditioning]

21/89 . . . . . . in moving material, e.g. running paper or textiles (G01N 21/90, G01N 21/91, G01N 21/94 take precedence)

21/8901 . . . . . . [Optical details; Scanning details (per se G02B)]

2021/8902 . . . . . . [Anamorphic spot]

21/8903 . . . . . . [using a multiple detector array]

2021/8904 . . . . . . [Sheetwide light conductor on detecting side, e.g. fluorescing light rod]

2021/8905 . . . . . . [Directional selective optics, e.g. slits, spatial filters]

2021/8907 . . . . . . [Cylindrical optics]

2021/8908 . . . . . . [Strip illuminator, e.g. light tube]

2021/8909 . . . . . . [Scan signal processing specially adapted for inspection of running sheets]

2021/891 . . . . . . [Edge discrimination, e.g. by signal filtering]

2021/8911 . . . . . . [Setting scan-width signals]

2021/8912 . . . . . . [Processing using lane subdivision]

21/8914 . . . . . . [characterised by the material examined]

21/8915 . . . . . . [non-woven textile material]

21/8916 . . . . . . [for testing photographic material]

2021/8917 . . . . . . [Paper, also ondulated]

2021/8918 . . . . . . [Metal]

21/892 . . . . . . characterised by the flaw, defect or object feature examined

21/8921 . . . . . . [Streaks]

21/8922 . . . . . . [Periodic flaws]

2021/8924 . . . . . . [Dents; Relief flaws]

2021/8925 . . . . . . [Inclusions]

2021/8927 . . . . . . [Defects in a structured web]

2021/8928 . . . . . . [Haze defects, i.e. with a part of diffraeted light]

21/894 . . . . . . Pinholes

21/896 . . . . . . Optical defects in or on transparent materials, e.g. distortion, surface flaws (in conveyed flat sheet or rod (for other objects G01N 21/958))

2021/8962 . . . . . . [for detecting separately opaque flaws and refracting flaws]

2021/8965 . . . . . . [using slant illumination, using internally reflected light]

2021/8967 . . . . . . [Discriminating defects on opposite sides or at different depths of sheet or rod]

21/898 . . . . . . Irregularities in textured or patterned surfaces, e.g. textiles, wood

21/8983 . . . . . . [for testing textile webs, i.e. woven material]

21/8986 . . . . . . [Wood]

21/90 . . . . . . in a container or its contents (G01N 21/91 takes precedence)

21/9009 . . . . . . [Non-optical constructional details affecting optical inspection, e.g. cleaning mechanisms for optical parts, vibration reduction]

21/9018 . . . . . . [Dirt detection in containers]

21/9027 . . . . . . [in containers after filling]

21/9036 . . . . . . [using arrays of emitters or receivers]

21/9045 . . . . . . [Inspection of ornamented or stippled container walls]

21/9054 . . . . . . [Inspection of sealing surface and container finish]

21/9063 . . . . . . [Hot-end container inspection]

21/9072 . . . . . . [with illumination or detection from inside the container]

21/9081 . . . . . . [Inspection especially designed for plastic containers, e.g. preforms]

21/909 . . . . . . [in opaque containers or opaque container parts, e.g. cans, tins, caps, labels]

21/91 . . . . . . using penetration of dyes, e.g. fluorescent ink

21/93 . . . . . . Detection standards; Calibrating [baseline adjustment, drift correction]

21/933 . . . . . . [Adjusting baseline or gain (also for web inspection)]

21/936 . . . . . . [Adjusting threshold, e.g. by way of moving average]

21/94 . . . . . . Investigating contamination, e.g. dust (G01N 21/85 takes precedence)

21/945 . . . . . . [Liquid or solid deposits of macroscopic size on surfaces, e.g. drops, films, or clustered contaminants (dust particles and microscopic contaminants in G01N 21/94)]
21/95 . . . characterised by the material or shape of the object to be examined
(G01N 21/89 - G01N 21/91, G01N 21/94 take precedence)

21/9501 . . . . [Semiconductor wafers (manufacturing processes per se of semiconductor devices implementing a measuring step H01L 22/101)]

21/9503 . . . . [Wafer edge inspection]
21/9505 . . . . [Wafer internal defects, e.g. microcracks]
21/9506 . . . . [Optical discs]
21/9508 . . . . [Capsules; Tablets]
21/951 . . . . [Balls]
2021/9511 . . . . [Optical elements other than lenses, e.g. mirrors (testing of optical apparatus in G01M 11/00)]

2021/9513 . . . . [Liquid crystal panels]
21/9515 . . . . [Objects of complex shape, e.g. examined with use of a surface follower device (measuring contours and curvatures G01B 11/24)]

2021/9516 . . . . [whereby geometrical features are being masked]
2021/9518 . . . . [using a surface follower, e.g. robot]
21/952 . . . . Inspecting the exterior surface of cylindrical bodies or wires (G01N 21/956 takes precedence)
21/954 . . . . Inspecting the inner surface of hollow bodies, e.g. bores
21/9542 . . . . [using a probe]
21/9544 . . . . [with emitter and receiver on the probe]
21/9546 . . . . [with remote light transmitting, e.g. optical fibres]
2021/9548 . . . . [Scanning the interior of a cylinder]
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 22/101)]

21/95607 . . . . [using a comparative method]
2021/95615 . . . . [with stored comparison signal]
21/95623 . . . . [using a spatial filtering method (per se G02B)]
2021/9563 . . . . [and suppressing pattern images]
2021/95638 . . . . [for PCB’s]
2021/95646 . . . . . [Soldering]
2021/95653 . . . . . [Through-holes]
2021/95661 . . . . . [for leads, e.g. position, curvature]
2021/95669 . . . . . [for solder coating, coverage]
2021/95676 . . . . . [Masks, reticles, shadow masks]
21/95684 . . . . . [Patterns showing highly reflecting parts, e.g. metallic elements]
21/95692 . . . . . [Patterns showing hole parts, e.g. honeycomb filtering structures]
21/958 . . . . Inspecting transparent materials (or objects, e.g. windscreens (for conveyed flat sheet or rod G01N 21/896)]

21/9583 . . . . [Lenses]
21/9586 . . . . [Windscreens]
22/00 Investigating or analysing materials by the use of microwaves (G01N 3/00 - G01N 17/00, G01N 24/00 take precedence)

22/005 . . . [and using Stark effect modulation]
22/02 . . . Investigating the presence of flaws
22/04 . . . Investigating moisture content

23/00 Investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays or neutrons, not covered by groups G01N 3/00 – G01N 17/00, G01N 21/00 or G01N 22/00

23/005 . . . [by using neutrons (G01N 23/002 - G01N 23/227 take precedence)]
23/02 . . . by transmitting the radiation through the material
23/025 . . . . [using neutrons]
23/04 . . . . and forming images of the material

WARNING
Group G01N 23/04 is impacted by reclassification into groups G01N 23/041 and G01N 23/044.
Groups G01N 23/04, G01N 23/041, and G01N 23/044 should be considered in order to perform a complete search.

23/041 . . . Phase-contrast imaging, e.g. using grating interferometers

WARNING
Group G01N 23/041 is incomplete pending reclassification of documents from groups G01N 23/04 and G01N 23/043.
Groups G01N 23/04, G01N 23/043, and G01N 23/041 should be considered in order to perform a complete search.

23/043 . . . [using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images]

WARNING
Group G01N 23/043 is impacted by reclassification into groups G01N 23/041 and G01N 23/044.
Groups G01N 23/043, G01N 23/041, and G01N 23/044 should be considered in order to perform a complete search.

23/044 . . . using laminography or tomosynthesis

WARNING
Group G01N 23/044 is incomplete pending reclassification of documents from groups G01N 23/04 and G01N 23/043.
Groups G01N 23/043, G01N 23/04, and G01N 23/044 should be considered in order to perform a complete search.

23/046 . . . using tomography, e.g. computed tomography [CT]
23/05 . . . using neutrons
23/06 . . . and measuring the absorption

WARNING
Group G01N 23/06 is impacted by reclassification into group G01N 23/083.
All groups listed in this Warning should be considered in order to perform a complete search.
23/083 . . . the radiation being X-rays

**WARNING**

Group G01N 23/083 is incomplete pending reclassification of documents from groups G01N 23/06 and G01N 23/10 – G01N 23/185.

All groups listed in this Warning should be considered in order to perform a complete search.

23/085 . . . . X-ray absorption fine structure [XAFS], e.g. extended XAFS [EXAFS]

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

23/09 . . . the radiation being neutrons

**WARNING**

Group G01N 23/09 is impacted by reclassification into groups G01N 23/10, G01N 23/12, G01N 23/125, G01N 23/16, and G01N 23/18.

Groups G01N 23/09, G01N 23/10, and G01N 23/083 should be considered in order to perform a complete search.

23/095 . . . Gamma-ray resonance absorption, e.g. using the Mössbauer effect

23/10 . . . the material being confined in a container, e.g. in a luggage X-ray scanners

**WARNING**

Group G01N 23/10 is incomplete pending reclassification of documents from group G01N 23/09.

Group G01N 23/10 is also impacted by reclassification into group G01N 23/083.

Groups G01N 23/09, G01N 23/10, and G01N 23/083 should be considered in order to perform a complete search.

23/12 . . . the material being a flowing fluid or a flowing granular solid

**WARNING**

Group G01N 23/12 is incomplete pending reclassification of documents from group G01N 23/09.

Group G01N 23/12 is also impacted by reclassification into group G01N 23/083.

Groups G01N 23/09, G01N 23/12, and G01N 23/083 should be considered in order to perform a complete search.

23/125 . . . . {with immerged detecting head}

**WARNING**

Group G01N 23/125 is incomplete pending reclassification of documents from group G01N 23/09.

Group G01N 23/125 is also impacted by reclassification into group G01N 23/083.

Groups G01N 23/09, G01N 23/125, and G01N 23/083 should be considered in order to perform a complete search.

23/16 . . . . the material being a moving sheet or film

**WARNING**

Group G01N 23/16 is incomplete pending reclassification of documents from groups G01N 23/09, G01N 23/10, and G01N 23/185.

Group G01N 23/16 is also impacted by reclassification into group G01N 23/083.

All groups listed in this Warning should be considered in order to perform a complete search.

23/18 . . . Investigating the presence of flaws defects or foreign matter

**WARNING**

Group G01N 23/18 is incomplete pending reclassification of documents from group G01N 23/09.

Group G01N 23/18 is also impacted by reclassification into groups G01N 23/083, and G01N 23/16.

Groups G01N 23/09, G01N 23/18, and G01N 23/16 should be considered in order to perform a complete search.

23/185 . . . . [in tyres]

**WARNING**

Group G01N 23/185 is impacted by reclassification into groups G01N 23/083, and G01N 23/16.

All groups listed in this Warning should be considered in order to perform a complete search.

23/20 . . . by using diffraction of the radiation by the materials, e.g. for investigating crystal structure; by using scattering of the radiation by the materials, e.g. for investigating non-crystalline materials; by using reflection of the radiation by the materials

23/20008 . . . Constructional details of analysers, e.g. characterised by X-ray source, detector or optical system; Accessories therefor; Preparing specimens therefor (monochromators for X-rays using crystals G21K 1/06)

23/20016 . . . Goniometers

23/20025 . . . Sample holders or supports therefor

23/20033 . . . . provided with temperature control or heating means

23/20041 . . . . for high pressure testing, e.g. anvil cells

23/2005 . . . Preparation of powder samples therefor

23/20058 . . . Measuring diffraction of electrons, e.g. low energy electron diffraction [LEED] method or reflection high energy electron diffraction [RHEED] method

23/20066 . . . Measuring inelastic scatter of gamma rays, e.g. Compton effect

23/20075 . . . . [by measuring interferences of X-rays, e.g. Borrmann effect]

23/20083 . . . . [by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement]

23/20091 . . . Measuring the energy-dispersion spectrum [EDS] of diffracted radiation
by measuring small-angle scattering

**WARNING**

Group **G01N 23/201** is impacted by reclassification into groups **G01N 23/205**, **G01N 23/207**, and **G01N 23/2073**.

All groups listed in this Warning should be considered in order to perform a complete search.

using neutrons

**WARNING**

Group **G01N 23/202** is impacted by reclassification into groups **G01N 23/205**, **G01N 23/207**, and **G01N 23/2073**.

All groups listed in this Warning should be considered in order to perform a complete search.

Measuring back scattering

using neutrons

**WARNING**

Group **G01N 23/205** is incomplete pending reclassification of documents from groups **G01N 23/201** and **G01N 23/202**.

Groups **G01N 23/201**, **G01N 23/202** and **G01N 23/205** should be considered in order to perform a complete search.

Analysing diffraction patterns

Diffractometry using detectors, e.g. using a probe in a central position and one or more displaceable detectors in circumferential positions

**WARNING**

Group **G01N 23/207** is incomplete pending reclassification of documents from groups **G01N 23/201** and **G01N 23/202**.

Groups **G01N 23/201**, **G01N 23/202** and **G01N 23/207** should be considered in order to perform a complete search.

{ using neutron detectors (neutron spectrometry **G01T 3/00**) }

**WARNING**

Group **G01N 23/2073** is incomplete pending reclassification of documents from groups **G01N 23/201** and **G01N 23/202**.

Groups **G01N 23/201**, **G01N 23/202** and **G01N 23/2073** should be considered in order to perform a complete search.

by measuring secondary emission from the material

**NOTE**

Devices per se are classified in the relevant places, e.g. **H01J 37/00, H01J 49/00**

**WARNING**

Group **G01N 23/22** is impacted by reclassification into group **G01N 23/2209**.

Groups **G01N 23/22** and **G01N 23/2209** should be considered in order to perform a complete search.

Preparing specimens therefor

Specimen supports therefor; Sample conveying means therefore

Combination of two or more measurements, at least one measurement being that of secondary emission, e.g. combination of secondary electron [SE] measurement and back-scattered electron [BSE] measurement

all measurements being of a secondary emission, e.g. combination of SE measurement and characteristic X-ray measurement

using wavelength dispersive spectroscopy [WDS]

**WARNING**

Group **G01N 23/2209** is incomplete pending reclassification of documents from group **G01N 23/22**.

Groups **G01N 23/22** and **G01N 23/2209** should be considered in order to perform a complete search.

by activation analysis

by irradiating the sample with X-rays or gamma-rays and by measuring X-ray fluorescence

**WARNING**

Group **G01N 23/223** is incomplete pending reclassification of documents from group **G01N 23/276**.

