

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS (NOTES omitted)

INSTRUMENTS

G01 MEASURING (counting [G06M](#)); TESTING (NOTES omitted)

G01N INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (separating components of materials in general [B01D](#), [B01J](#), [B03](#), [B07](#); apparatus fully provided for in a single other subclass, see the relevant subclass, e.g. [B01L](#); measuring or testing processes other than immunoassay, involving enzymes or microorganisms [C12M](#), [C12Q](#); investigation of foundation soil *in situ* [E02D 1/00](#); sensing humidity changes for compensating measurements of other variables or for compensating readings of instruments for variations in humidity, see [G01D](#) or the relevant subclass for the variable measured; testing or determining the properties of structures [G01M](#); measuring or investigating electric or magnetic properties of materials [G01R](#); systems or methods in general, using reception or emission of radiowaves or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation, [G01S](#); determining sensitivity, graininess, or density of photographic materials [G03C 5/02](#); testing component parts of nuclear reactors [G21C 17/00](#); {controlling or regulating non-electric variables [G05D](#); measuring degree of ionisation of ionised gases, i.e. plasma [H05H 1/0006](#); testing electrographic developer properties [G03G 15/0848](#)})

NOTES

- In this subclass, the following terms are used with the meanings indicated :
 - "investigating" means testing or determining;
 - "materials" includes solid, liquid or gaseous media, e.g. the atmosphere.
- Attention is drawn to the Notes following the title of class [G01](#).
- Inventions relating to investigating the properties of materials, specially adapted for use in processes covered by subclass [B23K](#), are classified in group [B23K 31/12](#).

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.

1/00	Sampling; Preparing specimens for investigation	2001/025	. . . {postal items}
2001/002	. {Devices for supplying or distributing samples to an analysing apparatus}	2001/027	. . . {field kits / quick test kits}
2001/005	. . {Packages for mailing or similar transport of samples}	2001/028	. . {Sampling from a surface, swabbing, vaporising}
2001/007	. . {Devices specially adapted for forensic samples, e.g. tamper-proofing, sample tracking}	1/04	. . in the solid state, e.g. by cutting
1/02	. Devices for withdrawing samples (for medical or veterinary purposes A61 ; {sampling of foundation soil E02D 1/04 }; obtaining samples of soil or well fluids E21B 49/00 ; {collecting or conveying radioactive samples G01T 7/00 , e.g. G01T 7/02 , G01T 7/08 })	2001/045	. . . {Laser ablation; Microwave vaporisation}
2001/021	. . {Correlating sampling sites with geographical information, e.g. GPS}	1/06	. . . providing a thin slice, e.g. microtome
2001/022	. . {sampling for security purposes, e.g. contraband, warfare agents}	2001/061	. . . . {Blade details}
2001/024	. . . {passengers or luggage}	2001/063	. . . . . {with sawing action}
		2001/065	. . . . . {Drive details}
		2001/066	. . . . . {electric}
		2001/068	. . . . . {Illumination means}
		1/08	. . . involving an extracting tool, e.g. core bit
		2001/085	. . . . . {Grabs}
		1/10	. . in the liquid or fluent state {(burettes, pipettes B01L 3/02 ; sampling of ground water E02D 1/06 ; metering by volume of fluids or fluent solid material G01F 11/00 , G01F 13/00)}
		2001/1006	. . . . . {Dispersed solids}