Groups **G01N 23/276** and **G01N 23/223** should be considered in order to perform a complete search.

using electron or ion

using incident electron beams, e.g. scanning electron microscopy [SEM]

Measuring emitted X-rays, e.g. electron probe microanalysis [EPMA]

Measuring cathodoluminescence

using incident ion beams, e.g. proton beams
25/00  Investigating or analyzing materials by the use of thermal means (G01N 3/00 - G01N 23/00 take precedence)
25/005  [by investigating specific heat]
27/00 Investigating or analysing materials by the use of electric, electro-chemical, or magnetic means (G01N 3/00 - G01N 25/00 take precedence; measurement or testing electric or magnetic variables or of electric or magnetic properties of materials G01R)

27/002 [by investigating the work function voltage]

27/005 [by determining the work function in vacuum]

27/007 [by investigating the electric dipolar moment (measuring piezo-electric properties G01R 29/22)]

27/02 [by investigating the impedance of the material]

27/021 [before and after chemical transformation of the material]

27/023 [where the material is placed in the field of a coil]

27/025 [a current being generated within the material by induction]

27/026 [Dielectric impedance spectroscopy (electrochemical impedance spectroscopy for measuring corrosion G01N 17/02)]

27/028 [Circuits thefere (measuring impedance per se G01R 27/02)]

27/04 [by investigating resistance (for measuring the amount of particles G01N 15/0656)]

27/041 [of a solid body]

27/043 [of a granular material]

27/045 [Circuits (measuring resistance per se G01R 27/06; e.g. G01R 27/22)]

27/046 [provided with temperature compensation]

27/048 [for determining moisture content of the material]

27/06 [of a liquid (involving electrolysis G01N 27/26)]

27/07 [Construction of measuring vessels; Electrodes therefor]

27/08 [which is flowing continuously]

27/10 [Investigation or analysis specially adapted for controlling or monitoring operations or for signalling]

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]

27/121 [for determining moisture content, e.g. humidity, of the fluid (moisture content of the tested material G01N 27/048)]

27/122 [Circuits particularly adapted therefor, e.g. linearising circuits]

27/123 [for controlling the temperature (temperature control per se G05D 23/00)]

27/124 [varying the temperature, e.g. in a cyclic manner]

27/125 [Composition of the body, e.g. the composition of its sensitive layer]

27/126 [comprising organic polymers]

27/127 [comprising nanoparticles]

27/128 [Microapparatus]

27/129 [Diode type sensors, e.g. gas sensitive Schottky diodes (capacitor type sensors G01N 27/227; field-effect transistor type sensors G01N 27/414)]

27/14 [of an electrically-heated body in dependence upon change of temperature]

27/16 [caused by burning or catalytic oxidation of a surrounding material to be tested, e.g. of gas]

27/18 [caused by changes in the thermal conductivity of a surrounding material to be tested (G01N 27/20 takes precedence)]

27/185 [using a catharometer]

27/20 [Investigating the presence of flaws]

27/205 [in insulating materials]

27/22 [by investigating capacitance]

27/221 [by investigating the dielectric properties (using microwaves G01N 22/00; measuring loss factors or dielectric constants per se G01R 27/26)]

27/227 [Sensors changing capacitance upon adsorption or absorption of fluid components, e.g. electrolyte-insulator-semiconductor sensors, MOS capacitors (G01N 27/225; takes precedence)]

27/228 [Circuits thefere (measuring capacitance per se G01R 27/26)]

27/24 [Investigating the presence of flaws]

27/26 [by investigating, for example, electrolysis or electrophoresis]
Electrolytic cell components

[Means for supporting or introducing electrochemical probes]

Electrodes, e.g. test electrodes; Half-cells

(G01N 27/414 takes precedence)

Reference electrodes

(pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes (ion selective electrodes G01N 27/333; glass electrodes G01N 27/36))

Gas permeable electrodes

(optically transparent or photoresponsive electrodes)

Disposable laminated or multilayered electrodes (G01N 27/327 takes precedence)

(at least partially made of carbon)

Half-cells with permeable membranes, e.g. semi-porous or perm-selective membranes

Calomel electrodes

Biochemical electrodes (electrical and mechanical details of in vitro measurements (chemical and biological details C12Q 1/00; G01N 33/543; in vivo A61B 5/00))

[Amperometric enzyme electrodes for analytes in body fluids, e.g. glucose in blood (amperometry per se G01N 27/49; aspects concerning the enzyme reagent C12Q 1/001)]

Test elements therefor, i.e. disposable laminated substrates with electrodes, reagent and channels (optical biosensors G01N 33/52)

Devices therefor, e.g. test element readers, circuitry (details not specific to biochemical electrodes G01N 33/4875)

Corrective measures, e.g. error detection, compensation for temperature or hematocrit, calibration (coding of calibration information G01N 33/4877)

Sensing specific biomolecules, e.g. nucleic acid strands, based on an electrode surface reaction

being a hybridisation with immobilised receptors (using a FET type sensor G01N 27/4145; concerning the hybridisation C12Q 1/68)

being a redox reaction, e.g. detection by cyclic voltammetry (voltammetry per se G01N 27/42; G01N 27/48)

involving nanosized elements, e.g. nanogaps or nanoparticles (nanopores G01N 33/4872; magnetic beads G01N 27/7451)

Ion-selective electrodes or membranes (glass electrodes G01N 27/36)

[the membrane containing at least one organic component (G01N 27/3271 takes precedence; aspects concerning the enzyme reagent in enzyme electrodes C12Q 1/001)]

Dropping-mercury electrodes

Glass electrodes

Cleaning of electrodes

Semi-permeable membranes or partitions

Salt-bridge leaks; Liquid junctions

Cells and electrode assemblies

[Combination of a single ion-sensing electrode and a single reference electrode (G01N 27/406 and G01N 27/413 take precedence)]

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

(for gases other than oxygen)

Cells and probes with solid electrolytes

Electrical connectors associated therewith

[Circuit arrangements specially adapted therefor]

[Means for heating or controlling the temperature of the solid electrolyte]

for investigating or analysing gases

[Reference electrodes or reference mixtures]

[Means for protecting the electrolyte or the electrodes]

[Means for sealing the sensor element in a housing]

Oxygen concentration cells

Oxygen pumping cells

for investigating liquid metals

using sensor elements of laminated structure

characterized by the diffusion barrier

Composition or fabrication of the solid electrolyte

[for detection of gases other than oxygen]

Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts

[Reference electrodes or reference mixtures]

[Means for protecting the electrolyte or the electrodes]

[Means for sealing the sensor element in a housing]

Oxygen concentration cells

Oxygen pumping cells

for investigating liquid metals

using sensor elements of laminated structure

Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts

[for detection of gases other than oxygen]

Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts

[Reference electrodes or reference mixtures]

[Means for protecting the electrolyte or the electrodes]

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
27/4141 . . . [specially adapted for gases]
27/4143 . . . . . . . (Air gap between gate and channel, i.e. suspended gate [SGI] FETs (work function measurement per se G01N 27/002])
27/4145 . . . [specially adapted for biomolecules, e.g. gate electrode with immobilised receptors]
27/4146 . . . [involving nanized elements, e.g. nanotubes, nanowires]
27/4148 . . . [Integrated circuits therefor, e.g. fabricated by CMOS processing (CMOS processing per se H01L 21/82)]
27/416 . . . Systems (G01N 27/27 takes precedence {; for testing batteries G01R 31/36})
27/4161 . . . [measuring the voltage and using a constant current supply, e.g. chronopotentiometry]
27/4162 . . . [investigating the composition of gases, by the influence exerted on ionic conductivity in a liquid (conductometry in general G01N 27/06: amperometric gas sensors G01N 27/404)]
27/4163 . . . [checking the operation of, or calibrating, the measuring apparatus (G01N 27/3274, G01N 27/4175 and G01N 33/0006 take precedence)]
27/4165 . . . . . . . [for pH meters]
27/4166 . . . [measuring a particular property of an electrolyte]
27/4167 . . . . . . . (pH electrodes therefor G01N 27/302, G01N 27/36)
27/4168 . . . [Oxidation-reduction potential, e.g. for chlorination of water (water analysis G01N 33/18)]
27/417 . . . . . . . using cells [i.e. more than one cell] and probes with solid electrolytes
27/4175 . . . . . . . [Calibrating or checking the analyser]
27/419 . . . . . . . Measuring voltages or currents of oxygen pumping cells and oxygen concentration cells
27/42 . . . . . . . Measuring deposition or liberation of materials from an electrolyte; Coulometry, i.e. measuring coulomb-equivalent of material in an electrolyte
27/423 . . . . . . . [Coulometry]
27/426 . . . . . . . [by weighing]
27/44 . . . . . . . using electrolysis to regenerate a reagent, e.g. for titration
27/447 . . . . . . . [using electrophoresis (aspects concerning peptides or proteins C07K 1/26; for non-analytical purposes B01D 57/02; separating particles by dielectrophoresis B03C 5/00)]
27/44704 . . . . . . . [Details; Accessories]
27/44708 . . . . . . . [Cooling]
27/44713 . . . . . . . [Particularly adapted electric power supply]
27/44717 . . . . . . . [Arrangements for investigating the separated zones, e.g. localising zones]
27/44721 . . . . . . . [by optical means]
27/44726 . . . . . . . [using specific dyes, markers or binding molecules]
27/4473 . . . . . . . [by electric means]
27/44734 . . . . . . . [by thermal means]
27/44739 . . . . . . . [Collecting the separated zones, e.g. blotting to a membrane or punching of gel spots]
27/44743 . . . . . . . [Introducing samples]
27/44747 . . . . . . . [Composition of gel or of carrier mixture]
27/44752 . . . . . . . [Controlling the zeta potential, e.g. by wall coatings]
27/44756 . . . . . . . [Apparatus specially adapted therefor]
27/4476 . . . . . . . [of the density gradient type]
27/44765 . . . . . . . [of the counter-flow type]
27/44769 . . . . . . . [Continuous electrophoresis, i.e. the sample being continuously introduced, e.g. free flow electrophoresis [FFE]]
27/44773 . . . . . . . [Multi-stage electrophoresis, e.g. two-dimensional electrophoresis]
27/44778 . . . . . . . [on a common gel carrier, i.e. 2D gel electrophoresis]
27/44782 . . . . . . . [of a plurality of samples]
27/44786 . . . . . . . [of the magneto-electrophoresis type]
27/44791 . . . . . . . [Microapparatus (sample containers with integrated microfluidic structures B01L 3/5027)]
27/44795 . . . . . . . [Isoelectric focusing]
27/453 . . . . . . . Cells therefor
27/48 . . . . . . . Polarography, i.e. measuring changes in current under a slowly-varying voltage
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
27/60 . . . . . . . by investigating electrostatic variables {, e.g. electrographic flaw testing (G01N 27/007 takes precedence)}
27/605 . . . . . . . [for determining moisture content, e.g. humidity]
27/66 . . . . . . . Investigating the presence of flaws
27/62 . . . . . . . by investigating the ionisation of gases; by investigating electric discharges, e.g. emission of cathode

**WARNING**

Group G01N 27/62 is incomplete pending reclassification of documents from group G01N 23/2258.

Groups G01N 23/2258 and G01N 27/62 should be considered in order to perform a complete search.

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])
27/624 . . . . . . . [using a non-uniform electric field, i.e. differential mobility spectrometry [DMS] or high-field asymmetric-waveform ion-mobility spectrometry [FAIMS]]
27/626 . . . . . . . [using heat to ionise a gas]
27/628 . . . . . . . [and a beam of energy, e.g. laser enhanced ionisation]
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]}
27/66 . . . . . . . and measuring current or voltage
27/68 . . . . . . . using electrical discharge to ionise a gas
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, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00) take precedence)

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, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00) take precedence)

29/01 by measuring propagation velocity or propagation time of acoustic waves

29/02 . . . Analysing fluids (using acoustic emission techniques G01N 29/14 )

29/03 . by using magnetico-acoustical effects or the Barkhausen effect

29/04 . . . [Fluid sensors based on microsensors, e.g. quartz crystal-microbalance [QCM], surface acoustic wave [SAW] devices, tuning forks, cantilevers, flexural plate wave [FPW] devices (microdevices per se B81B)]

29/05 . by measuring propagation velocity or propagation time of acoustic waves

29/06 . by measuring mechanical or acoustic impedance

29/07 . by measuring attenuation of acoustic waves

29/08 . by measuring frequency or resonance of acoustic waves

29/09 . by measuring mechanical or acoustic impedance

29/10 . by measuring attenuation of acoustic waves

29/11 . using probes

29/12 . using magnetographic methods

29/13 . using eddy currents (for measuring thickness G01B 7/06)

29/14 . [Details]

29/15 . [specially adapted for scanning]

29/16 . [by moving the sensors]

29/17 . [by moving the material]

29/18 . [Sensors]

29/19 . [and more than one sensor]

29/20 . [by analysing electrical signals]

29/21 . [Compensating for probe to workpiece spacing]

29/22 . [Compensating for velocity]

29/23 . [by measuring the propagation time, or delaying the signals]

29/24 . [Recording measured data (in general G01D)]

29/25 . [synchronously with scanning]

29/26 . [Calibrating of recording device]

29/27 . [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)]

29/28 . by investigating breakdown voltage (G01N 27/60, G01N 27/62 take precedence)

29/29 . by measuring breakdown voltage (G01N 27/60, G01N 27/62 take precedence)

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, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00) take precedence)

29/01 by 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, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00) take precedence)

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)
29/12 . . by measuring frequency or resonance of acoustic waves (measuring frequency or resonant frequency of mechanical vibrations or acoustic waves in general G01H 1/06, G01H 3/04, G01H 13/00; acoustic resonators G10K 11/04; vibration or shock testing of structures G01M 7/00)

29/14 . . using acoustic emission techniques ([echo of particles G01N 29/046; measuring mechanical vibrations or acoustic waves in solids in general G01H 1/00])

29/22 . . Details [e.g. general constructional or apparatus details]

29/221 . . . [Arrangements for directing or focusing the acoustical waves (electronic orientation or focusing G01N 29/262; sound directing or focusing G10K 11/26; mechanical steering of sound transducers or their beams G10K 11/35)]

29/222 . . . (Constructional or flow details for analysing fluids (optoacoustic fluid cells G01N 29/2425))

29/223 . . . (Supports, positioning or alignment in fixed situation (mounting transducers per se G10K 11/004))

29/225 . . . (Supports, positioning or alignment in moving situation)

29/226 . . . [Handheld or portable devices]

29/227 . . . [related to high pressure, tension or stress conditions]

29/228 . . . [related to high temperature conditions]

29/24 . . . . Probes (transducers for acoustic waves B06B, G10K; for measuring G01H)

29/2406 . . . [Electrostatic or capacitive probes, e.g. electret or cMUT-probes]

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 G01N 27/90, magnetostrictive transducers B06B 1/08, measuring magnetostrictive properties G01R 33/18)]

29/2418 . . . [using optoacoustic interaction with the material, e.g. laser radiation, photoacoustics (photoacoustic cells G01N 21/1702; measuring characteristics of vibrations by using radiation-sensitive means G01H 9/00; acousto-optical conversion techniques for short-range imaging G01S 15/8965; sound-producing devices using laser bundle G10K 15/046)]

29/2425 . . . . [optoacoustic fluid cells therefor]

29/2431 . . . . [using other means for acoustic excitation, e.g. heat, microwaves, electron beams (sound producing devices not otherwise provided for G10K 15/04)]

29/2437 . . . . [Piezoelectric probes]

29/2443 . . . . [Quartz crystal probes]

29/245 . . . . [Ceramic probes, e.g. lead zirconate titanate [PZT] probes]

29/2456 . . . . [Focusing probes (focusing arrangements G01N 29/221)]

29/2462 . . . . [Probes with waveguides, e.g. SAW devices]

29/2468 . . . . [Probes with delay lines]

29/2475 . . . . [Embedded probes, i.e. probes incorporated in objects to be inspected]

29/2481 . . . . [Wireless probes, e.g. with transponders or radio links]

29/2487 . . . . [Directing probes, e.g. angle probes (directing arrangements G01N 29/221)]

29/2493 . . . . [Wheel shaped probes]

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))

29/262 . . . . [by electronic orientation or focusing, e.g. with phased arrays (phased arrays per se G10K 11/34)]

29/265 . . . . by moving the sensor relative to a stationary material

29/27 . . . . by moving the material relative to a stationary sensor

29/275 . . . . by moving both the sensor and the material

29/28 . . . . providing acoustic coupling [e.g. water (impedance matching G10K 11/02)]

29/30 . . . . Arrangements for calibrating or comparing, e.g. with standard objects

29/32 . . . . Arrangements for suppressing undesired influences, e.g. temperature or pressure variations [compensating for signal noise]

29/323 . . . . [compensating for pressure or tension variations]

29/326 . . . . [compensating for temperature variations]

29/34 . . . . Generating the ultrasonic, sonic or infrasonic waves [e.g. electronic circuits specially adapted therefor]

29/341 . . . . [with time characteristics]

29/343 . . . . [pulse waves, e.g. particular sequence of pulses, bursts]

29/345 . . . . [continuous waves]

29/346 . . . . [with amplitude characteristics, e.g. modulated signal]

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)]

29/36 . . . . Detecting the response signal [e.g. electronic circuits specially adapted therefor]

29/38 . . . . by time filtering, e.g. using time gates

29/40 . . . . by amplitude filtering, e.g. by applying a threshold [or by gain control]

29/42 . . . . by frequency filtering [or by tuning to resonant frequency]

29/44 . . . . Processing the detected response signal [e.g. electronic circuits specially adapted therefor (digital signal processing per se G01F 17/00)]

29/4409 . . . . [by comparison]

29/4418 . . . . [with a model, e.g. best-fit, regression analysis]

29/4427 . . . . [with stored values, e.g. threshold values]

29/4436 . . . . [with a reference signal (amplitude comparison G01N 29/48)]

29/4445 . . . . [Classification of defects]

29/4454 . . . . [Signal recognition, e.g. specific values or portions, signal events, signatures]

29/4463 . . . . [Signal correction, e.g. distance amplitude correction [DAC], distance gain size [DGS], noise filtering]

29/4472 . . . . [Mathematical theories or simulation]

29/4481 . . . . [Neural networks]
Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography (or field flow fractionation)

(G01N 3/00, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00, G01N 29/00, G01N 21/00, G01N 7/00, G01N 5/00, G01N 9/00, G01N 13/00, G01N 23/00, G01N 29/00, G01N 27/00, G01N 29/00)

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.

Field flow fractionation

Hydrodynamic fractionation, e.g. CHDF or HDC

Characterised by driving force

Sedimentation or centrifugal FFF

Cross flow FFF

Asymmetrical flow

Electrical field

Characterised by opposing force

Normal, i.e. diffusion or thermal FFF

Steric FFF, i.e. diffusion negligible for larger particles; separation due to protrusion depth into carrier flow profile

Hyperlayer, i.e. different particle populations in hyperlayers elevated above wall

Lift hyperlayer, i.e. hydrodynamic lift forces dominate steric effect

Dielectric FFF, i.e. opposing forces dominate hydrodynamic lift forces and steric effects

Programming of driving force (carrier programming G01N 30/02)

Separation due to differential desorption

Thermal desorption

The desorption energy being adapted to sample, e.g. laser tuned to molecular bonds

Extraction

Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments

Column chromatography

Gas chromatography

Liquid chromatography

Preparation or injection of sample to be analysed

Standards

Preparation

Extraction sample from raw material

Using different phases to separate parts of sample

By reaction, e.g. derivatising the sample

Using an enricher

Absorbing precolumn

Using a splitter

By evaporation

Cooling; cold traps

Cryogenic focusing

Using more than one trap

Pyrolising

Evaporating sample

PTV evaporation

Thermal desorption analysis

Elimination of some components

Specially adapted to seal the inlet

Using a sampling valve

Multiport valves, i.e. having more than two ports

Rotary valves

Linearly moving valves, e.g. sliding valves

Diaphragm valves, e.g. deformed member closing the passage

With metering cavity, e.g. sample loop

With more than one cavity

In high pressure liquid systems

Automatic injection systems

Conditioning of the fluid carrier; Flow patterns

Control of physical parameters of the fluid carrier

Electrically driven carrier

Of temperature

Same temperature for whole column

Temperature gradients along column

Using cryogenic fluids

Using peltier elements

Temperature control of column exit, e.g. of restrictors

Temperature control of column inlet

Using resistive heating

Column or associated structural member used as heater

Electrical resistance used to determine control temperature

Using specially adapted T(t) profile

Ovens

Heat exchange between incoming and outgoing mobile phase

Of pressure or speed (G01N 30/36 takes precedence)
Conditioning of the sorbent material or stationary phase

Packing methods or coating methods

of fluid composition, e.g. gradient

(fluid composition fixed during analysis)

(fluid electrical conductivity fixed during analysis)

(mixers)

in high pressure liquid systems

Flow patterns

[centrifugal chromatography]

[flow switching in a single column]

(by using auxiliary fluid)

(by switching valves]

[Radial chromatography, i.e. with mobile phase traversing radially the stationary phase]

[Turbulent flow of mobile phase]

[Elution in two different directions on one stationary phase]

using back flushing

[purging a device]

[re-concentrating or inverting previous separation]

[carrying out another separation]

using counter-current

using recycling of the fraction to be distributed

[heart cut]

using more than one column

(with serial coupling of separation columns]

[with different eluents or with eluents in different states (G01N 30/46 takes precedence)]

[for multidimensional chromatography]

[with specially adapted interfaces between the columns]

[with separation columns in parallel]

[all columns being identical]

[involving switching between different column configurations]

[Sorbert materials therefor]

[Solid sorbents]

[Solid sorbents]

[gels]

[liquid sorbents]

Conditioning of the sorbent material or stationary liquid

Physical parameters

[form]

[pressure]

[structural properties]

[surface properties, e.g. porosity]

[sorbent material in form of a membrane]

[Monolithic sorbent material]

Temperature

Packing methods or coating methods

[slurry packing]

[coating]

the sorbent moving as a whole

[Parallel current chromatography]

[Continuous current chromatography]

Construction of the column

[end pieces]

[capillary restrictors]

[interfaces to detectors]

[Fluid distributors]

[Adjustable pistons]

[Fluid seals]

[retaining the stationary phase, e.g. Frits]

[joining multiple columns]

[in series]

[in parallel]

[with supporting means; Holders]

[body]

[with fluid access or exit ports]

[with varying cross section]

[with compartments or bed substructure]

[in open tubular form]

[Capillaries]

[transparent to radiation]

[form designed to optimise dispersion]

[Cartridges]

[Micromachined or nanomachined, e.g. micro- or nanosize]

NOTE

Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass B82B relating to "nanostructures"

Detectors specially adapted therefor

[signal-to-noise ratio]

(by modulation of sample feed or detector response]

(by measuring reference material, e.g. carrier without sample)

[calibration, baseline]

[Multiplexing, i.e. several columns sharing a single detector]

[Electrical detectors]

[photoionisation detectors]

[electrical conductivity detectors]

[surface ionisation]

Thermal conductivity detectors

Flame ionisation detectors

[flame photometry]

Electron capture detectors

Mass spectrometers

[interface to gas chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see H01J 49/04)]

[splitting of the gaseous effluent]
Signal analysis
Preparation of the fraction to be distributed
Fraction collectors
{ with integration or differentiation }
Nebulising, aerosol formation or ionisation
{ adding modificating material }
Intermediate storage of effluent, including condensation on surface
{ the store moving as a whole, e.g. moving wire }
Optical detectors
{ measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light }
FTIR
{ detecting along the line of flow, e.g. axial }
Acoustical detectors
{ measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves }
{ for measuring mechanical vibrations }
{ detecting radioactive properties }
using more than one detector
Fraction collectors
Automatic means therefor
Preparation of the fraction to be distributed
{ using pyrolysis }
{ Intermediate storage of effluent, including condensation on surface }
{ the store moving as a whole, e.g. moving wire }
using permeable separator tubes
{ adding modifying material }
{ for chemical reaction }
{ to modify physical properties }
Nebulising, aerosol formation or ionisation
Generation of electrically charged aerosols or ions
{ of ions or clusters of individual ions }
Uncharged atoms or aerosols
{ by pneumatic means }
{ by thermal means }
{ by electrical or glow discharge }
{ by electric field }
{ Desoluation chambers }
Signal analysis
{ with integration or differentiation }
{ Integration }
{ Differentiation }
{ Dividing or multiplying by a constant }
Filtering, e.g. Fourier filtering
{ Other mathematical operations for data preprocessing }
Detection of slopes or peaks; baseline correction
Slopes
Peaks
Peak quality criteria
Peak shape
Baseline
Data segmentation, e.g. time windows
Feature segmentation not otherwise provided for
Recording, data acquisition, archiving and storage
Details of data formats
Optimising operation parameters
Expert systems; optimising a large number of parameters
for calibrating the measuring apparatus
using retention times
not depending on an individual instrument, e.g. retention time indexes or calibration transfer
Evaluation, i.e. decoding of the signal into analytical information (for analysis of specific compounds see also G01N 30/88 and subgroups of G01N 33/00; chemical libraries per se C40B1)
Target compound analysis, i.e. whereby a limited number of peaks is analysed
Group type analysis, e.g. of components having structural properties in common
Fingerprinting, e.g. of components having structural properties in common
Peak purity of co-eluting compounds
Models, e.g. prediction of retention times, method development and validation
Details of Software
Integrated analysis systems specially adapted therefor, not covered by a single one of the groups G01N 30/04 - G01N 30/86
automated systems
analysis specially adapted for the sample
(biological materials)
involving amino acids
involving blood
involving nucleic acids
involving peptides or proteins
involving saccharides
organic compounds
involving halogenated organic compounds
involving polymers
involving hydrocarbons
(inorganic compounds)
Fullerenes
elemental analysis, e.g. isotope dilution analysis
impurities
optical isomers
Modular construction, specially adapted therefor
Analysis of industrial production processes
monitoring the quality of the stationary phase; column performance
31/00 Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup; Apparatus specially adapted for such methods

31/002 [Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method]

31/005 [investigating the presence of an element by oxidation (G01N 31/12 takes precedence)]

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 - G01N 3/00 - G01N 29/00, if this is of major importance, is dealt with in the group concerned.

31/02 using precipitation (measuring deposition or liberation of materials from an electrolyte G01N 27/42)

31/10 using catalysis

31/12 using combustion (G01N 25/20 takes precedence)

31/16 using titration

31/162 [Determining the equivalent point by means of a discontinuity]

31/164 [by electrical or electrochemical means]

31/166 [Continuous titration of flowing liquids]

31/168 [Determining water content by using Karl Fischer reagent]

31/18 Burettes specially adapted for titration

31/20 using microanalysis, e.g. drop reaction

31/22 using chemical indicators (G01N 31/02 takes precedence)

31/221 [for investigating pH value]

31/222 [for investigating moisture content]

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)]

31/224 [for investigating presence of dangerous gases]

31/225 [for oxygen, e.g. including dissolved oxygen]

31/226 [for investigating the degree of sterilisation]

31/227 [for nitrates or nitrates]

31/228 [for peroxides]
G01N

33/0062 . . . [concerning the measuring method, e.g. intermittent, or the display, e.g. digital]
33/0063 . . . [using a threshold to release an alarm or displaying means (alarm arrangements G08B, e.g. fire alarm actuated by the presence of smoke or gases G08B 17/10, for other abnormal conditions G08B 21/00)]
33/0065 . . . [by measuring the rate of variation of the concentration]
33/0067 . . . [using more than one threshold]
2033/0068 . . . [using a computer specifically programmed]
33/007 . . . [Arrangements to check the analyser (calibrating G01N 33/0006)]
2033/0072 . . . [by generating a test gas]
33/0073 . . . [Control unit therefor]
33/0075 . . . [for multiple spatially distributed sensors, e.g. for environmental monitoring (transmission systems for measured values G08C)]
2033/0077 . . . [testing material properties on individual granules or tablets]
2033/0078 . . . [testing material properties on manufactured objects]
2033/008 . . . [sport articles (balls, skis, rackets)]
2033/0081 . . . [containers; packages; bottles]
2033/0083 . . . [vehicle parts]
2033/0085 . . . [wheels]
2033/0086 . . . [clothes; hosiery]
2033/0088 . . . [other articles]
2033/009 . . . [seals]
2033/0091 . . . [Powders]
2033/0093 . . . [radioactive materials]
2033/0095 . . . [Semicontinuous materials]
2033/0096 . . . [testing material properties on thin layers or coatings]
33/0098 . . . [Plants or trees (wood G01N 33/46)]
33/02 . . . Food
33/025 . . . [Fruits or vegetables]
33/03 . . . Edible oils or edible fats
33/04 . . . Dairy products
33/06 . . . [Determining fat content, e.g. by butyrometer]
33/08 . . . Eggs, e.g. by candling
33/085 . . . [by candling]
33/10 . . . [Starch-containing substances, e.g. dough]
2033/105 . . . [Pasta]
33/12 . . . [Meat; fish]
33/14 . . . [Beverages]
33/143 . . . [containing sugar]
33/146 . . . [containing alcohol]
33/15 . . . [Medicinal preparations (; Physical properties thereof, e.g. dissolubility (drug screening with animal cells G01N 33/9008))]
33/18 . . . Water
33/1806 . . . [biological or chemical oxygen demand (BOD or COD)]
33/1813 . . . [specific cations in water, e.g. heavy metals (electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22)]
33/182 . . . [specific anions in water (electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22)]
33/1826 . . . [organic contamination in water]
33/1833 . . . [Oil in water (water in oil G01N 33/2847)]
2033/184 . . . [herbicides, pesticides, fungicides, insecticides, or the like]
33/1846 . . . [Total carbon analysis]
33/1853 . . . [hardness of water]
33/186 . . . [using one or more living organisms, e.g. a fish]
33/1866 . . . [using microorganisms (G01N 33/1806 takes precedence)]
2033/1873 . . . [ice or snow]
33/188 . . . [Determining the state of nitrification (biological treatment of water by aerobic or anaerobic processes for denitrification of water C02F 3/305)]
33/1886 . . . [using probes, e.g. submersible probes, buoys]
33/1893 . . . [using flow cells]
33/20 . . . Metals

**WARNING**

Group G01N 33/20 is impacted by reclassification into groups G01N 33/202, G01N 33/202, G01N 33/204, G01N 33/2045, G01N 33/207, and G01N 33/208.

All groups listed in this Warning should be considered in order to perform a complete search.

33/202 . . . Constituents thereof

**WARNING**

Group G01N 33/202 is incomplete pending reclassification of documents from group G01N 33/20.

Groups G01N 33/20 and G01N 33/202 should be considered in order to perform a complete search.

33/2022 . . . Non-metallic constituents

**WARNING**

Group G01N 33/2022 is incomplete pending reclassification of documents from group G01N 33/20.

Groups G01N 33/20 and G01N 33/2022 should be considered in order to perform a complete search.

33/2025 . . . Gaseous constituents

33/2028 . . . Metallic constituents

**WARNING**

Group G01N 33/2028 is incomplete pending reclassification of documents from group G01N 33/20.

Groups G01N 33/20 and G01N 33/2028 should be considered in order to perform a complete search.
WARNING

Group G01N 33/204 is incomplete pending reclassification of documents from group G01N 33/20.
Groups G01N 33/20 and G01N 33/204 should be considered in order to perform a complete search.

33/204 . Structure thereof, e.g. crystal structure

33/205 . . in liquid state, e.g. molten metals
33/207 . Welded or soldered joints; Solderability

33/208 . Coatings, e.g. platings

WARNING

Group G01N 33/208 is incomplete pending reclassification of documents from group G01N 33/20.
Groups G01N 33/20 and G01N 33/208 should be considered in order to perform a complete search.