2001/1012	. . . .	{Suspensions}	1/2202	. . .	{involving separation of sample components during sampling}
2001/1018	. . . . .	{Gas suspensions; Fluidised beds}	1/2205	. . . .	{with filters}
2001/1025	. . . . .	{Liquid suspensions; Slurries; Mud; Sludge}	1/2208	. . . .	{with impactors}
2001/1031	. . .	{Sampling from special places}	1/2211	. . . .	{with cyclones}
2001/1037	. . . .	{from an enclosure (hazardous waste, radioactive)}	1/2214	. . . .	{by sorption}
2001/1043	. . . . .	{from sewers}	2001/2217	. . . . .	{using a liquid}
2001/105	. . . . .	{from high-pressure reactors or lines}	2001/222	. . . . .	{other features (not used)}
2001/1056	. . .	{Disposable (single-use) samplers}	2001/2223	. . . . .	{aerosol sampling devices}
2001/1062	. . .	{Sampling under constant temperature, pressure, or the like}	1/2226	. . .	{Sampling from a closed space, e.g. food package, head space}
2001/1068	. . . . .	{Cooling sample below melting point}	2001/2229	. . . . .	{Headspace sampling, i.e. vapour over liquid}
2001/1075	. . . . .	{Trapping evaporated liquids by cooling}	2001/2232	. . . . .	{using a membrane, i.e. pervaporation}
2001/1081	. . . . .	{Storing samples under refrigeration}	2001/2235	. . . . .	{over a melt, e.g. furnace}
2001/1087	. . .	{Categories of sampling}	2001/2238	. . . . .	{the gas being compressed or pressurized}
2001/1093	. . . . .	{Composite sampling; Cumulative sampling}	2001/2241	. . . . .	{purpose-built sampling enclosure for emissions}
1/12	. . .	Dippers; Dredgers	2001/2244	. . .	{Exhaled gas, e.g. alcohol detecting}
1/125	. . . . .	{adapted for sampling molten metals}	1/2247	. . .	{Sampling from a flowing stream of gas}
1/14	. . .	Suction devices, e.g. pumps; Ejector devices	2001/225	. . . . .	{isokinetic, same flow rate for sample and bulk gas}
1/1409	. . . . .	{adapted for sampling molten metals}	1/2252	. . . . .	{in a vehicle exhaust}
2001/1418	. . . . .	{Depression, aspiration}	2001/2255	. . . . .	{with dilution of the sample}
2001/1427	. . . . .	{Positive displacement, piston, peristaltic}	1/2258	. . . . .	{in a stack or chimney}
2001/1436	. . . . .	{Ejector}	2001/2261	. . . . .	{preventing condensation (heating lines)}
2001/1445	. . . . .	{Overpressure, pressurisation at sampling point}	2001/2264	. . . . .	{with dilution}
2001/1454	. . . . .	{Positive displacement, piston}	2001/2267	. . . . .	{separating gas from liquid, e.g. bubbles}
2001/1463	. . . . .	{Injector; Air-lift}	2001/227	. . . . .	{separating gas from solid, e.g. filter}
2001/1472	. . . . .	{Devices not actuated by pressure difference}	1/2273	. . .	{Atmospheric sampling}
2001/1481	. . . . .	{Archimedian screw; Auger}	2001/2276	. . . . .	{Personal monitors}
2001/149	. . . . .	{Capillaries; Sponges}	2001/2279	. . . . .	{high altitude, e.g. rockets, balloons}
1/16	. . .	with provision for intake at several levels (G01N 1/2035) G01N 1/12 , G01N 1/14 take precedence)	2001/2282	. . .	{with cooling means}
1/18	. . .	with provision for splitting samples into portions (G01N 1/12 , G01N 1/14 take precedence; fraction-collection apparatus for chromatography B01D 15/08)	2001/2285	. . .	{Details of probe structures}
2001/185	. . . . .	{Conveyor of containers successively filled}	2001/2288	. . . . .	{Filter arrangements}
1/20	. . .	for flowing or falling materials (G01N 1/2035) G01N 1/12 , G01N 1/14 take precedence)	2001/2291	. . . . .	{Movable probes, e.g. swivelling, swinging}
2001/2007	. . . . .	{Flow conveyors}	1/2294	. . .	{Sampling soil gases or the like}
2001/2014	. . . . .	{Pneumatic conveyors}	2001/2297	. . .	{Timing devices}
2001/2021	. . . . .	{falling under gravity}	1/24	. . .	Suction devices (G01N 1/22 - G01N 1/2294 take precedence)
2001/2028	. . . . .	{Belts}	2001/241	. . . . .	{Bellows}
1/2035	. . . . .	{by deviating part of a fluid stream, e.g. by drawing-off or tapping}	2001/242	. . . . .	{Injectors or ejectors}
1/2042	. . . . .	{using a piston actuated by the pressure of the liquid to be sampled}	2001/244	. . . . .	{using critical flow orifices}
2001/205	. . . . .	{using a valve}	2001/245	. . . . .	{Fans}
2001/2057	. . . . .	{Sample chamber in a valve/piston}	2001/247	. . . . .	{Syringes}
2001/2064	. . . . .	{using a by-pass loop}	2001/248	. . . . .	{Evacuated containers}
2001/2071	. . . . .	{Removable sample bottle}	1/26	. . .	with provision for intake from several spaces
2001/2078	. . . . .	{Pre-evacuated bottle}	1/28	. . .	Preparing specimens for investigation {including physical details of (bio-)chemical methods covered elsewhere, e.g. G01N 33/50 , C12Q } (mounting specimens on microscopic slides G02B 21/34 ; means for supporting the objects or the materials to be analysed in electron microscopes H01J 37/20 ; laboratory gas handling apparatus B01L 5/00)
2001/2085	. . . . .	{Non-pre-evacuated septum closed bottles}	1/2806	. . .	{Means for preparing replicas of specimens, e.g. for microscopical analysis}
2001/2092	. . . . .	{Cross-cut sampling}	1/2813	. . .	{Producing thin layers of samples on a substrate, e.g. smearing, spinning-on (G01N 1/30 takes precedence)}
1/22	. .	in the gaseous state {(specially adapted for biological material G01N 33/497 ; measuring breath flow A61B 5/087)}	2001/282	. . .	{with mapping; Identification of areas; Spatial correlated pattern}
			2001/2826	. . .	{Collecting by adsorption or absorption}

- 2001/2833 . . . {Collecting samples on a sticky, tacky, adhesive 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 homogeneising}
- 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}
- 1/32 . . Polishing; Etching
- 1/34 . . Purifying; Cleaning {(processes or apparatus for extracting or separating nucleic acids from biological samples [C12N 15/1003](#))}
- 1/36 . . Embedding or analogous mounting of samples
- 2001/362 . . . {using continuous plastic film to mount sample}
- 2001/364 . . . {using resins, epoxy}
- 2001/366 . . . {Moulds; Demoulding}
- 2001/368 . . . {Mounting multiple samples in one block, e.g. TMA [Tissue Microarrays]}
- 1/38 . . Diluting, dispersing or mixing samples
- 2001/381 . . . {by membrane diffusion; Permeation tubes}
- 2001/382 . . . {using pistons of different sections}
- 2001/383 . . . {collecting and diluting in a flow of liquid}
- 2001/385 . . . {diluting by adsorbing a fraction of the sample}
- 2001/386 . . . {Other diluting or mixing processes}
- 2001/387 {mixing by blowing a gas, bubbling}
- 2001/388 {mixing the sample with a tracer}
- 1/40 . . Concentrating samples
- 1/4005 . . . {by transferring a selected component through a membrane}
- 2001/4011 {being a ion-exchange membrane}
- 2001/4016 {being a selective membrane, e.g. dialysis or osmosis}
- 1/4022 . . . {by thermal techniques; Phase changes}
- 2001/4027 {evaporation leaving a concentrated sample}
- 2001/4033 {sample concentrated on a cold spot, e.g. condensation or distillation}
- 2001/4038 . . . {electric methods, e.g. electromigration, electrophoresis, ionisation}
- 1/4044 . . . {by chemical techniques; Digestion; Chemical decomposition}
- 1/405 . . . {by adsorption or absorption}
- 1/4055 . . . {by solubility techniques}
- 2001/4061 {Solvent extraction}
- 2001/4066 {using difference of solubility between liquid and gas, e.g. bubbling, scrubbing or sparging}
- 2001/4072 {membraneless transfer of a component between two parallel laminar flows of fluid}
- 1/4077 . . . {by other techniques involving separation of suspended solids}
- 2001/4083 {sedimentation}
- 2001/4088 {filtration}
- 2001/4094 {using ultrasound}
- 1/42 . . Low-temperature sample treatment, e.g. cryofixation
- 1/44 . . Sample treatment involving radiation, e.g. heat
- 3/00 Investigating strength properties of solid materials by application of mechanical stress (strain gauges [G01B](#); measuring stress in general [G01L](#))**
- NOTE**
- This group covers the stressing of materials not only below but also beyond the elastic limit, e.g. until breaking occurs.
- 3/02 . . Details
- 3/04 . . Chucks
- 3/06 . . Special adaptations of indicating or recording means (indicating or recording means for measuring in general [G01D](#))
- 3/062 . . . {with mechanical indicating or recording means}
- 3/064 . . . {with hydraulic indicating or recording means}
- 3/066 . . . {with electrical indicating or recording means}
- 3/068 . . . {with optical indicating or recording means}
- 3/08 . . by applying steady tensile or compressive forces ([G01N 3/28](#) takes precedence)
- 3/10 . . generated by pneumatic or hydraulic pressure ([G01N 3/18](#) takes precedence)
- 3/12 . . . Pressure testing (testing fluid-tightness [G01M 3/00](#))
- 3/14 . . generated by dead weight, e.g. pendulum; generated by springs tension ([G01N 3/18](#) takes precedence)
- 3/16 . . applied through gearing ([G01N 3/18](#) takes precedence)
- 3/165 . . . {generated by rotation, i.e. centrifugal force (for testing structures or apparatus [G01M 99/004](#))}
- 3/18 . . Performing tests at high or low temperatures
- 3/20 . . by applying steady bending forces ([G01N 3/26](#), [G01N 3/28](#) take precedence)
- 3/22 . . by applying steady torsional forces ([G01N 3/26](#), [G01N 3/28](#) take precedence)
- 3/24 . . by applying steady shearing forces ([G01N 3/26](#), [G01N 3/28](#) take precedence)
- 3/26 . . Investigating twisting or coiling properties
- 3/28 . . Investigating ductility, e.g. suitability of sheet metal for deep-drawing or spinning
- 3/30 . . by applying a single impulsive force, e.g. by falling weight
- 3/303 . . generated only by free-falling weight
- 3/307 . . generated by a compressed or tensile-stressed spring; generated by pneumatic or hydraulic means
- 3/31 . . generated by a rotating fly-wheel
- 3/313 . . generated by explosives

- 3/317 . . generated by electromagnetic means
- 3/32 . . by applying repeated or pulsating forces ([generation of such forces in general, see the relevant classes or subclasses, e.g. B06, G10](#))
- 3/34 . . generated by mechanical means, e.g. hammer blows
- 3/36 . . generated by pneumatic or hydraulic means
- 3/38 . . generated by electromagnetic means
- 3/40 . Investigating hardness or rebound hardness
- 3/405 . . {[by determining the vibration frequency of a sensing element in contact with the specimen](#)}
- 3/42 . . by performing impressions under a steady load by indentors, e.g. sphere, pyramid ([G01N 3/54 takes precedence](#))
- 3/44 . . . the indentors being put under a minor load and a subsequent major load, i.e. Rockwell system
- 3/46 . . . the indentors performing a scratching movement
- 3/48 . . by performing impressions under impulsive load by indentors, e.g. falling ball ([G01N 3/54 takes precedence](#))
- 3/50 . . by measuring rolling friction, e.g. by rocking pendulum ([G01N 3/54 takes precedence](#))
- 3/52 . . by measuring extent of rebound of a striking body ([G01N 3/54 takes precedence](#))
- 3/54 . . Performing tests at high or low temperatures
- 3/56 . Investigating resistance to wear or abrasion
- 3/562 . . {[using radioactive tracers](#)}
- 3/565 . . {[of granular or particulate material](#)}
- 3/567 . . {[by submitting the specimen to the action of a fluid or of a fluidised material, e.g. cavitation, jet abrasion \(G01N 3/565 takes precedence\)](#)}
- 3/58 . Investigating machinability by cutting tools; Investigating the cutting ability of tools
- 3/60 . Investigating resistance of materials, e.g. refractory materials, to rapid heat changes ({[thermal testing of structures or apparatus G01M 99/002](#)})
- 3/62 . Manufacturing, calibrating, or repairing devices used in investigations covered by the preceding subgroups
- 5/00** **Analysing materials by weighing, e.g. weighing small particles separated from a gas or liquid** ([G01N 9/00 takes precedence](#) ; [weighing per se G01G](#))
- 5/02 . . by absorbing or adsorbing components of a material and determining change of weight of the adsorbent, e.g. determining moisture content ({[absorption bulbs B01D 53/00](#)})
- 5/025 . . {[for determining moisture content](#)}
- 5/04 . . by removing a component, e.g. by evaporation, and weighing the remainder
- 5/045 . . {[for determining moisture content](#)}
- 7/00** **Analysing materials by measuring the pressure or volume of a gas or vapour**
- 7/02 . . by absorption, adsorption, or combustion of components and measurement of the change in pressure or volume of the remainder ({[absorption bulbs B01D 53/00](#)})
- 7/04 . . by absorption or adsorption alone
- 7/06 . . by combustion alone
- 7/08 . . by combustion followed by absorption or adsorption of the combustion products
- 7/10 . . by allowing diffusion of components through a porous wall and measuring a pressure or volume difference
- 7/12 . . the diffusion being followed by combustion or catalytic oxidation
- 7/14 . . by allowing the material to emit a gas or vapour, e.g. water vapour, and measuring a pressure or volume difference ({[determining urea G01N 33/48742](#)})
- 7/16 . . by heating the material
- 7/18 . . by allowing the material to react
- 7/20 . . . the reaction being fermentation
- 7/22 of dough
- 9/00** **Investigating density or specific gravity of materials; Analysing materials by determining density or specific gravity** ([weighing apparatus G01G](#))
- 9/002 . . {[using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis \(G01N 9/34 takes precedence\)](#)}
- 2009/004 . . {[comparing frequencies of two elements](#)}
- 2009/006 . . {[vibrating tube, tuning fork](#)}
- 2009/008 . . {[Schlatter vibrating vane type](#)}
- 9/02 . . by measuring weight of a known volume
- 2009/022 . . {[of solids](#)}
- 2009/024 . . . {[the volume being determined directly, e.g. by size of container](#)}
- 2009/026 . . . {[the volume being determined by amount of fluid displaced](#)}
- 2009/028 {[a gas being used as displacement fluid](#)}
- 9/04 . . of fluids
- 9/06 . . . with continuous circulation through a pivotally supported member
- 9/08 . . by measuring buoyant force of solid materials by weighing both in air and in a liquid
- 9/10 . . by observing bodies wholly or partially immersed in fluid materials
- 9/12 . . by observing the depth of immersion of the bodies, e.g. hydrometers
- 9/14 . . . the body being built into a container
- 9/16 . . . the body being pivoted
- 9/18 . . . Special adaptations for indicating, recording, or control
- 9/20 . . by balancing the weight of the bodies
- 9/22 . . . with continuous circulation of the fluid
- 9/24 . . by observing the transmission of wave or particle radiation through the material
- 9/26 . . by measuring pressure differences
- 2009/263 . . {[using vertically-movable pressure transducer](#)}
- 9/266 . . {[for determining gas density](#)}
- 9/28 . . by measuring the blowing pressure of gas bubbles escaping from nozzles at different depths in a liquid
- 9/30 . . by using centrifugal effects
- 9/32 . . by using flow properties of fluids, e.g. flow through tubes or apertures
- 9/34 . . by using elements moving through the fluid, e.g. vane