33/22 . Fuels, explosives (liquid hydrocarbons G01N 33/28)
33/222 . Solid fuels, e.g. coal
33/225 . Gaseous fuels, e.g. natural gas
33/227 . Explosives, e.g. combustive properties thereof (detecting explosives in air G01N 33/0057)
33/24 . Earth materials (G01N 33/42 takes precedence)
33/241 . for hydrocarbon content (drilling mud G01N 33/2823; drilling per se E21B; prospecting G01V)
2033/243 . for determining biological parameters concerning composting, biodegradability or bioavailability
2033/245 . for agricultural purposes
33/246 . for water content (for control of watering A01G 25/1671)
2033/248 . related to manure as a biological product, i.e. excluding artificial fertilizers
33/26 . Oils; viscous liquids; paints; inks (G01N 33/22 takes precedence)
33/28 . Oils, i.e. hydrocarbon liquids (gaseous fuels G01N 33/225; edible oils or edible fats G01N 33/03)
33/29 . [investigating the resistance to heat or oxidation (to the weather, to corrosion, or to light G01N 17/00)]
33/30 . for lubricating properties
33/31 . Lubricating oil characteristics, e.g. deterioration (lubricating properties G01N 33/30)
33/33 . for metal working or machining
33/34 . Paper
33/36 . Textiles
33/37 . Paints; inks (investigating resistance to the weather, to corrosion, to light G01N 17/00)
33/38 . Concrete; ceramics; glass; bricks
33/39 . Precious stones; pearls
33/39 . Concrete, cement
33/39 . Crystals
33/39 . Glass
33/39 . Ceramics
33/40 . Grinding-materials
33/41 . Road-making materials (G01N 33/38 takes precedence)
33/42 . Resins; rubber; leather
33/43 . Resins, plastics
33/45 . Rubber
33/46 . Leather
33/46 . Wood
33/48 . Biological material, e.g. blood, urine (G01N 33/02, G01N 33/26, G01N 33/44, G01N 33/46 take precedence); Haemocytometers (counting blood corpuscules distributed over a surface by scanning the surface G06M 11/02)
33/483 . Physical analysis of biological material
G01N

33/4833 . . . [of solid biological material, e.g. tissue samples, cell cultures (tissue in vivo A61B 5/00; cell suspensions G01N 33/48735)]

33/4836 . . . . [using multielectrode arrays]

33/487 . . . . of liquid material

33/48707 . . . . [by electrical means (G01N 33/49, G01N 33/493 take precedence)]

33/48714 . . . . [for determining substances foreign to the organism, e.g. drugs or heavy metals (drugs by chemical analysis G01N 33/94)]

33/48721 . . . . [Investigating individual macromolecules, e.g. by translocation through nanopores (Coulter counters in general G01N 15/12; fabrication methods for nanoapertures B81B 1/00; sequencing of nucleic acids C12Q 1/68)]

33/48728 . . . . [Investigating individual cells, e.g. by patch clamp, voltage clamp (investigating individual particles in general G01N 15/10)]

33/48735 . . . . [Investigating suspensions of cells, e.g. measuring microbe concentration (by chemical means C12Q 1/04; colony counters C12M 1/34; concentration of particle suspensions in general G01N 15/06)]

33/48742 . . . . [Determining urea by measuring the volume of a gas (in general G01N 7/14 - G01N 7/18)]

33/4875 . . . . [Details of handling test elements, e.g. dispensing or storage, not specific to a particular test method (test-elements per se B01L, automatic analysers G01N 35/00, in-vivo analysis on the human body for medical diagnosis A61B)]

33/48757 . . . . [Test elements dispensed from a stack]

33/48764 . . . . [Test tape taken off a spool]

33/48771 . . . . [Coding of information, e.g. calibration data, lot number]

33/48778 . . . . [Containers specially adapted therefor, e.g. for dry storage]

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]

33/48792 . . . . [Data management, e.g. communication with processing unit (for in vivo diagnostics A61B 5/0002; transmission systems for measured values G08C)]

33/49 . . . . Blood [chemical methods for determining blood cell populations G01N 33/5094; chemical analysis of blood groups or blood types G01N 33/80)]

33/4905 . . . . [Determining clotting time of blood (by chemical methods G01N 33/86, C12Q 1/54)]

33/491 . . . . [by separating the blood components (G01N 15/05 takes precedence)]

33/4915 . . . . [using flow cells (flow cytometry G01N 15/14)]

33/492 . . . . [Determining multiple analytes]

33/4925 . . . . [measuring blood gas content, e.g. O₂, CO₂, HCO₃⁻]

33/493 . . . . urine

33/497 . . . . of gaseous biological material, e.g. breath

33/4972 . . . . [Determining alcohol content (for vehicle safety devices B60K 28/06)]

2033/4975 . . . . [other than oxygen, carbon dioxide or alcohol, e.g. organic vapours]

2033/4977 . . . . [metabolic gass from microbes, cell cultures, plant tissues and the like]

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 microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes C12Q)

NOTES

1. In this group, the following expression is used with the meaning indicated: “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.

2. In groups G01N 33/52 – G01N 33/98, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

3. 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.

33/5002 . . . . [Partitioning blood components]

33/5005 . . . . [involving human or animal cells (immunoassay G01N 33/56966; immunoassays of protozoa G01N 33/56905; protozoa in screening assays C12Q 1/025)]

33/5008 . . . . [for testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics]

33/5011 . . . . [for testing antineoplastic activity]

33/5014 . . . . [for testing toxicity]

33/5017 . . . . [for testing neoplastic activity]

33/502 . . . . [for testing non-proliferative effects]

33/5023 . . . . [on expression patterns]

33/5026 . . . . [on cell morphology]

33/5029 . . . . [on cell motility]

33/5032 . . . . [on intercellular interactions]

33/5035 . . . . [on sub-cellular localization]

33/5038 . . . . [involving detection of metabolites per se]

33/5041 . . . . [involving analysis of members of signalling pathways]

33/5044 . . . . [involving specific cell types]

33/5047 . . . . [Cells of the immune system]

33/505 . . . . [involving T-cells]

33/5052 . . . . [involving B-cells]
G01N

33/5055 . . . . . . . {involving macrophages}
33/5058 . . . . . . . {Neurological cells}
33/5061 . . . . . . . {Muscle cells}
33/5064 . . . . . . . {Endothelial cells}
33/5067 . . . . . . . {Liver cells}
33/507 . . . . . . . . {Pancreatic cells}
33/5073 . . . . . . . {Stem cells}
33/5076 . . . . . . . {involving cell organelles, e.g. Golgi complex, endoplasmic reticulum}
33/5079 . . . . . . . {Mitochondria}
33/5082 . . . . . . . {Supracellular entities, e.g. tissue, organisms}
33/5085 . . . . . . . {of invertebrates}
33/5088 . . . . . . . {of vertebrates}
33/5091 . . . . . . . {for testing the pathological state of an organism}
33/5094 . . . . . . . {for blood cell populations (red blood cells G01N 33/80)}
33/5097 . . . . . . . {involving plant cells (immunoassays of plant cells G01N 33/56961; unicellular algae, phytoplankton and photosynthetic bacteria in screening assays G12Q 1/025)}
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 G01N 33/54386; involving labelled immunochemicals G01N 33/58; for haemoglobin or occult blood G01N 33/72)]
33/521 . . . . . . . . . {Single-layer analytical elements}
33/523 . . . . . . . . . . {the element being adapted for a specific analyte}
33/525 . . . . . . . . . . . {Multi-layer analytical elements}
33/526 . . . . . . . . . . . . {the element being adapted for a specific analyte}
33/528 . . . . . . . . . . . . . {Atypical element structures, e.g. gloves, rods, tampons, toilet paper}
33/53 . . . . . . . Immunossay; Biospecific binding assay; Materials therefor
33/5302 . . . . . . . . {Apparatus specially adapted for immunological test procedures}
33/5304 . . . . . . . {Reaction vessels, e.g. agglutination plates (for solid-phase systems G01N 33/543)}
33/5306 . . . . . . . {Improving reaction conditions, e.g. reduction of non-specific binding, promotion of specific binding}
33/5308 . . . . . . . . . . {for analytes not provided for elsewhere, e.g. nucleic acids, uric acid, worms, mites}
33/531 . . . . . . . Production of immunochemical test materials
33/532 . . . . . . . Production of labelled immunochemicals
33/533 . . . . . . . with fluorescent label
33/534 . . . . . . . with radioactive label
33/535 . . . . . . . with enzyme label [or co-enzymes, co-factors, enzyme inhibitors or enzyme substrates]
33/536 . . . . . . . with immune complex formed in liquid phase
33/537 . . . . . . . with separation of immune complex from unbound antigen or antibody
33/5375 . . . . . . . {by changing the physical or chemical properties of the medium or immunochemicals, e.g. temperature, density, pH, partitioning}
33/538 . . . . . . . by sorbent column, particles or resin strip [i.e. sorbent materials]
33/539 . . . . . . . involving precipitating reagent [e.g. ammonium sulfate]
33/541 . . . . . . . Double or second antibody [i.e. precipitating antibody]
33/542 . . . . . . . with steric inhibition or signal modification, e.g. fluorescent quenching
33/543 . . . . . . . with an insoluble carrier for immobilising immunochemicals
33/54306 . . . . . . . {Solid-phase reaction mechanisms}
33/54313 . . . . . . . {the carrier being characterised by its particulate form}
33/5432 . . . . . . . {Liposomes or microcapsules}
33/54326 . . . . . . . {Magnetic particles}
33/54333 . . . . . . . {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}
33/5434 . . . . . . . {using magnetic particle immunoreagent carriers which constitute new materials per se}
33/54346 . . . . . . . {Nanoparticles}
33/54353 . . . . . . . {with ligand attached to the carrier via a chemical coupling agent (coatings G01N 33/54393)}
33/5436 . . . . . . . {with ligand physically entrapped within the solid phase (liposomes G01N 33/5432; immunological test elements G01N 33/54386)}
33/54366 . . . . . . . {Apparatus specially adapted for solid-phase testing}
33/54373 . . . . . . . {involving physiochemical end-point determination, e.g. wave-guides, FETS, gratings}
33/5438 . . . . . . . . . . {Electrodes}
33/54386 . . . . . . . . {Analytical elements}
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}
33/544 . . . . . . . the carrier being organic
33/545 . . . . . . . Synthetic resin
33/546 . . . . . . . as water suspendable particles
33/547 . . . . . . . with antigen or antibody attached to the carrier via a bridging agent
33/548 . . . . . . . Carbohydrates, e.g. dextran
33/549 . . . . . . . with antigen or antibody entrapped within the carrier
33/551 . . . . . . . the carrier being inorganic
33/552 . . . . . . . Glass or silica
33/553 . . . . . . . Metal or metal coated
33/554 . . . . . . . the carrier being a biological cell or cell fragment, e.g. bacteria, yeast cells
33/555 . . . . . . . Red blood cell
33/556 . . . . . . . Fixed or stabilised red blood cell
33/557 . . . . . . . using kinetic measurement, i.e. time rate of progress of an antigen-antibody interaction
33/558 . . . . . . . using diffusion or migration of antigen or antibody
33/559 . . . . . . . through a gel, e.g. Ouchterlony technique
33/561  . . . . . . Immunelectrophoresis
33/563  . . . . . . involving antibody fragments
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}
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}
33/567  . . . . . . utilising isolate of tissue or organ as binding agent
33/569  . . . . . . for microorganisms, e.g. protozoa, bacteria, viruses
33/56905  . . . . . . {Protozoa}
33/56911  . . . . . . {Bacteria}
33/56916  . . . . . . {Enterobacteria, e.g. shigella, salmonella, klebsiella, serratia}
33/56922  . . . . . . {Campylobacter}
33/56927  . . . . . . {Chlamydia}
33/56933  . . . . . . {Mycoplasma}
33/56938  . . . . . . {Staphylococcus}
33/56944  . . . . . . {Streptococcus}
33/5695  . . . . . . {Mycobacteria}
33/56955  . . . . . . {involved in periodontal diseases}
33/56961  . . . . . . {Plant cells or fungi}
33/56966  . . . . . . {Animal cells}
33/56972  . . . . . . {White blood cells}
33/56977  . . . . . . {HLA or MHC typing}
33/56983  . . . . . . {Viruses}
33/56988  . . . . . . {AIDS or HTLV}
33/56994  . . . . . . {Herpetoviridae, e.g. cytomegalovirus, Epstein-Barr virus}
33/571  . . . . . . for venereal disease, e.g. syphilis, gonorrhoea {[(herpes G01N 33/56994; chlamydia G01N 33/56927)]}
33/573  . . . . . . for enzymes or isoenzymes
33/5735  . . . . . . {co-enzymes or co-factors, e.g. NAD, ATP}
33/574  . . . . . . for cancer

NOTE
In this group:
• relevant features relating to a specifically defined cancer are only classified in groups G01N 33/57407 - G01N 33/57449
• relevant features describing cancer markers related to multiple forms of cancer are classified in groups G01N 33/57484 - G01N 33/57496

33/57407  . . . . . . (Specifically defined cancers)
33/57411  . . . . . . {of cervix}
33/57415  . . . . . . {of breast}
33/57419  . . . . . . {of colon}
33/57423  . . . . . . {of lung}
33/57426  . . . . . . {leukemia}
33/5743  . . . . . . {of skin, e.g. melanoma}
33/57434  . . . . . . {of prostate}
33/57438  . . . . . . {of liver, pancreas or kidney}
33/57442  . . . . . . {of the uterus and endometrial}
33/57446  . . . . . . {of stomach or intestine}
33/57449  . . . . . . {of ovaries}
33/57469  . . . . . . {involving tumor associated glycolinkage, i.e. TAG}
33/57473  . . . . . . {involving carcinoembryonic antigen, i.e. CEA}
33/57476  . . . . . . {involving oncofetal proteins}
33/5748  . . . . . . {involving oncogenic proteins}
33/57484  . . . . . . {involving compounds serving as markers for tumor, cancer, neoplasia, e.g. cellular determinants, receptors, heat shock/stress proteins, A-protein, oligosaccharides, metabolites}
33/57488  . . . . . . {involving compounds identifiable in body fluids}
33/57492  . . . . . . {involving compounds localized on the membrane of tumor or cancer cells}
33/57496  . . . . . . {involving intracellular compounds}
33/576  . . . . . . for hepatitis
33/5761  . . . . . . {Hepatitis B}
33/5762  . . . . . . {Hepatitis B core antigen}
33/5764  . . . . . . {Hepatitis B surface antigen}
33/5765  . . . . . . {Hepatitis delta antigen}
33/5767  . . . . . . {non-A, non-B hepatitis}
33/5768  . . . . . . {Hepatitis A}
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; (G01N 33/53 - G01N 33/576 take precedence)}
33/579  . . . . . . {involving limulus lyse}