- 9/36 . . . Analysing materials by measuring the density or specific gravity, e.g. determining quantity of moisture ([methods of measurement in general G01N 9/02 - G01N 9/32](#))
- 11/00 Investigating flow properties of materials, e.g. viscosity, plasticity; Analysing materials by determining flow properties**
- 2011/0006 . . . {Calibrating, controlling or cleaning viscometers}
- 2011/0013 . . . {Temperature compensation}
- 2011/002 . . . {Controlling sample temperature; Thermal cycling during measurement}
- 2011/0026 . . . {Investigating specific flow properties of non-Newtonian fluids}
- 2011/0033 . . . {Yield stress; Residual stress at zero shear rate}
- 2011/004 . . . {Stress relaxation time}
- 2011/0046 . . . {[In situ](#) measurement during mixing process}
- 2011/0053 . . . {using ergometry; measuring power consumption}
- 2011/006 . . . {Determining flow properties indirectly by measuring other parameters of the system}
- 2011/0066 . . . {electrical properties}
- 2011/0073 . . . {acoustic properties}
- 2011/008 . . . {optical properties}
- 2011/0086 . . . {magnetic properties}
- 2011/0093 . . . {thermal properties}
- 11/02 . . . by measuring flow of the material
- 11/04 . . . through a restricted passage, e.g. tube, aperture
- 11/06 . . . by timing the outflow of a known quantity
- 11/08 . . . by measuring pressure required to produce a known flow
- 11/10 . . . by moving a body within the material
- 11/105 . . . {by detecting the balance position of a float moving in a duct conveying the fluid under test}
- 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}
- 2011/147 {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}
- 2015/0069 . . . {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 consistence 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](#); by filtering [B01D](#); by sifting [B07B](#))
- 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 15/042](#))}
- 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 23/201](#);
 - by measuring impedance: [G01N 27/02](#), e.g. [G01N 27/06](#), [G01N 27/22](#);
 - by electrochemical means: [G01N 27/00](#), e.g. [G01N 27/26](#);
 - by measuring absorption of sonic or ultrasonic vibrations: [G01N 29/00](#), e.g. [G01N 29/02](#)
- 15/0606 . . {by collecting particles on a support}
- 15/0612 . . . {Optical scan of the deposits ([G01N 15/0625](#) takes precedence)}
- 15/0618 . . . {of the filter type ([G01N 15/0643](#) takes precedence)}
- 15/0625 {Optical scan of the deposits}
- 15/0631 {Separation of liquids, e.g. by absorption, wicking}
- 15/0637 . . . {Moving support}
- 15/0643 {of the filter type}
- 15/065 . . {using condensation nuclei counters}
- 15/0656 . . {using electric, e.g. electrostatic methods or magnetic methods (by investigating individual particles [G01N 15/1031](#), [G01N 15/12](#))}
- 2015/0662 . . {Comparing before/after passage through filter}
- 2015/0668 . . {Comparing properties of sample and carrier fluid, e.g. oil in water}
- 2015/0675 . . {Comparing suspension before/after dilution}
- 2015/0681 . . {Purposely modifying particles, e.g. humidifying for growing}
- 2015/0687 . . {in solutions, e.g. non volatile residue}
- 2015/0693 . . {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}
- 2015/0813 . . {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}
- 2015/0833 . . {Pore surface area}
- 2015/084 . . {Testing filters}
- 2015/0846 . . {by use of radiation, e.g. transmitted or reflected light}
- 2015/0853 . . {by electrical capacitance measurement}
- 2015/086 . . {of films, membranes or pellicules}
- 2015/0866 . . {Sorption}
- 2015/0873 . . . {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
- 2015/1006 . . . {for cytology}
- 15/1012 . . {Calibrating particle analysers; References therefor}
- 2015/1018 {Constitution of reference particles}
- 2015/1025 {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](#))}
- 2015/1037 . . {Associating coulter-counter and optical flow cytometer [OFC]}
- 2015/1043 . . {Measuring mass of individual particles}
- 2015/105 . . {Other than optical measurement of deformation of individual particles (optical measurement [G01N 2015/1495](#))}
- 15/1056 . . {Microstructural devices for other than electro-optical measurement (for electro-optical measurement [G01N 15/1484](#))}
- 2015/1062 . . {counting the particles by other than electro-optical means (by electro-optical means [G01N 2015/1486](#))}
- 2015/1068 . . {Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers}
- 2015/1075 . . {Determining speed or velocity of a particle}
- 2015/1081 . . {Sorting the particles}
- 2015/1087 . . {Particle size}
- 2015/1093 . . {Particle shape}
- 15/12 . Coulter-counters
- 15/1209 . . . {Details}
- 15/1218 {concerning the aperture}
- 15/1227 {Circuits}
- 2015/1236 {Flow forming}
- 15/1245 . . . {Devices using more than one aperture}
- 2015/1254 . . . {Electrodes}
- 2015/1263 {Scanning electrodes}
- 2015/1272 . . . {Cleaning}