NOTE
Groups G01N 33/53 - G01N 33/576 take precedence over groups G01N 33/58 - G01N 33/98
33/58  . . . . . . {involving labelled substances (G01N 33/53 takes precedence)}
33/581  . . . . . . {with enzyme label (including co-enzymes, co-factors, enzyme inhibitors or substrates)}
33/582  . . . . . . {with fluorescent label}
33/583  . . . . . . {with non-fluorescent dye label}
33/585  . . . . . . {with a particulate label, e.g. coloured latex}
33/586  . . . . . . {Liposomes, microcapsules or cells}
33/587  . . . . . . {Nanoparticles}
33/588  . . . . . . {with semiconductor nanocrystal label, e.g. quantum dots}
33/590  . . . . . . {involving radioactive labelled substances}
33/62  . . . . . . {involving urea}
33/64  . . . . . . {involving ketones}
33/66  . . . . . . {involving blood sugars, e.g. galactose}
33/68  . . . . . . {involving proteins, peptides or amino acids (involving lipoproteins G01N 33/922)}
33/6803  . . . . . . {General methods of protein analysis not limited to specific proteins or families of proteins}
33/6806  . . . . . . {Determination of free amino acids}
33/6809  . . . . . . {involving fluorescent derivatizing reagents reacting non-specifically with all amino acids}
33/6812  . . . . . . {Assays for specific amino acids}
33/6815 . . . . . . . {containing sulfur, e.g. cysteine, cystine, methionine, homocysteine}
33/6818 . . . . . . . {Sequencing of polypeptides}
33/6821 . . . . . . . {involving C-terminal degradation}
33/6824 . . . . . . . {involving N-terminal degradation, e.g. Edman degradation}
33/6827 . . . . . . . {Total protein determination, e.g. albumin in urine}
33/683 . . . . . . . {involving metal ions}
33/6833 . . . . . . . {Copper, e.g. Folin-, Lowry-, biuret methods}
33/6836 . . . . . . . {Silver staining}
33/6839 . . . . . . . {involving dyes, e.g. Coomassie blue, bromcresol green}
33/6842 . . . . . . . {Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins}
33/6845 . . . . . . . {Methods of identifying protein-protein interactions in protein mixtures}
33/6848 . . . . . . . {Methods of protein analysis involving mass spectrometry}
33/6851 . . . . . . . {Methods of protein analysis involving laser desorption ionisation mass spectrometry}
33/6854 . . . . . . . {Immunoglobulins}
33/6857 . . . . . . . {Antibody fragments}
33/686 . . . . . . . {Anti-idiotype}
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}
33/6866 . . . . . . . {Interferon}
33/6869 . . . . . . . {Interleukin}
33/6872 . . . . . . . {Intracellular protein regulatory factors and their receptors, e.g. including ion channels}
33/6875 . . . . . . . {Nucleoproteins}
33/6878 . . . . . . . {in epitope analysis}
33/6881 . . . . . . . {from skin}
33/6884 . . . . . . . {from lung}
33/6887 . . . . . . . {from muscle, cartilage or connective tissue}
33/689 . . . . . . . {related to pregnancy or the gonads}
33/6893 . . . . . . . {related to diseases not provided for elsewhere}
33/6896 . . . . . . . {Neurological disorders, e.g. Alzheimer's disease}
33/70 . . . . . . . {involving creatine or creatinine}
33/72 . . . . . . . {involving blood pigments, e.g. haemoglobin, bilirubin [or other porphyrins; involving occult blood}
33/721 . . . . . . . {Haemoglobin}
33/723 . . . . . . . {Glycosylated haemoglobin}
33/725 . . . . . . . {using peroxidative activity}
33/726 . . . . . . . {Devices}
33/728 . . . . . . . {Bilirubin; including biliverdin}
33/74 . . . . . . . {involving hormones [or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors]}
33/743 . . . . . . . {Steroid hormones}
33/746 . . . . . . . {Erythropoetin}
33/76 . . . . . . . {Human chorionic gonadotropin [including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors]}
33/78 . . . . . . . {Thyroid gland hormones [e.g. T3, T4, T3H, T4B or their receptors]}
33/80 . . . . . . . {involving blood groups or blood types [or red blood cells (white blood cells G01N 33/5672)]}
33/82 . . . . . . . {involving vitamins [or their receptors]}
33/84 . . . . . . . {involving inorganic compounds or pH}
33/86 . . . . . . . {involving blood coagulating time [or factors, or their receptors]}
33/88 . . . . . . . {involving prostaglandins [or their receptors]}
33/90 . . . . . . . {involving iron binding capacity of blood}
33/92 . . . . . . . {involving lipids, e.g. cholesterol [, lipoproteins, or their receptors (steroid hormones G01N 33/743)]}
33/94 . . . . . . . {involving narcotics [or drugs or pharmaceuticals, neurotransmitters or associated receptors]}
33/9406 . . . . . . . {Neurotransmitters}
33/9413 . . . . . . . {Dopamine}
33/942 . . . . . . . {Serotonin, i.e. 5-hydroxy-tryptamine}
33/9426 . . . . . . . {GABA, i.e. gamma-amino-butyrate}
33/9433 . . . . . . . {(N)oradrenaline}
33/944 . . . . . . . {Acetycholine}
33/9446 . . . . . . . {Antibacterials}
33/9453 . . . . . . . {Cardioregulators, e.g. antihypotensives, antiarrhythmics}
33/946 . . . . . . . {CNS-stimulants, e.g. cocaine, amphetamines}
33/9466 . . . . . . . {Antidepressants}
33/9473 . . . . . . . {Anticonvulsants, e.g. phenobarbital, phenytion}
33/948 . . . . . . . {Sedatives, e.g. cannabimoids, barbiturates (opiates G01N 33/9486)}
33/9486 . . . . . . . {Analgesics, e.g. opiates, aspirine}
33/9493 . . . . . . . {Immunosuppressants}
33/96 . . . . . . . {involving blood or serum control standard}
33/98 . . . . . . . {involving alcohol, e.g. ethanol in breath}

NOTE

In groups G01N 35/00 - G01N 35/085, the indexing codes of G01N are added

35/00 Automatic analysis not limited to methods or materials provided for in any single one of groups G01N 1/00 - G01N 33/00; Handling materials therefor

35/00009 . . . {provided with a sample supporting tape, e.g. with absorbent zones}
2035/00019 . . . {cassette structures}
35/00029 . . . {provided with flat sample substrates, e.g. slides (G01N 35/028 takes precedence)}
2035/00039 . . . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}
2035/00049 . . . {for loading/unloading a carousel}
2035/00059 . . . {vacuum chucks}
35/00069 . . . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}
2035/00079 . . . {Evaporation covers for slides}
2035/00089 . . . {Magazines}
2035/00099 . . . {Characterised by type of test elements}
35/00108 . . . [Test strips, e.g. paper]
35/00118 . . . [for multiple tests]
35/00128 . . . [with pressing or squeezing devices]
35/00138 . . . [Slides]
35/00148 . . . [Test cards, e.g. Biermerieux or McDonnel multowell test cards]
35/00158 . . . [Elements containing microarrays, i.e. “biochip”]
35/00168 . . . [Manufacturing or preparing test elements]
35/00178 . . . (Special arrangements of analysers)
35/00188 . . . (the analyte being in the solid state)
35/00198 . . . [Dissolution analysers]
35/00207 . . . [Handling bulk quantities of analyte]
35/00217 . . . [involving measurement of weight]
35/00227 . . . [Monitoring a process (online)]
35/00237 . . . [Handling microquantities of analyte, e.g. microvolumes, capillary networks]
35/00247 . . . [Microvolumes]
35/00257 . . . [Capillary stop flow circuits]
35/00267 . . . [Melttable plugs]
35/00277 . . . [Special precautions to avoid contamination (e.g. enclosures, glove- boxes, sealed sample carriers, disposal of contaminated material)]
35/00287 . . . [movable lid/cover for sample or reaction tubes]
35/00297 . . . [Antistatic arrangements]
35/00306 . . . [Housings, cabinets, control panels (details)]
35/00316 . . . [Detecting door closure]
35/00326 . . . [Analysers with modular structure]
35/00336 . . . [Analysers adapted for operation in microgravity, i.e. spaceflight]
35/00346 . . . [Heating or cooling arrangements]
35/00356 . . . [Holding samples at elevated temperature (incubation)]
35/00366 . . . [Several different temperatures used]
35/00376 . . . [Conductive heating, e.g. heated plates]
35/00386 . . . [using fluid heat transfer medium]
35/00396 . . . [where the fluid is a liquid]
35/00405 . . . [Microwaves]
35/00415 . . . [Other radiation]
35/00425 . . . [Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/ reagent at given temperature]
35/00435 . . . [Refrigerated reagent storage]
35/00445 . . . [Other cooling arrangements]
35/00455 . . . [Controlling humidity in analyser]
35/00465 . . . [Separating and mixing arrangements]
35/00475 . . . [Filters]
35/00485 . . . [combined with sample carriers]
35/00495 . . . [Centrifuges]
35/00504 . . . [combined with carousels]
35/00514 . . . [Stationary mixing elements]
35/00524 . . . [Mixing by agitating sample carrier]
35/00534 . . . [Mixing by a special element, e.g. stirrer]
35/00544 . . . [using fluid flow]
35/00554 . . . [using ultrasound]
35/00564 . . . [Handling or washing solid phase elements, e.g. beads]
35/00574 . . . [Means for distributing beads]
35/00584 . . . [Control arrangements for automatic analysers]
35/00594 . . . [Quality control, including calibration or testing of components of the analyser]
using a plurality of sample containers moved by a conveyor system past one or more treatment or analysis stations { ([G01N 35/0098 and G01N 35/0099 take precedence]) } 

[ having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes ]

[ forming cuvettes in situ, e.g. from plastic strip ]

[ having a carousel or turntable for reaction cells or cuvettes ]

[ having blocks or racks of reaction cells or cuvettes ]

[ having reaction cells in the form of microtitration plates ]

[ Details of the conveyor system ([G01N 35/0021 - G01N 35/0028 take precedence]) ]

[ Sample carriers, cuvettes or reaction vessels ]

[ Sample carriers with closing or sealing means ]

[ manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers ]

[ Individual bottles or tubes ]

[ connected in a flexible chain ]

[ lifting items out of a rack for access ]

[ Block or rack elements with a single row of samples ]

[ moving in one dimension ]

[ moving in two dimensions in a horizontal plane ]

[ forming an endless chain in a vertical plane ]

[ Plate elements with several rows of samples ]

[ moved independently, e.g. by fork manipulator ]

[ carried on a linear conveyor ]

[ Two or more linear conveyors ]

[ Stacks, magazines or elevators for plates ]

[ nestable or stockable ]

[ Sample carriers adapted for special purposes ]

[ characterised by material of construction ]

[ integrated with measuring devices ]

[ in the form of a syringe or pipette tip ]

[ with pre-packaged reagents, i.e. test-packs ]

[ Cleaning cuvettes or reaction vessels ]

[ Rotary sample carriers, i.e. carousels ]

[ for samples ]

[ for reagents ]

[ for cuvettes or reaction vessels ]

[ Combinations of the above ]

[ composed of interchangeable ring elements ]

[ using centrifugal transport of liquid ]

[ composed of interchangeable sectors ]

[ Multiple carousels working in parallel ]

[ Coaxial carousels ]

[ Spiral tracks ]

[ Multiple concentric rows of wells ]

[ General conveyor features ]

[ Buffers (FIFO) or stacks (LIFO) for holding carriers between operations ]

[ in incubators ]

[ Loading or unloading the conveyor ]

[ Switching points ("aiguillages") ]

[ converging, e.g. selecting carriers from multiple incoming streams ]

[ diverging, e.g. sending carriers to different analysers ]

[ for selective recirculation of carriers ]

[ Details of actuating means for conveyors or pipettes ]

[ electric, e.g. stepper motor, solenoid ]

[ Magnetic ]

[ hydraulic or pneumatic ]

[ Pneumatic tube conveyors; Tube mails; "Rohrpost" ]

[ Transmission ]

[ Belt or chain ]

[ Gearing, cams ]

[ Helix or lead screw ]

[ Self-propelled units ]

[ Position sensing, encoding; closed-loop control ]

[ Locating samples; identifying different tube sizes ]

[ Detecting or compensating piontional errors ]

[ Other details ]

[ Drawers used as storage or dispensing means for vessels or cuvettes ]

[ using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis ]

[ Flow Injection Analysis ]

[ Devices for transferring samples { or any liquids } to, in, or from, the analysis apparatus, e.g. suction devices, injection devices ([G01N 35/0099 takes precedence]) ]

[ Reagent dispensers ]

[ Cleaning sample transfer devices ]

[ Rinsing only the inside of the tip ]

[ Characterised by arrangements for controlling the aspiration or dispense of liquids ]

[ Control of the position or alignment of the transfer device ]

[ Confirming presence of tip ]

[ Control of the volume dispensed or introduced ]

[ Detecting inhomogeneities, e.g. foam, bubbles, clots ]

[ Preventing or detecting loss of fluid by dripping ]

[ using a valve in the tip or nozzle ]

[ Fluid level sensing ]

[ General features of the devices ]

[ using disposable tips ]

[ Dilution or aliquotting ]

[ Transferring microquantities of liquid ]

[ Using surface tension, e.g. pins or wires ]

[ Micropipettes, e.g. microcapillary tubes ]

[ Ink-jet like dispensers ]

[ Using pneumatic means ]

[ Levitated, suspended drops ]

[ using the transfer device for another function ]
37/00 Details not covered by any other group of this subclass

2201/00 Features of devices classified in G01N 21/00

2201/02 . . . Mechanical
2201/021 . . . Special mounting in general
2201/0212 . . . Liquid borne; swimming apparatus
2201/0214 . . . Airborne
2201/0216 . . . Vehicle borne
2201/0218 . . . Submersible, submarine
2201/022 . . . Casings
2201/0221 . . . Portable; cableless; compact; hand-held
2201/0222 . . . Pocket size
2201/0224 . . . Pivoting casing
2201/0225 . . . Part of casing being slidable, telescopic
2201/0227 . . . Sealable enclosure
2201/0228 . . . Moulded parts
2201/023 . . . Controlling conditions in casing
2201/0231 . . . Thermostating
2201/0233 . . . Gas purge
2201/0235 . . . with gas filters in casing
2201/0236 . . . Explosion proof
2201/0238 . . . Moisture monitoring or controlling
2201/024 . . . Modular construction
2201/0245 . . . with insertable-removable part

2201/0247 . . . Suction; blowing
2201/0249 . . . Expiration
2201/025 . . . Mechanical control of operations
2201/0253 . . . Switches mounted at the casing
2201/0256 . . . Sensor for insertion of sample, cuvette, test strip
2201/0257 . . . Analysis
2201/0258 . . . Process analysis
2201/0259 . . . Analysis, i.e. testing a sample with the help of a measuring device
2201/026 . . . Light source
2201/0262 . . . Light emitting diodes
2201/0264 . . . Light emitting diodes, e.g. for spectral resolution
2201/0266 . . . Line selective sources
2201/0268 . . . Ambient light is used
2201/0269 . . . Light sources used for calibration
2201/027 . . . Controlling conditions in optical devices
2201/0271 . . . Modulated LED
2201/0273 . . . Compact sources
2201/0275 . . . Line selective sources
2201/0277 . . . Ambient light is used
2201/0279 . . . Light sources used for calibration
2201/028 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0282 . . . Multisources for spatial resolution
2201/0284 . . . Laser diodes
2201/0286 . . . Line selective sources
2201/0288 . . . Ambient light is used
2201/0289 . . . Light sources used for calibration
2201/029 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0292 . . . Modulated LED
2201/0294 . . . Compact sources
2201/0296 . . . Line selective sources
2201/0298 . . . Ambient light is used
2201/0299 . . . Light sources used for calibration
2201/03 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0302 . . . Modulated LED
2201/0304 . . . Compact sources
2201/0306 . . . Line selective sources
2201/0308 . . . Ambient light is used
2201/0309 . . . Light sources used for calibration
2201/031 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0314 . . . Modulated LED
2201/0316 . . . Compact sources
2201/0318 . . . Line selective sources
2201/032 . . . Ambient light is used
2201/0322 . . . Light sources used for calibration
2201/0324 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0326 . . . Modulated LED
2201/0328 . . . Compact sources
2201/033 . . . Line selective sources
2201/0332 . . . Ambient light is used
2201/0334 . . . Light sources used for calibration
2201/0336 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0338 . . . Modulated LED
2201/034 . . . Compact sources
2201/0342 . . . Line selective sources
2201/0344 . . . Ambient light is used
2201/0346 . . . Light sources used for calibration
2201/0348 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/035 . . . Modulated LED
2201/0352 . . . Compact sources
2201/0354 . . . Line selective sources
2201/0356 . . . Ambient light is used
2201/0358 . . . Light sources used for calibration
2201/036 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0362 . . . Modulated LED
2201/0364 . . . Compact sources
2201/0366 . . . Line selective sources
2201/0368 . . . Ambient light is used
2201/037 . . . Light sources used for calibration
2201/0372 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0374 . . . Modulated LED
2201/0376 . . . Compact sources
2201/0378 . . . Line selective sources
2201/038 . . . Ambient light is used
2201/0382 . . . Light sources used for calibration
2201/0384 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0386 . . . Modulated LED
2201/0388 . . . Compact sources
2201/039 . . . Line selective sources
2201/0392 . . . Ambient light is used
2201/0394 . . . Light sources used for calibration
2201/0396 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/0398 . . . Modulated LED
2201/04 . . . Batch operation; multisample devices
2201/0407 . . . with multiple optical units, e.g. one per sample
2201/0415 . . . Carrusel, sequential
2201/0423 . . . with rotating optics
2201/043 . . . optics constituted by optical fibre multiplex selector
2201/0438 . . . Linear motion, sequential
2201/0446 . . . Multicell plate, sequential
2201/0453 . . . Multicell sequential and multistest, e.g. multiwavelength
2201/0461 . . . Simultaneous, e.g. video imaging
2201/0469 . . . One cell, sequential, e.g. successive samples
2201/0476 . . . Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding
2201/0484 . . . Computer controlled
2201/0492 . . . Automatised microscope
2201/05 . . . Illumination; Optics
2201/0561 . . . Sources
2201/06106 . . . Plural sources used for calibration
2201/06113 . . . Coherent sources; lasers
2201/0612 . . . Laser diodes
2201/06126 . . . Large diffuse sources
2201/06133 . . . Light tables
2201/0614 . . . Diffusing light tube with sample within
2201/06146 . . . Multisources for homogeneisation, as well as for separating the liquid
2201/06153 . . . the sources being LED's
2201/0616 . . . Ambient light is used
2201/06166 . . . Line selective sources
2201/06173 . . . IR sources from heated molecular species
2201/0618 . . . Halogene sources
2201/06186 . . . Resistance heated; wire sources; lamelle sources
2201/06193 . . . Secondary in-situ sources, e.g. fluorescent particles
2201/062 . . . LED's
2201/0621 . . . Supply
2201/0622 . . . Use of a compensation LED
2201/0623 . . . Use of a reference LED
2201/0624 . . . Compensating variation in output of LED source
2201/0625 . . . Modulated LED
2201/0626 . . . Use of several LED's for spatial resolution
2201/0627 . . . Use of several LED's for spectral resolution
2201/0628 . . . Organic LED [OLED]
2201/063 . . . Illuminating optical parts
2201/0631 . . . Homogeneising elements
2201/0632 . . . homogeneising by integrating sphere
2201/0633 . . . Directed, collimated illumination
2201/0634 . . . Diffuse illumination
2201/0635 . . . Structured illumination, e.g. with grating
2201/0636 . . . Reflectors
2201/0637 . . . Elliptic
2201/0638 . . . Refractive parts
2201/0639 . . . Sphere lens
2201/064 . . . Stray light conditioning
2201/0642 . . . Light traps; baffles
2201/0644 . . . Simple baffled tube construction
G01N