- 2015/1281 . . . {Detecting blocking debris}
- 2015/129 . . . {measuring the ratio of AC/DC impedances}
- 15/14 . . Electro-optical investigation, e.g. flow cytometers
- 2015/1402 . . . {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}
- 2015/1406 {Control of droplet point}
- 2015/1409 {Control of supply of sheaths fluid, e.g. sample injection control}
- 2015/1411 {Features of sheaths fluids}
- 2015/1413 {Hydrodynamic focussing}
- 2015/1415 {Control of particle position}
- 2015/1418 {Eliminating clogging of debris}
- 2015/142 {Acoustic or ultrasonic focussing}
- 2015/1422 {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}
- 15/1436 {the optical arrangement forming an integrated apparatus with the sample container, e.g. a flow cell}
- 2015/1438 {Using two lasers in succession}
- 2015/144 {Imaging characterised by its optical setup}
- 2015/1443 {Auxiliary imaging}
- 2015/1445 {Three-dimensional imaging, imaging in different image planes, e.g. under different angles or at different depths, e.g. by a relative motion of sample and detector, for instance by tomography}
- 2015/1447 {Spatial selection}
- 2015/145 {by pattern of light, e.g. fringe pattern}
- 2015/1452 {Adjustment of focus; Alignment}
- 2015/1454 {using phase shift or interference, e.g. for improving contrast}
- 15/1456 . . . {without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals}
- 15/1459 {the analysis being performed on a sample stream}
- 2015/1461 {Coincidence detecting; Circuits therefor}
- 15/1463 {using image analysis for extracting features of the particle}
- NOTE**
- References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:
- counting objects disposed at random with size distinction [G06M 11/04](#)
 - extraction of features from image for pattern recognition [G06K 9/46](#)
- 2015/1465 {image analysis on colour image}
- 15/1468 . . . {with spatial resolution of the texture or inner structure of the particle}
- NOTE**
- References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:
- 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](#)
- 15/147 {the analysis being performed on a sample stream}
- 2015/1472 {with colour}
- 15/1475 {using image analysis for extracting features of the particle}
- 2015/1477 {Multiparameters}
- 2015/1479 {Using diffuse illumination or excitation}
- 2015/1481 {Optical analysis of particle in droplet}
- 15/1484 {microstructural devices}
- 2015/1486 {Counting the particles}
- 2015/1488 {Methods for deciding}
- 2015/149 {Sorting the particles}
- 2015/1493 {Particle size}
- 2015/1495 {Deformation of particles}
- 2015/1497 {Particle shape}
- 17/00 Investigating resistance of materials to the weather, to corrosion, or to light**
- 17/002 . {Test chambers}
- 17/004 . {to light}
- 17/006 . {of metals}
- 17/008 . {Monitoring fouling}
- 17/02 . Electrochemical measuring systems for weathering, corrosion or corrosion-protection measurement
- 17/04 . Corrosion probes
- 17/043 . . {Coupons}
- 17/046 . . . {Means for supporting or introducing coupons}
- 19/00 Investigating materials by mechanical methods**
([G01N 3/00](#) - [G01N 17/00](#) take precedence)
- 19/02 . Measuring coefficient of friction between materials
{(testing of tyres [G01M 17/02](#); determinations of friction coefficient used in vehicle braking or traction control systems [B60T 8/172](#))}
- 19/04 . Measuring adhesive force between materials, e.g. of sealing tape, of coating
- 19/06 . Investigating by removing material, e.g. spark-testing