2201/0646 . . . Light seals
2201/0648 . . . Shutters
2201/0645 . . . Integrating spheres
2201/0655 . . . Hemispheres
2201/066 . . . Modifiable path; multiple paths in one sample
2201/0662 . . . Comparing measurements on two or more paths in one sample
2201/0664 . . . Using two ways, i.e. two devices in same path in one sample
2201/0666 . . . Selectable paths; insertable multiple sources
2201/0668 . . . Multiple paths; optimisable path length
2201/067 . . . Electro-optic, magneto-optic, acousto-optic elements
2201/0675 . . . SLM
2201/068 . . . Optics, miscellaneous
2201/0683 . . . Brewster plate; polarisation controlling elements
2201/0686 . . . Cold filter; IR filter
2201/069 . . . Supply of sources
2201/0691 . . . Modulated (not pulsed supply)
2201/0692 . . . Regulated sources; stabilised supply
2201/0693 . . . Battery powered circuitry
2201/0694 . . . Microprocessor controlled supply
2201/0695 . . . Supply to maintain constant beam intensity
2201/0696 . . . Pulsed
2201/0697 . . . Pulsed lasers
2201/0698 . . . Using reference pulsed source
2201/0699 . . . Randomly pulsed source
2201/08 . . . Optical fibres; light guides
2201/0806 . . . Light rod
2201/0813 . . . Arrangement of collimator tubes, glass or empty
2201/082 . . . Fibres for a reference path
2201/0826 . . . Fibre array at source, distributing
2201/0833 . . . Fibre array at detector, resolving
2201/084 . . . Fibres for remote transmission
2201/0846 . . . Fibre interface with sample, e.g. for spatial resolution
2201/0853 . . . Movable fibre optical member, e.g. for scanning or selecting
2201/086 . . . Modular construction, e.g. disconnectable fibre parts
2201/0866 . . . Use of GRIN elements
2201/0873 . . . Using optically integrated constructions
2201/088 . . . Using a sensor fibre
2201/0886 . . . and using OTDR
2201/0893 . . . Using fibres for resolution in time
2201/10 . . . Scanning
2201/101 . . . Scanning measuring head
2201/102 . . . Video camera
2201/103 . . . Scanning by mechanical motion of stage
2201/1035 . . . 3D motion
2201/104 . . . Mechano-optical scan, i.e. object and beam moving
2201/1042 . . . X, Y scan, i.e. object moving in X, beam in Y
2201/1045 . . . Spiral scan
2201/1047 . . . with rotating optics and moving stage
2201/105 . . . Purely optical scan
2201/1053 . . . System of scan mirrors for composite motion of beam
2201/1056 . . . Prism scan, diasporameter
2201/106 . . . Acousto-optical scan
2201/107 . . . CRT flying spot scan
2201/108 . . . Miscellaneous
2201/1082 . . . Descanning
2201/1085 . . . Using optical fibre array and scanner
2201/1087 . . . Foucussed scan beam, e.g. laser
2201/11 . . . Monitoring and controlling the scan
2201/112 . . . Grating pulse time encoder
2201/115 . . . Optical equalisation of scan intensity
2201/117 . . . Indexed, memorised or programmed scan
2201/12 . . . Circuits of general importance; Signal processing
2201/121 . . . Correction signals
2201/1211 . . . for temperature
2201/1212 . . . and switch-off from upwarming
2201/1214 . . . for humidity
2201/1215 . . . for interfering gases
2201/1217 . . . for index of solution, carrying fluids
2201/1218 . . . for pressure variations
2201/122 . . . Kinetic analysis; determining reaction rate
2201/1222 . . . Endpoint determination; reaction time determination
2201/1224 . . . Polymerisation
2201/1226 . . . Relaxation methods, e.g. temperature jump, field jump
2201/1228 . . . Reading time being controlled, e.g. by microprocessor
2201/123 . . . Conversion circuit
2201/1232 . . . Log representation, e.g. for low transmittance
2201/1235 . . . Measuring or displaying selectively absorbance or density
2201/1237 . . . Measuring extrema
2201/124 . . . Sensitivity
2201/1241 . . . Multirange
2201/1242 . . . Validating, e.g. range invalidation, suspending operation
2201/1244 . . . Ambient light detector, e.g. for invalidating
2201/1245 . . . Averaging several measurements
2201/1247 . . . Thresholding
2201/1248 . . . Validating from signal shape, slope, peak
2201/125 . . . Digital circuitry
2201/126 . . . Microprocessor processing
2201/1263 . . . Microprocessor is used as variant to separate part circuits
2201/1266 . . . Interface card
2201/127 . . . Calibration; base line adjustment; drift compensation
2201/12707 . . . Pre-test of apparatus, e.g. dark test, sensor test
2201/12715 . . . Zero adjustment, i.e. to verify calibration
2201/12723 . . . Self check capacity; automatic, periodic step of checking
2201/1273 . . . Check triggered by sensing conditions, e.g. ambient changes
2201/12738 . . . Selectively initiating check
2201/12746 . . . Calibration values determination
2201/12753 . . . and storage
2201/12761 . . . Precalibration, e.g. for a given series of reagents
2201/12769 . . . and adjusting controls, e.g. zero and 100 %
2201/12776 . . . Automatic scaling up
2201/12784 . . . Base line obtained from computation, histogram
2201/12792 . . . Compensating own radiation in apparatus
2201/128 . . . Alternating sample and standard or reference part in one path
2203/00 Investigating strength properties of solid materials by application of mechanical stress

- Type of application of the stress
- Steady
- Repeated or cyclic
- Low frequencies up to 100 Hz
- High frequencies from 10 000 Hz
- Impulsive
- Constant speed test
- Type of force applied
- Tensile or compressive
- Compressive
- Torsional
- Bending
- Shearing
- Combination of several types of applied forces
- Rotation and bending
- Generation of the force
- using mechanical means
- Weight
- Spring
- involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects
- Hammer or pendulum
- Human or animal power
- Pneumatic or hydraulic means
- Hydraulic means
- Electromagnetic means
- Piezoelectric means
- Cutting or drilling tools
- using mechanical waves, e.g. acoustic
- using stresses due to heating, e.g. conductive heating, radiative heating
- Kind of property studied
- Crack, flaws, fracture or rupture
- Crack or flaws
- Initiation of crack
- Propagation of crack
- Fatigue, creep, strain-stress relations or elastic constants
- Creep
- Fatigue
- Strain-stress relations or elastic constants
- Hardness, compressibility or resistance to crushing
- using indentation
- Residual indentation measurement

- Indentation characteristics measured during load
- Rebound strike or reflected energy
- Compressibility
- Resistance to crushing
- Biorheological properties
- Peeling or tearing
- Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
- Visco-elasticity
- Fibre-matrix interaction in composites
- Tests specified by its name, e.g. Charpy, Brinnel, Mullen
- Details not specific for a particular testing method
- Control of the test
- Safety arrangements, e.g. remote control, emergency stop
- Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
- Specific programs of loading, e.g. incremental loading or pre-loading
- Treatment of the signal; Calibration
- Theories, calculations
- Calculations a priori without experimental data
- Finite elements
- Calculations based on experimental data
- Environment of the test
- Temperature
- Thermal cycling
- High temperature; Heating means
- Low temperature; Cooling means
- Pressure
- High pressure
- Low pressure; Vacuum
- Other environments
- Inert
- Corrosive
- With circulation of a fluid
- Tests performed "in situ" or after "in situ" use
- Special simulation of "in situ" conditions, scale models or dummies
- Tests "on-line" during fabrication
- Geometry of the test
- Monoaxial, i.e. the forces being applied along a single axis of the specimen
- Biaxial, the forces being applied along two normal axes of the specimen
- Triaxial, i.e. the forces being applied along three normal axes of the specimen
- Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen
- Specifications of the specimen
- Shape of the specimen
- Beam
- Cylindrical specimens
- Dunb-bell specimens
- Specimens with holes or notches
- Cruciform specimens
- Tubular or ring-shaped specimens
Spherical specimens
Thin specimens
One dimensional, e.g. filaments, wires, ropes or cables
Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes
Bulk material, e.g. powders
Miniature specimen; Testing on microregions of a specimen
Springs
Leaf spring
Coil spring
Air-spring, air bag spring or bellows
Welds
Manufacturing or preparing specimens
Chucks, fixtures, jaws, holders or anvils
Features allowing alignment between specimen and chucks
With dampers or shock absorbing means
Holders for quick insertion/removal of test pieces
Cushioning layer between test piece and grip
characterised by their material
with provisions for testing more than one specimen at the time
in series
in parallel
comprising sensing means
Diamond anvil cells
Clamping ring, “whole periphery” clamping
Indicating or recording means; Sensing means
Mechanical indicating, recording or sensing means
Hydraulic or pneumatic indicating, recording or sensing means
Electrical or magnetic indicating, recording or sensing means
using piezo-electric gauges
using thin films, paintings
using magnetic properties
using optical, X-ray, ultra-violet, infrared or similar detectors
Image analysis
using contrasting ink, painting, staining
using acoustic or ultrasonic detectors
using witness specimens
Parameter measured for estimating the property
Force, weight, load, energy, speed or acceleration
Spatial dimension, e.g. length, area, angle
Time or frequency
Temperature
Investigating materials by wave or particle radiation
by radioactivity, nuclear decay
by transmission
and measuring absorption
X-ray absorption fine structure [EXAFS]
gamma ray resonance absorption (Mossbauer effect)
combination of at least 2 measurements (transmission and scatter)
by diffraction, scatter or reflection
correcting for scatter
reflection
back scatter
small angle scatter
scatter raster collimator
diffraction
diffraction cameras
measure of energy-dispersion spectrum of diffracted radiation
diffraction of electrons, e.g. LEED
analysing diffraction pattern
spectro-diffraclometry
inelastic scatter, e.g. Compton effect
interference of radiation, e.g. Borrmann effect
combination of measurements, at least 1 secondary emission
combination of measurements, 2 kinds of secondary emission
use of a laser
activation analysis
neutron-gamma activation analysis
X-ray fluorescence
Compton background correcting
X-ray fluorescence with indicator, tags
incident electron beam and measuring excited X-rays
incident electron beam and measuring cathode luminescence (U.V.)
incident ion beam, e.g. proton
incident ion beam and measuring X-rays [PIXE]
incident ion beam and measuring secondary ion beam [SIMS]
photo-electric effect
photo-electron spectrum [ESCA, XPS]
Auger electrons
exo-electron emission
tribo-emission
Different kinds of radiation or particles
monochromatic
different radiations, e.g. X and alpha
electromagnetic radiation
gamma
X-ray
beta or electrons
ions
alpha
molecular or atomic beams
neutrons
fast
thermal
protons
positrons; electron-positron annihilation
2223/11 . . neutrino
2223/20 . . Sources of radiation
2223/201 . . betatron
2223/202 . . isotopes
2223/203 . . synchrotron
2223/204 . . source created from radiated target
2223/205 . . natural source
2223/206 . . sources operating at different energy levels
2223/30 . . Accessories, mechanical or electrical features
2223/301 . . portable apparatus
2223/302 . . comparative arrangements
2223/303 . . calibrating, standardising
2223/3032 . . periodic calibration, e.g. with filter wheel
2223/3035 . . phantom
2223/3037 . . standards (constitution)
2223/304 . . electric circuits, signal processing
2223/305 . . computer simulations
2223/306 . . computer control
2223/307 . . cuvettes-sample holders
2223/3075 . . correcting for the properties of the container, e.g. empty
2223/308 . . support of radiation source
2223/309 . . support of sample holder
2223/31 . . temperature control
2223/3103 . . cooling, cryostats
2223/3106 . . heating, furnaces
2223/311 . . high pressure testing, anvil cells
2223/312 . . powder preparation
2223/313 . . filters, rotating filter disc
2223/314 . . chopper
2223/315 . . monochromators
2223/316 . . collimators
2223/317 . . windows
2223/318 . . protective films
2223/319 . . using opaque penetrant medium
2223/32 . . adjustments of elements during operation
2223/321 . . manipulator for positioning a part
2223/322 . . immerged detecting head
2223/323 . . irradiation range monitor, e.g. light beam
2223/33 . . scanning, i.e. relative motion for measurement of successive object-parts
2223/3301 . . beam is modified for scan, e.g. moving collimator
2223/3302 . . object and detector fixed
2223/3303 . . object fixed; source and detector move
2223/3304 . . helicoidal scan
2223/3305 . . detector fixed; source and body moving
2223/3306 . . object rotates
2223/3307 . . source and detector fixed; object moves
2223/3308 . . object translates
2223/331 . . rocking curve analysis
2223/3335 . . electronic scanning
2223/34 . . sensing means for gap between source and detector
2223/345 . . mathematical transformations on beams or signals, e.g. Fourier
2223/348 . . ellipsoidal collector
2223/351 . . prohibiting charge accumulation on sample substrate
2223/40 . . Imaging
2223/401 . . image processing
2223/402 . . mapping distribution of elements
2223/403 . . mapping with false colours
2223/404 . . contrast medium
2223/405 . . mapping of a material property
2223/406 . . fluoroscopic image
2223/407 . . stimulable phosphor sheet
2223/408 . . display on monitor
2223/409 . . embedding or impregnating the object
2223/41 . . imaging specifically internal structure
2223/411 . . tv imaging from fluorescent screen
2223/412 . . use of image converter tube [PMT]
2223/413 . . sensor array [CCD]
2223/414 . . stereoscopic system
2223/415 . . radiographic film
2223/416 . . wrap around
2223/417 . . recording with co-ordinate markings
2223/418 . . electron microscope
2223/419 . . computed tomograph
2223/42 . . image digitised, enhanced in an image processor
2223/421 . . digitised image, analysed in real time (recognition algorithms)
2223/422 . . windows within the image
2223/423 . . multispectral imaging-multiple energy imaging
2223/424 . . energy substraction image processing (dual energy processing)
2223/425 . . temporal (time difference) substraction processing
2223/426 . . image comparing, unknown with known substance
2223/427 . . stepped imaging (selected area of sample is changed)
2223/50 . . Detectors
2223/501 . . array
2223/5015 . . linear array
2223/502 . . ionisation chamber
2223/503 . . auxiliary reference detector
2223/504 . . pin-diode
2223/505 . . scintillation
2223/5055 . . scintillation crystal coupled to PMT
2223/506 . . time-of-flight
2223/507 . . secondary-emission detector
2223/508 . . photo-acoustic
2223/509 . . infra-red
2223/51 . . Specific applications or type of materials
2223/5101 . . density profile
2223/5102 . . crystal growth
2223/5103 . . superlattices
2223/5104 . . monocrystal
2223/5105 . . phases
2223/5106 . . texture
2223/5107 . . strain
2223/5108 . . superconductors
2223/61 . . thin films, coatings
2223/611 . . printed circuit board [PCB]
2223/6116 . . semiconductor wafer
2223/612 . . biological material
2223/6123 . . bone mineral
2223/6126 . . tissue
2223/613 . . moisture
2223/614 . . road surface
2223/615 . . composite materials, multilayer laminates
2223/616 . . earth materials
Indexing codes associated with group G01N 29/00