19/08	. Detecting presence of flaws or irregularities (measuring roughness or irregularity of surfaces G01B 5/28)	21/0332	. . . {with temperature control (control of temperature G05D 23/00 ; cryostats F17C 3/08)}
19/10	. Measuring moisture content, e.g. by measuring change in length of hygroscopic filament; Hygrometers	2021/0335	. . . . {Refrigeration of cells; Cold stages}
21/00	Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible or ultra-violet light (G01N 3/00-G01N 19/00 take precedence)	2021/0339	. . . . {Holders for solids, powders}
	NOTE	2021/0342	. . . . {Solid sample being immersed, e.g. equiindex fluid}
	This group <u>does not cover</u> the investigation of spectral properties of light <u>per se</u> , 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 G01J 3/00 .	2021/0346	. . . . {Capillary cells; Microcells}
		2021/035	. . . . {Supports for sample drops}
		2021/0353	. . . . . {Conveyor of successive sample drops}
		2021/0357	. . . . {Sets of cuvettes}
		2021/036	. . . . {transformable, modifiable}
		2021/0364	. . . . {flexible, compressible}
		2021/0367	. . . . {Supports of cells, e.g. pivotable}
		2021/0371	. . . . . {Supports combined with sample intake}
		2021/0375	. . . . . {Slidable cells}
		2021/0378	. . . . {Shapes}
		2021/0382	. . . . . {Frustoconical, tapered cell}
		2021/0385	. . . . {Diffusing membrane; Semipermeable membrane}
		2021/0389	. . . . {Windows}
21/01	. Arrangements or apparatus for facilitating the optical investigation	2021/0392	. . . . . {Nonplanar windows}
2021/0106	. . {General arrangement of respective parts}	2021/0396	. . . . . {Oblique incidence}
2021/0112	. . . {Apparatus in one mechanical, optical or electronic block}	21/05	. . . Flow-through cuvettes (G01N 21/09 takes precedence; handling fluid samples G01N 1/10)
2021/0118	. . . . {Apparatus with remote processing}	2021/052	. . . . . {Tubular type; cavity type; multireflective}
2021/0125	. . . . . {with stored program or instructions}	2021/054	. . . . . {Bubble trap; Debubbling}
2021/0131	. . . . . {being externally stored}	2021/056	. . . . . {Laminated construction}
2021/0137	. . . . . {with PC or the like}	2021/058	. . . . . {Flat flow cell}
2021/0143	. . . . . {with internal and external computer}	21/07	. . . Centrifugal type cuvettes (G01N 21/09 takes precedence; centrifuges <u>per se</u> B04B)
2021/015	. . . {Apparatus with interchangeable optical heads or interchangeable block of optics and detector}	21/09	. . . adapted to resist hostile environments or corrosive or abrasive materials
2021/0156	. . . . {with optics only in separate head, e.g. connection by optical fibres}	21/11	. . Filling or emptying of cuvettes
2021/0162	. . {using microprocessors for control of a sequence of operations, e.g. test, powering, switching, processing}	2021/115	. . . . {Washing; Purging}
2021/0168	. . . . {for the measurement cycle}	21/13	. . Moving of cuvettes or solid samples to or from the investigating station {(handling materials for automatic analysis G01N 35/00)}
2021/0175	. . . . {for selecting operating means}	2021/135	. . . . {Sample holder displaceable (in automatised apparatus G01N 35/02)}
2021/0181	. . {Memory or computer-assisted visual determination}	21/15	. . Preventing contamination of the components of the optical system or obstruction of the light path
2021/0187	. . {Mechanical sequence of operations}	2021/151	. . . . {Gas blown}
2021/0193	. . {the sample being taken from a stream or flow to the measurement cell}	2021/152	. . . . {Scraping; Brushing; Moving band}
21/03	. . Cuvette constructions	2021/154	. . . . {Ultrasonic cleaning}
21/0303	. . . {Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment (G01N 21/031 - G01N 21/15 take precedence)}	2021/155	. . . . {Monitoring cleanness of window, lens, or other parts}
2021/0307	. . . . {Insert part in cell}	2021/157	. . . . . {Monitoring by optical means}
21/031	. . . {Multipass arrangements}	2021/158	. . . . {Eliminating condensation}
2021/0314	. . . . {Double pass, autocollimated path}	21/17	. . Systems in which incident light is modified in accordance with the properties of the material investigated (where the material investigated is optically excited causing a change in wavelength of the incident light G01N 21/63)
21/0317	. . . {High pressure cuvettes; (G01N 21/0332 - G01N 21/15 take precedence)}	21/1702	. . {with opto-acoustic detection, e.g. for gases or analysing solids}
2021/0321	. . . . {One time use cells, e.g. integrally moulded}	2021/1704	. . . . {in gases}
2021/0325	. . . . {Cells for testing reactions, e.g. containing reagents}	2021/1706	. . . . {in solids}
2021/0328	. . . . . {Arrangement of two or more cells having different functions for the measurement of reactions}	2021/1708	. . . . {with piezotransducers (probes for investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves G01N 29/24)}

- 21/171 . . {with calorimetric detection, e.g. with thermal lens detection}
- 2021/1712 . . . {Thermal lens, mirage effect}
- 2021/1714 . . . {Photothermal radiometry with measurement of emission}
- 21/1717 . . {with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance}
- 2021/1719 . . . {Carrier modulation in semiconductors}
- 2021/1721 . . . {Electromodulation}
- 2021/1723 . . . {Fluid modulation}
- 2021/1725 . . . {Modulation of properties by light, e.g. photorefectance}
- 2021/1727 . . . {Magnetomodulation}
- 2021/1729 . . . {Piezomodulation}
- 2021/1731 . . . {Temperature modulation}
- 2021/1734 . . {Sequential different kinds of measurements; Combining two or more methods}
- 2021/1736 . . . {with two or more light sources}
- 2021/1738 . . {Optionally different kinds of measurements; Method being valid for different kinds of measurement}
- 2021/174 . . . {either absorption-reflection or emission-fluorescence}
- 2021/1742 . . . {either absorption or reflection}
- 2021/1744 . . . {either absorption or scatter}
- 2021/1746 . . {Method using tracers}
- 2021/1748 . . {Comparative step being essential in the method}
- 2021/1751 . . . {Constructive features therefore, e.g. using two measurement cells}
- 2021/1753 {and using two light sources}
- 2021/1755 {and using two apparatus or two probes}
- 2021/1757 . . {Time modulation of light being essential to the method of light modification, e.g. using single detector (circuits for photometry with modulation, using one detector G01J 1/44)}
- 2021/1759 . . . {Jittering, dithering, optical path modulation}
- 2021/1761 . . {A physical transformation being implied in the method, e.g. a phase change}
- 2021/1763 . . . {Gas to liquid phase change}
- 2021/1765 . . {Method using an image detector and processing of image signal}
- 2021/1768 . . . {using photographic film}
- 2021/177 . . . {Detector of the video camera type}
- 2021/1772 {Array detector}
- 2021/1774 {Line array detector}
- 2021/1776 {Colour camera}
- 2021/1778 {IIT [intensified image tube]}
- 2021/178 . . {Methods for obtaining spatial resolution of the property being measured}
- 2021/1782 . . . {In-depth resolution}
- 2021/1785 . . . {Three dimensional}
- 2021/1787 {Tomographic, i.e. computerised reconstruction from projective measurements}
- 2021/1789 . . {Time resolved}
- 2021/1791 . . . {stroboscopic; pulse gated; time range gated}
- 2021/1793 . . {Remote sensing}
- 2021/1795 . . . {Atmospheric mapping of gases}
- 2021/1797 . . . {in landscape, e.g. crops}
- 21/19 . . Dichroism
- 21/21 . . Polarisation-affecting properties (G01N 21/19 takes precedence)
- 21/211 . . . {Ellipsometry (optical thickness measurement G01B 11/06)}
- 2021/212 {Arrangement with total internal reflection}
- 2021/213 {Spectrometric ellipsometry}
- 2021/214 {Variance incidence arrangement}
- 2021/215 {Brewster incidence arrangement}
- 2021/216 . . . {using circular polarised light}
- 2021/217 . . . {Measuring depolarisation or comparing polarised and depolarised parts of light}
- 2021/218 . . . {Measuring properties of electrooptical or magneto-optical media}
- 21/23 . . . Bi-refringence
- 21/25 . . Colour; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands
- 21/251 . . . {Colorimeters; Construction thereof}
- 21/253 {for batch operation, i.e. multisample apparatus (analytical automats G01N 35/00)}
- 21/255 . . . {Details, e.g. use of specially adapted sources, lighting or optical systems}
- 21/256 . . . {Arrangements using two alternating lights and one detector}
- 2021/258 . . . {Surface plasmon spectroscopy, e.g. micro- or nanoparticles in suspension}
- 21/27 . . . using photo-electric detection (G01N 21/31 takes precedence) {}; circuits for computing concentration (logarithmic circuits G06G 7/24; photometric circuits in general G01J)
- 21/272 {for following a reaction, e.g. for determining photometrically a reaction rate (photometric kinetic analysis)}
- 21/274 {Calibration, base line adjustment, drift correction}
- 21/276 {with alternation of sample and standard in optical path}
- 21/278 {Constitution of standards}
- 21/29 . . . using visual detection (G01N 21/31 takes precedence)
- 21/293 {with colour charts, graduated scales or turrets}
- 2021/296 {Visually measuring scintillation effect}
- 21/31 . . . Investigating relative effect of material at wavelengths characteristic of specific elements or molecules, e.g. atomic absorption spectrometry {(G01N 21/72 takes precedence)}
- 21/3103 {Atomic absorption analysis}
- 2021/3107 {Cold vapor, e.g. determination of Hg}
- 2021/3111 {using Zeeman split}
- 2021/3114 {Multi-element AAS arrangements}
- 2021/3118 {Commutating sources, e.g. line source/broad source, chopping for comparison of broad/narrow regimes}
- 2021/3122 {using a broad source with a monochromator}
- 2021/3125 {Measuring the absorption by excited molecules}
- 2021/3129 {Determining multicomponents by multiwavelength light}
- 2021/3133 {with selection of wavelengths before the sample}
- 2021/3137 {with selection of wavelengths after the sample}