Indexing codes associated with the measured variable
- Velocity or travel time
- Phase angle
- Resonance or resonant frequency
- Attenuation, scattering
- Doppler techniques
- Impedance

Indexing codes associated with the analysed material
- Gases
- Binary gases
- Mixtures of three or more gases, e.g. air
- Smoke, combustion gases
- Liquids
- Binary liquids
- Mixtures of three or more liquids

Indexing codes associated with the measured variable
- Oils, e.g. engine oils
- Aqueous liquids
- Solids
- Composite or layered materials
- Glass, ceramics, concrete or stone
- Metals, e.g. steel
- Plastics; polymers; soft materials, e.g. rubber
- Thin materials, e.g. paper, membranes, thin films
- Wood
- Mixtures
- Solids in gases, e.g. particle suspensions
- Solids in liquids
- Liquids in gases, e.g. sprays
- Gases in liquids, e.g. bubbles, foams
- Liquids in porous solids
- Gases in porous solids
- Solids in solids, e.g. granules
- Biological material, e.g. blood
- Tissue characterisation
- Other human or animal parts, e.g. bones
- Materials with nonlinear acoustic properties
- Change of phase or condition
- Solidification, icing, curing composites, polymerisation
- Melting, molten solids
- Condensation
- Evaporation
- (Bio)chemical reactions, e.g. on biosensors
- Adsorption, desorption, surface mass change, e.g. on biosensors
- with a layer containing at least one organic compound
- Structural degradation, e.g. fatigue of composites, ageing of oils
- Material parameters
- Concentration of a compound, e.g. measured by a surface mass change
- Density, viscosity
- Elastic parameters, strength or force
- Flow rate, liquid level
- Humidity, wetness
- Length, thickness
- Electric or magnetic parameters
- Pressure
- Temperature
- Internal structure, e.g. defects, grain size, texture
- Wave modes and trajectories
- Wave modes
- Longitudinal waves
- Shear waves, transverse waves, horizontally polarised waves
- Surface waves, e.g. Rayleigh waves, Love waves
- Parallel to the surface, e.g. creep waves
- Bulk waves, e.g. quartz crystal microbalance, torsional waves
- Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever
- Mode conversion
- Complex trajectories
G01N

2291/044 . . . Internal reflections (echoes), e.g. on walls or defects
2291/045 . . . External reflections, e.g. on reflectors
2291/048 . . . Transmission, i.e. analysed material between transmitter and receiver
2291/051 . . . Perpendicular incidence, perpendicular propagation
2291/052 . . . Perpendicular incidence, angular propagation
2291/055 . . . Angular incidence, perpendicular propagation
2291/056 . . . Angular incidence, angular propagation
2291/057 . . . Angular incidence, parallel to surface propagation
2291/10 . . . Number of transducers
2291/101 . . . one transducer
2291/102 . . . one emitter, one receiver
2291/103 . . . one emitter, two or more receivers
2291/104 . . . two or more emitters, one receiver
2291/105 . . . two or more emitters, two or more receivers
2291/106 . . . one or more transducer arrays
2291/26 . . . Scanned objects
2291/262 . . . Linear objects
2291/2623 . . . Rails; Railroads
2291/2626 . . . Wires, bars, rods
2291/263 . . . Surfaces
2291/2632 . . . flat
2291/2634 . . . cylindrical from outside
2291/2636 . . . cylindrical from inside
2291/2638 . . . Complex surfaces
2291/265 . . . Spherical objects
2291/267 . . . Welds
2291/2672 . . . Spot welding
2291/2675 . . . Seam, butt welding
2291/2677 . . . Lapp welding
2291/269 . . . Various geometry objects
2291/2691 . . . Bolts, screws, heads
2291/2692 . . . Tyres
2291/2693 . . . Rotor or turbine parts
2291/2694 . . . Wings or other aircraft parts
2291/2695 . . . Bottles, containers
2291/2696 . . . Wheels, Gears, Bearings
2291/2697 . . . Wafer or (micro)electronic parts
2291/2698 . . . Other discrete objects, e.g. bricks

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

NOTE
In groups G01N 2333/47 - G01N 2333/994
indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism.

2333/001 . . . by chemical synthesis
2333/003 . . . of Peptide-nucleic acids (PNAs)
2333/005 . . . from viruses
2333/01 . . . DNA viruses
2333/015 . . . Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus
2333/02 . . . Hepadnaviridae, e.g. hepatitis B virus
2333/025 . . . Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
2333/03 . . . Herpetoviridae, e.g. pseudorabies virus
2333/032 . . . Pseudorabies virus, i.e. Aujeszky virus
2333/035 . . . Herpes simplex virus I or II

2333/04 . . . Varicella-zoster virus
2333/045 . . . Cytomegalovirus
2333/05 . . . Epstein-Barr virus
2333/055 . . . Marek's disease virus
2333/06 . . . Infectious bovine rhinotrachitis virus
2333/065 . . . Poxviridae, e.g. avipoxvirus
2333/07 . . . Vaccinia virus; Variola virus
2333/075 . . . Adenoviridae
2333/08 . . . RNA viruses
2333/085 . . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
2333/09 . . . Foot-and-mouth disease virus
2333/095 . . . Rhinovirus
2333/10 . . . Hepatitis A virus
2333/105 . . . Poliovirus
2333/11 . . . Orthomyxoviridae, e.g. influenza virus
2333/115 . . . Paramyxoviridae, e.g. parainfluenza virus
2333/12 . . . Mumps virus; Measles virus
2333/125 . . . Newcastle disease virus
2333/13 . . . Canine distemper virus
2333/135 . . . Respiratory syncytial virus
2333/14 . . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
2333/145 . . . Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus
2333/15 . . . Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus
2333/155 . . . Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
2333/16 . . . HIV-1, HIV-2
2333/161 . . . gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p66/68, p51/52, p31/34, p32, p40
2333/162 . . . env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site
2333/163 . . . Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx
2333/165 . . . Coronaviridae, e.g. avian infectious bronchitis virus
2333/17 . . . Porcine transmissible gastroenteritis virus
2333/175 . . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus
2333/18 . . . Togaviridae; Flaviviridae
2333/181 . . . Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus (rubella virus G01N 2333/19)
2333/183 . . . Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus) or border disease virus
2333/185 . . . Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue
2333/186 . . . Hepatitis C; Hepatitis NANB
2333/188 . . . Hepatitis G; Hepatitis NANBNCNDNE
2333/19 . . . Rubella virus
2333/195 . . . from bacteria

NOTE
In groups G01N 2333/20 - 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.

- from Spirochaetales (O), e.g. Treponema, Leptospira
- from Campylobacter (G)
- from Pseudomonadaeae (F)
- from Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter
- from Halobacteriaceae (F)
- from Neisseriaceae (F), e.g. Acinetobacter
- from Alcaligenes (G)
- from Brucella (G)
- from Bordetella (G)
- from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
- from Escherichia (G)
- from Shigella (G)
- from Salmonella (G)
- from Klebsiella (G)
- from Enterobacter (G)
- from Erwinia (G)
- from Hafnia (G)
- from Vibrionaceae (F)
- from Pasteurellaceae (F), e.g. Haemophilus influenza
- from Richettsiales (o)
- from Chlamydiales (o)
- from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]
- from Micrococcaceae (F)
- from Staphylococcus (G)
- from Streptococcus (G), e.g. Enterococci
- from Streptococcus pneumoniae (Pneumococcus) (Streptokinase G01N 2333/3153)
- from Bacillus (G)
- from Bacillus thuringiensis crystal protein (delta-endotoxin)
- from Clostridium (G)
- from Lactobacillus (G)
- from Corynebacterium (G)
- from Brevibacterium (G)
- from Mycobacteriaceae (F)
- from Nocardia (G)
- from Actinomyces; from Streptomyces (G)
- from Actinoplanes (G)
- from fungi
- from Basidiomycetes
- from Aspergillus
- from Penicillium
- from yeasts
- from Saccharomyces
- from Candida
- from algae
- from lichens
- from plants
- from Lectins, e.g. concanavalin, phytohaemagglutinin
- from Zeins
- from Sweetening agents, e.g. thaumatin, monellin

NOTE
In groups G01N 2333/47 - G01N 2333/994 indexing codes are assigned irrespective to the source of the indicated proteins.
Assays involving growth factors

- Tumor necrosis factor [TNF]
- Thrombopoietin, i.e. C-MPL ligand
- Chemokines
- Angiogenetic factors; Angiogenin
- Osteogenic factor; Bone-inducing factor
- Bone morphogenetic factor; Osteogenins;
- Erythropoietin [EPO]
- Fibroblast growth factors [FGF]
- Epidermal growth factor [EGF] (urogastrone)
- Nerve growth factor [NGF]
- Differentiation factor
- glial growth factor, heregulin, ARIA, neu
differentiation factor
- Pancreatic thread protein; Reg protein
- Keratin; Cytokeratin
- Bacterialidal/Permeability-increasing protein BPI
- Cancer-associated SCM-recognition factor, CRISPP
- p53
- Hepatocyte growth factor; Scatter factor;
- Tumor cytotoxic factor II
- Neuregulins, i.e. p185erbB2 ligands,
- glial growth factor, heregulin, ARIA, neu
differentiation factor
- Nerve growth factor [NGF]
- Epidermal growth factor [EGF] (urogastrone)
- Platelet-derived growth factor [PDGF]
- Transforming growth factor [TGF]
- Fibroblast growth factors [FGF]
- Acidic FGF [aFGF]
- basic FGF [bFGF]
- Erythropoietin [EPO]
- Bone morphogenetic factor; Osteogenins;
- Osteogenic factor; Bone-inducing factor
- Angiogenetic factors; Angiogenin
- Assays involving cytokines
- Chemokines
- 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
- Beta-chemokines, e.g. RANTES, I-309/
  TCA-3, MIP-1alpha, MIP-1beta/ACT-2/
  LD78/SCIF, MCP-1/MCAF, MCP-2,
  MCP-3, LDFC-1or LDCF-2
- Thrombopoietin, i.e. C-MPL ligand
- Tumor necrosis factor [TNF]
2333/655 . . . Somatostatins
2333/66 . . . Thymopoietins
2333/665 . . . Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
2333/67 . . . Lipotropins, e.g. beta, gamma lipotropin
2333/675 . . . beta-Endorphins
2333/68 . . . Melanocyte-stimulating hormone [MSH]
2333/685 . . . alpha-Melanotropin
2333/69 . . . beta-Melanotropin
2333/695 . . . Corticotropin [ACTH]
2333/70 . . . Enkephalins
2333/705 . . . Assays involving receptors, cell surface antigens or cell surface determinants
2333/70503 . . . Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3
2333/70507 . . . C2D
2333/7051 . . . T-cell receptor (TcR)-CD3 complex
2333/70514 . . . CD4
2333/70517 . . . CD8
2333/70521 . . . CD28, CD152
2333/70525 . . . ICAM molecules, e.g. CD50, CD54, CD102
2333/70528 . . . CD58
2333/70532 . . . B7 molecules, e.g. CD80, CD86
2333/70535 . . . Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)
2333/70539 . . . MHC-molecules, e.g. HLA-molecules
2333/70542 . . . CD106
2333/70546 . . . Integrin superfamily, e.g. VLA-1, leuCAM, GPIIb/GPIIIa, LPAM
2333/7055 . . . Integrin alpha1-subunit-containing molecules, e.g. CD29, CD49
2333/70553 . . . Integrin beta2-subunit-containing molecules, e.g. CD11, CD18
2333/70555 . . . Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61
2333/70556 . . . Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
2333/70564 . . . Selectins, e.g. CD62
2333/70567 . . . Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors
2333/70571 . . . for neuropeptides, e.g. serotonin receptor, dopamine receptor
2333/70575 . . . NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 (NGF G01N 2333/48, TNF G01N 2333/525)
2333/70578 . . . NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 or CD40 (NGF-receptor G01N 2333/71, TNF-receptor G01N 2333/7151)
2333/70582 . . . CD71
2333/70585 . . . CD44
2333/70589 . . . CD45
2333/70592 . . . CD52
2333/70596 . . . Molecules with a "CD"-designation not provided for elsewhere in G01N 2333/705
2333/71 . . . for growth factors; for growth regulators
2333/715 . . . for cytokines; for lymphokines; for interferons
2333/7151 . . . for tumor necrosis factor [TNF]; for lymphotoxin [LT]
2333/7153 . . . or colony-stimulating factors [CSF]
2333/7155 . . . for interleukins [IL]
2333/7156 . . . for interferons [IFN]
2333/7158 . . . for chemokines
2333/72 . . . for hormones (for neuropeptides)
2333/723 . . . Steroid/hybrid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor
2333/726 . . . G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH
2333/745 . . . Assays involving non-enzymic blood coagulation factors
2333/7452 . . . Thrombomodulin
2333/7454 . . . Tissue factor (tissue thromboplastin, Factor III)
2333/7456 . . . Factor V
2333/7458 . . . Protein S
2333/75 . . . Fibrin; Fibrinogen
2333/755 . . . Factors VIII, e.g. factor VIII C [AHF], factor VIII Ag [VWF]
2333/76 . . . Assays involving albumins other than in routine use for blocking surfaces or for anchoring haptons during immunisation
2333/765 . . . Serum albumin, e.g. HSA
2333/77 . . . Ovalbumin
2333/775 . . . Apolipoproteins
2333/78 . . . Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin [CIG]
2333/785 . . . Alveolar surfactant peptides; Pulmonary surfactant peptides
2333/79 . . . Transferrins, e.g. lactoferins, ovotransferrins
2333/795 . . . Porphyrin- or corrin-ring-containing peptides
2333/80 . . . Cytochromes
2333/805 . . . Haemoglobins; Myoglobin
2333/81 . . . Protease inhibitors
2333/8103 . . . Exopeptidase (E.C. 3.4.11-19) inhibitors
2333/8107 . . . Endopeptidase (E.C. 3.4.21-99) inhibitors
2333/8111 . . . Serine protease (E.C. 3.4.21) inhibitors
2333/8114 . . . Kunitz type inhibitors
2333/8117 . . . Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)
2333/8121 . . . Serpins
2333/8125 . . . Alpha-1-antitrypsin
2333/8128 . . . Antithrombin III
2333/8132 . . . Plasminogen activator inhibitors
2333/8135 . . . Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid
2333/8139 . . . Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin
2333/8142 . . . Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors
2333/8146 . . . Metalloproteinase (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metallo proteinase, TIMP
2333/815 . . . from leeches, e.g. hirudin, eglin
2333/82 . . . Translation products from oncotenes
2333/825 . . . Metallothioneins
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.
Oxidoreductases (1.)