- 21/314 {with comparison of measurements at specific and non-specific wavelengths ([dual wavelength spectrometry G01J 3/427](#))}
- 2021/3144 {for oxymetry}
- 2021/3148 {using three or more wavelengths}
- 21/3151 {using two sources of radiation of different wavelengths ([G01N 21/33 - G01N 21/39 take precedence](#))}
- 2021/3155 {Measuring in two spectral ranges, e.g. UV and visible}
- 2021/3159 {Special features of multiplexing circuits}
- 2021/3162 {with offset adjustment between filters}
- 2021/3166 {using separate detectors and filters}
- 2021/317 {Special constructive features}
- 2021/3174 {Filter wheel}
- 2021/3177 {Use of spatially separated filters in simultaneous way}
- 2021/3181 {using LEDs}
- 2021/3185 {typically monochromatic or band-limited}
- 2021/3188 {band-limited}
- 2021/3192 {Absorption edge variation is measured}
- 2021/3196 {Correlating located peaks in spectrum with reference data, e.g. fingerprint data}
- 21/33 using ultra-violet light ([G01N 21/39 takes precedence](#))
- 2021/335 {Vacuum UV}
- 21/35 using infra-red light ([G01N 21/39 takes precedence](#))
- 21/3504 for analysing gases, e.g. multi-gas analysis
- 2021/3509 {Correlation method, e.g. one beam alternating in correlator/sample field}
- 2021/3513 {Open path with an instrumental source}
- 21/3518 Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques
- NOTE**
- This group also covers devices without instrumental sources, e.g. radiometric-type devices using ambient infra-red light.
- 2021/3522 {balancing by two filters on two detectors}
- 2021/3527 {and using one filter cell as attenuator}
- 2021/3531 {without instrumental source, i.e. radiometric}
- 2021/3536 {using modulation of pressure or density}
- 2021/354 {Hygrometry of gases}
- 2021/3545 {Disposition for compensating effect of interfering gases}
- 2021/355 {by using a third optical path, e.g. interference cuvette}
- 21/3554 for determining moisture content
- 21/3559 in sheets, e.g. in paper
- 21/3563 for analysing solids; Preparation of samples therefor
- 2021/3568 {applied to semiconductors, e.g. Silicon}
- 2021/3572 {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
- 2021/3595 {using FTIR}
- 21/37 using pneumatic detection ([\(opto-acoustic detection G01N 21/1702\)](#))
- 21/39 using tunable lasers
- 2021/391 {Intracavity sample}
- 2021/392 {Measuring reradiation, e.g. fluorescence, backscatter}
- 2021/393 {and using a spectral variation of the interaction of the laser beam and the sample}
- 2021/394 {DIAL method}
- 2021/395 {using a topographic target}
- 2021/396 {Type of laser source}
- 2021/397 {Dye laser}
- 2021/398 {CO₂ laser}
- 2021/399 {Diode laser}
- 21/41 Refractivity; Phase-affecting properties, e.g. optical path length ([G01N 21/21 takes precedence](#))
- 2021/4106 {Atmospheric distortion; Turbulence}
- 2021/4113 {Atmospheric dispersion}
- 21/412 {Index profiling of optical fibres}
- 2021/4126 {Index of thin films}
- 21/4133 {Refractometers, e.g. differential}
- 2021/414 {Correcting temperature effect in refractometers}
- 2021/4146 {Differential cell arrangements}
- 2021/4153 {Measuring the deflection of light in refractometers}
- 2021/416 {Visualising flow by index measurement}
- 2021/4166 {Methods effecting a waveguide mode enhancement through the property being measured}
- 2021/4173 {Phase distribution}
- 2021/418 {Frequency/phase diagrams}
- 2021/4186 {Phase modulation imaging}
- 2021/4193 {using a PSD}
- 21/43 by measuring critical angle
- 21/431 {Dip refractometers, e.g. using optical fibres}
- 2021/432 {comprising optical fibres}
- 2021/433 {with an unclad part on the fibre}
- 2021/434 {Dipping block in contact with sample, e.g. prism}
- 2021/435 {Sensing drops on the contact surface}
- 2021/436 {Sensing resonant reflection}
- 2021/437 {with investigation of angle}
- 2021/438 {with investigation of wavelength}
- 21/45 using interferometric methods; using Schlieren methods
- 2021/451 {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}
- 2021/456 {Moire deflectometry}