Ligases (6)

Antibodies with enzymatic activity; e.g. abzymes

ribozymes

Enzymes with nucleic acid structure; e.g. acting on nitrogen containing compounds as oxidase, lactate dehydrogenase (1.1)

acting on reduced flavodoxin as donor (1.19)

acting on superoxide radicals as acceptor (1.2)

acting on CH-NH groups of donors (1.5)

acting on oxygen as acceptor (1.5.3) in general

acting on other nitrogen compounds as donors (1.7)

acting with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)

acting on hydrogen peroxide as acceptor (1.11)

Transfases (2.)

transferring one-carbon groups (2.1)

Methyltransferases (general) (2.1.1.)

with definite EC number (2.1.1.-)

with a definite EC number (2.1.10.)

Catecholmethyltransferases (2.1.1.6)

with a definite EC number (2.1.1.-)

with oxygen as acceptor (1.5.3), e.g.

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3) in general

with a definite EC number (1.5.3.-)

Sarcosine oxidase (1.5.3.1)

acting on other nitrogen compounds as donors (1.7)

acting with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)

acting on hydrogen peroxide as acceptor (1.11)

Transfases (2.)

transferring one-carbon groups (2.1)

Methyltransferases (general) (2.1.1.)

with definite EC number (2.1.1.-)

with a definite EC number (2.1.10.)

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3), e.g.

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3) in general

with a definite EC number (1.5.3.-)

Sarcosine oxidase (1.5.3.1)

acting on other nitrogen compounds as donors (1.7)

acting with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)

acting on hydrogen peroxide as acceptor (1.11)

Transfases (2.)

transferring one-carbon groups (2.1)

Methyltransferases (general) (2.1.1.)

with definite EC number (2.1.1.-)

with a definite EC number (2.1.10.)

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3), e.g.

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3) in general

with a definite EC number (1.5.3.-)

Sarcosine oxidase (1.5.3.1)

acting on other nitrogen compounds as donors (1.7)

acting with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)

acting on hydrogen peroxide as acceptor (1.11)

Transfases (2.)

transferring one-carbon groups (2.1)

Methyltransferases (general) (2.1.1.)

with definite EC number (2.1.1.-)

with a definite EC number (2.1.10.)

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3), e.g.

Catecholmethyltransferases (2.1.1.6)

Catecholmethyltransferases (2.1.1.6)

Dihydrofolate reductase [DHFR] (1.5.1.3)

with oxygen as acceptor (1.5.3) in general

with a definite EC number (1.5.3.-)

Sarcosine oxidase (1.5.3.1)

acting on other nitrogen compounds as donors (1.7)

acting with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)

acting on hydrogen peroxide as acceptor (1.11)
Hydrolases (3)
acting on peptide bonds (3.4)
acting on glycosyl compounds (3.2)
(3.1.4)
acting on ester bonds (3.1), e.g. phosphatases
(3.4.21-3.4.99)
Proteinases, i.e. endopeptidases
isoamylase, pullulanase
acting on alpha-1, 6-glucosidic bonds, e.g.
alpha-galactosidase
e.g. beta-galactosidase
deoxy-D-glucose, e.g. lysozyme
hyaluronidase, invertase, amylase
acting on alpha -1, 4-glucosidic bonds, e.g.
Deoxyribonucleases (DNAses)
Ribonucleases (RNAses);
Deoxyribonucleases (DNAses)
acting on glycosyl compounds (3.2)
acting on alpha -1, 4-glucosidic bonds, e.g.
hyaluronidase, invertase, amylase
acting on alpha -1, 4-glucosidic bonds, e.g.
hyaluronidase, invertase, amylase
Fungal source
alpha-amylase from plant source
Glucoamylase
acting on beta-1, 4 bonds between N-
acetyluramic acid and 2-acetyl-aminodideoxy-D-glucose, e.g. lysozyme
acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase
acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase
acting on beta-1, 4-glucosidic bonds, e.g. cellulase
acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
Dextranase
acting on peptide bonds (3.4)
Proteinases, i.e. endopeptidases
(3.4.21-3.4.99)
derived from viruses
derived from RNA viruses
derived from bacteria
cellulase
acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
Dextranase
acting on peptide bonds (3.4)
Proteinases, i.e. endopeptidases
(3.4.21-3.4.99)
derived from viruses
derived from RNA viruses
derived from bacteria
bacteria being Bacillus
Bacillus subtilis or Bacillus licheniformis
derived from fungi
from yeast
from Aspergillus
derived from animal tissue
from non-mammals
in general
with EC number
Serine endopeptidases (3.4.21)
Cysteine endopeptidases (3.4.22)
Aspartic endopeptidases (3.4.23)
Metalloendopeptidases (3.4.24)
from snakes
from mammals
in general
Serine endopeptidases (3.4.21)
Glycans
Dibasic site splicing serine proteases, e.g. furin
Factor X (3.4.21.6)
Factor VII (3.4.21.21)
Factor IX (3.4.21.22)
Factor XI (3.4.21.27)
Kallikrein (3.4.21.34; 3.4.21.35)
Factor XII (3.4.21.38)
Protein C (3.4.21.69)
Blood coagulation factors
not provided for in a preceding group or according to more than one of the proceeding groups
Cysteine endopeptidases (3.4.22)
Interleukin 1-beta convertase-like enzymes
Aspartic endopeptidases (3.4.23)
with definite EC number
Pepsin (3.4.23.1; 3.4.23.2; 3.4.23.3)
Chymosin, i.e. rennin
(3.4.23.4)
Renin (3.4.23.15)
Metalloendopeptidases (3.4.24)
Phosphoramidon sensitive endothelin converting enzymes
with definite EC number
Matrix metalloproteases, e.g.
.3.4.24.7
Enkephalinase (3.4.24.11)
Elastase
Plasmin, i.e. fibrinolysin
Plasminogen activators
Urokinase
Tissue plasminogen activator
Thrombin
Tryptsin; Chymotrypsin
acting on carbon to nitrogen bonds other than peptide bonds (3.5)
2333/98 . . . . acting on amide bonds in linear amides (3.5.1)
2333/982 . . . . Asparaginase
2333/984 . . . . Penicillin amidase
2333/986 . . . . acting on amide bonds in cyclic amides (3.5.2), e.g. beta-lactamase (penicillinase, 3.5.2.6), creatinine amidohydrolase (creatininase, EC 3.5.2.10), N-methylhydantoinase (3.5.2.6)
2333/988 . . Lyases (4.), e.g. aldolases, heparinase, enolases, fumarase
2333/99 . . . . Isomerases (5.)
2333/992 . . . . Glucose isomerase; Xylose isomerase; Glucose-6-phosphate isomerase
2333/994 . . . . Pancreatine
2400/00 Assays, e.g. immunoassays or enzyme assays, involving carbohydrates
2400/02 . . involving antibodies to sugar part of glycoproteins (lectins from plants G01N 2333/42, lectins from mammals G01N 2333/4724)
2400/10 . . Polysaccharides, i.e. having more than five saccharide radicals attached to each other by glycosidic linkages; Derivatives thereof, e.g. ethers, esters
2400/12 . . Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar
2400/14 . . alpha-D-Glucans, i.e. having alpha 1,n (n=3,4,6) linkages between saccharide units, e.g. pullulan
2400/16 . . Starch, amylose, amylopectin
2400/18 . . Cyclodextrin
2400/22 . . Dextran
2400/24 . . beta-D-Glucans, i.e. having beta 1,n (n=3,4,6) linkages between saccharide units, e.g. xanthan
2400/26 . . Cellulose
2400/28 . . Chitin, chitosan
2400/32 . . Galactans, e.g. agar, agarose, agaropectin, carrageenan
2400/34 . . alpha-D-Galacturonans, e.g. pectin
2400/36 . . beta-D-Fructofuranans, e.g. levans, insulin
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 (proteoglycans G01N 2333/4722)
2400/40 . . Glycosaminoglycans, i.e. GAG or mucopolysaccharides, e.g. chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparin, heparan sulfate, and related sulfated polysaccharides
2400/44 . . Galuramannuronans, e.g. alginic acid
2400/46 . . Pectin
2400/48 . . Reserve carbohydrates, e.g. glycogen
2400/50 . . Lipopolysaccharides; LPS
2405/00 Assays, e.g. immunoassays or enzyme assays, involving lipids (lipopolysaccharides G01N 2400/50)
2405/02 . . Triacylglycerols
2405/04 . . Phospholipids, i.e. phosphoglycerides
2405/06 . . Glycophospholipids, e.g. phosphatidyl inositol
2405/08 . . Sphingolipids
2405/10 . . Glycosphingolipids, e.g. cerebrosides, gangliosides
2407/00 Assays, e.g. immunoassays or enzyme assays, involving terpenes
2407/02 . . Taxol; Taxanes
2410/00 Assays, e.g. immunoassays or enzyme assays, involving peptides of less than 20 amino acids
2410/02 . . Angiotensins; Related peptides
2410/04 . . Oxytocins; Vasopressins; Related peptides
2410/06 . . Kallidins; Bradykinins; Related peptides
2410/08 . . Cyclosporins and related peptides
2410/10 . . Valinomycins and derivatives thereof
2415/00 Assays, e.g. immunoassays or enzyme assays, involving penicillins or cephalosporins
2430/00 Assays, e.g. immunoassays or enzyme assays, involving synthetic organic compounds as analytes
2430/10 . . Insecticides
2430/12 . . Pyrethroids
2430/20 . . Herbicides, e.g. DDT
2430/30 . . Polychlorinated biphenyls (PCBs)
2430/40 . . Dioxins
2430/50 . . Polyaromatic hydrocarbons (PAHs)
2430/60 . . Synthetic polymers other than synthetic polypeptides as analytes
2440/00 Post-translational modifications [PTMs] in chemical analysis of biological material
2440/10 . . acylation, e.g. acetylation, formylation, lipoylation, myristoylation, palmitylation
2440/12 . . alklylation, e.g. methylation, (iso-)prenylation, farnesylation
2440/14 . . phosphorylation
2440/16 . . (de-)jamidation
2440/18 . . citrullination
2440/20 . . formation of disulphide bridges
2440/22 . . iodination
2440/24 . . hydroxylation
2440/26 . . nitrosylation
2440/28 . . PEGylation
2440/30 . . sulphation
2440/32 . . biotinylation
2440/34 . . addition of amino acid(s), e.g. arginylation, (poly-)glutamylation, (poly-)gycylation
2440/36 . . addition of addition of other proteins or peptides, e.g. SUMOylation, ubiquitination
2440/38 . . addition of carbohydrates, e.g. glycosylation, glycation
2440/40 . . addition of nucleotides or derivatives, e.g. adenylataion, flavin attachment
2446/00 Magnetic particle immunoreagent carriers
2446/10 . . the magnetic material being used to coat a pre-existing polymer particle but not being present in the particle core
2446/20 . . the magnetic material being present in the particle core
2446/30 . . the magnetic material being dispersed in the polymer composition before their conversion into particulate form
2446/40 . . the magnetic material being dispersed in the monomer composition prior to polymerisation
2446/60 . . the magnetic material being dispersed in a medium other than the main solvent prior to incorporation into the polymer particle
4. When indexing in the following scheme, the present indexing scheme is not used. The indexing codes G01N 2800/02 and 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 microorganism 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.

2520/00 Use of whole organisms as detectors of pollution
2550/00 Electrophoretic profiling, e.g. for proteome analysis
2560/00 Chemical aspects of mass spectrometric analysis of biological material

Notes
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.

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, glycomics or lipidomics

2600/00 Assays involving molecular imprinted polymers/polymers created around a molecular template
2610/00 Assays involving self-assembled monolayers [SAMs]
2650/00 Assays involving polymers whose constituent monomers bore biological functional groups before polymerization, i.e. vinyl, acryl derivatives of amino acids, sugars

2800/00 Detection or diagnosis of diseases

Notes
2. For diseases caused by microorganism 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.

2800/02 Nutritional disorders
2800/04 Endocrine or metabolic disorders
2800/042 Disorders of carbohydrate metabolism, e.g. diabetes, glucose metabolism
2800/044 Hyperlipemia or hypolipemia, e.g. dyslipidaemia, obesity
2800/046 Thyroid disorders
2800/048 Pituitary or hypothalamic - pituitary relationships, e.g. vasopressin or ADH related
2800/06 Gastro-intestinal diseases
2800/062 Gastritis or peptic ulcer disease
2800/065 Bowel diseases, e.g. Crohn, ulcerative colitis, IBS
Neurological disorders
or G01N 33/576
is not used
and subgroups
Infectious diseases, e.g. generalised sepsis
G01N 2800/104
Immunology or allergic disorders (SLE
Lupus erythematosus [SLE]
G01N 2800/105
Osteoarthrits, 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
G01N 2800/168
Glaucoma
G01N 2800/18
Dental and oral disorders
G01N 2800/20
Dermatological disorders
G01N 2800/202
Dermatitis
G01N 2800/205
Scaling papulaceous diseases, e.g. psoriasis, pyotisias
G01N 2800/207
Pigmentation disorders
G01N 2800/22
Haematology
G01N 2800/222
Platelet disorders
G01N 2800/224
Haemostasis or coagulation
G01N 2800/226
Thrombotic disorders, i.e. thrombo-embolism
irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis
G01N 2800/228
Disorders of the spleen, e.g. splenic rupture, splenomegaly
G01N 2800/24
Immunology or allergic disorders (SLE
G01N 2800/104)
G01N 2800/245
Transplantation related diseases, e.g. graft versus
host disease
G01N 2800/26
Infectious diseases, e.g. generalised sepsis
NOTE
Indexing code G01N 2800/26 is not used
for documents already classified in one or
more of groups G01N 33/569 and subgroups,
G01N 33/571 or G01N 33/576 and subgroups
G01N 2800/28
Neurological disorders
G01N 2800/2807
Headache; Migraine
G01N 2800/2814
Dementia; Cognitive disorders
G01N 2800/2821
Alzheimer
G01N 2800/2828
Prion diseases
G01N 2800/2835
Movement disorders, e.g. Parkinson, Huntington, Tourette
G01N 2800/2842
Pain, e.g. neuropathic pain, psychogenic pain
G01N 2800/285
Demyelinating diseases; Multiple sclerosis
G01N 2800/2857
Seizure disorders; Epilepsy
G01N 2800/2864
Sleep disorders
G01N 2800/2871
Cerebrovascular disorders, e.g. stroke, cerebral
infarct, cerebral haemorrhage, transient ischemic event
G01N 2800/2878
Muscular dystrophy
G01N 2800/2885
Duchenne dystrophy
G01N 2800/2892
Myotonic dystrophy
G01N 2800/30
Psychoses; Psychiatry
G01N 2800/301
Anxiety or phobic disorders
G01N 2800/302
Schizophrenia
G01N 2800/303
Eating disorders, e.g. anorexia, bulimia
G01N 2800/304
Mood disorders, e.g. bipolar, depression
G01N 2800/305
Attention deficit disorder; Hyperactivity
G01N 2800/306
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, tordas 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;
Tubulo-interstitial 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, mastitits, 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
Poisoning, e.g. from bites or stings
Multiple drug resistance
Determining the risk of developing a disease
Predicting or monitoring the response to treatment; Prognosis
Determining the risk of relapse
Staging of a disease; Further complications associated with the disease
Complex ways of combining multiple protein biomarkers for diagnosis
Mechanisms involved in disease identification

Stress
Oxidative stress
(Neo)vascularisation - Angiogenesis
Ischaemia
(Hyper)proliferation
Cancer
Non-proliferative mechanisms
Hypoxia
Aging, e.g. cellular aging
Fibrils-Filaments-Plaque formation
Fibrosis
(Intracellular) signaling and trafficking pathways
Endoplasmic reticulum to Golgi trafficking
Metabolic pathways
Carbohydrate metabolism, e.g. glycolysis, gluconeogenesis
Amino acid metabolism
Nitrogen metabolism, e.g. urea cycle
Lipogenesis or lipolysis, e.g. fatty acid metabolism
Toxin induced
Inflammation