2021/458	. . . . {using interferential sensor, e.g. sensor fibre, possibly on optical waveguide}	21/49	. . . . within a body or fluid
21/47	. . Scattering, i.e. diffuse reflection (G01N 21/25 , G01N 21/41 take precedence { G01N 21/55 takes precedence})	2021/495	. . . . {the fluid being adsorbed, e.g. in porous medium}
2021/4702	. . . . {Global scatter; Total scatter, excluding reflections}	21/51	. . . . inside a container, e.g. in an ampoule (G01N 21/53 takes precedence; checking containers for cleanliness B08B 9/46)
2021/4704	. . . . {Angular selective}	2021/513	. . . . . {Cuvettes for scattering measurements}
2021/4707	. . . . {Forward scatter; Low angle scatter}	2021/516	. . . . . {Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays}
2021/4709	. . . . {Backscatter}	21/53	. . . . . within a flowing fluid, e.g. smoke (alarm devices actuated by smoke G08B 17/10)
2021/4711	. . . . {Multiangle measurement}	21/532	. . . . . {with measurement of scattering and transmission}
2021/4714	. . . . . {Continuous plural angles}	21/534	. . . . . {by measuring transmission alone, i.e. determining opacity}
2021/4716	. . . . . {Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}	2021/536	. . . . . {Measurement device mounted at stack}
2021/4719	. . . . . {using a optical fibre array}	21/538	. . . . . {for determining atmospheric attenuation and visibility}
2021/4721	. . . . . {using a PSD}	21/55	. . . Specular reflectivity
2021/4723	. . . . . {Scanning scatter angles}	2021/551	. . . . {Retroreflectance}
2021/4726	. . . . . {Detecting scatter at 90°}	21/552	. . . . Attenuated total reflection
2021/4728	. . . . . {Optical definition of scattering volume}	21/553	. . . . . {and using surface plasmons (fluorescence excitation G01N 21/648 ; enhanced Raman G01N 21/658)}
2021/473	. . . . {Compensating for unwanted scatter, e.g. reliefs, marks}	21/554	. . . . . {detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}
2021/4733	. . . . {Discriminating different types of scatterers}	2021/555	. . . . {Measuring total reflection power, i.e. scattering and specular}
2021/4735	. . . . {Solid samples, e.g. paper, glass}	2021/556	. . . . {Measuring separately scattering and specular}
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}	2021/557	. . . . {Detecting specular reflective parts on sample}
21/474	. . . . . {Details of optical heads therefor, e.g. using optical fibres}	2021/558	. . . . {Measuring reflectivity and transmission}
2021/4742	. . . . . {comprising optical fibres}	2021/559	. . . . {Determining variation of specular reflection within diffusively reflecting sample}
2021/4745	. . . . . {Fused bundle, i.e. for backscatter}	21/57	. . . . Measuring gloss
2021/4747	. . . . . {Concentric bundles}	2021/575	. . . . . {Photogoniometering}
2021/475	. . . . . {Bifurcated bundle}	21/59	. . . Transmissivity (G01N 21/25 takes precedence)
2021/4752	. . . . . {Geometry}	2021/5903	. . . . {using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}
2021/4754	. . . . . {Diffuse illumination}	21/5907	. . . . {Densitometers}
2021/4757	. . . . . {Geometry 0/45° or 45/0°}	21/5911	. . . . . {of the scanning type (scanning per se G02B)}
2021/4759	. . . . . {Annular illumination}	2021/5915	. . . . . {Processing scan data in densitometry}
2021/4761	. . . . . {Mirror arrangements, e.g. in IR range}	2021/5919	. . . . . {Determining total density of a zone}
2021/4764	. . . . . {Special kinds of physical applications}	2021/5923	. . . . . {Determining zones of density; quantitating spots}
2021/4766	. . . . . {Sample containing fluorescent brighteners}	2021/5926	. . . . . {Isodensitometers}
2021/4769	. . . . . {Fluid samples, e.g. slurries, granulates; Compressible powdery of fibrous samples}	2021/593	. . . . . {Correcting from the background density}
2021/4771	. . . . . {Matte surfaces with reflecting particles}	2021/5934	. . . . . {Averaging on a zone}
2021/4773	. . . . . {Partly or totally translucent samples}	2021/5938	. . . . . {Features of monitor, display}
2021/4776	. . . . . {Miscellaneous in diffuse reflection devices}	2021/5942	. . . . . {for dot area ratio in printing applications}
2021/4778	. . . . . {Correcting variations in front distance}	2021/5946	. . . . . {for binary signal}
2021/478	. . . . . {Application in testing analytical test strips}	2021/5949	. . . . . {Correcting nonlinearity of signal, e.g. in measurement of photomedium}
2021/4783	. . . . . {Examining under varying incidence; Angularly adjustable head}	2021/5953	. . . . . {for detecting a spatial spectrum}
21/4785	. . . . {Standardising light scatter apparatus; Standards therefor}	2021/5957	. . . . . {using an image detector type detector, e.g. CCD}
21/4788	. . . . {Diffraction (for sizing particles G01N 15/0205)}	2021/5961	. . . . . {using arrays of sources and detectors}
2021/479	. . . . . {Speckle}	2021/5965	. . . . . {using selected detectors in an array}
2021/4792	. . . . {Polarisation of scatter light}	2021/5969	. . . . . {Scanning of a tube, a cuvette, a volume of sample}
21/4795	. . . . {spatially resolved investigating of object in scattering medium (in vivo A61B)}	2021/5973	. . . . . {where the cuvette or tube is moved}
2021/4797	. . . . . {time resolved, e.g. analysis of ballistic photons}		

- 2021/5976 {Image projected and scanning projected image}
- 2021/598 {Features of mounting, adjusting}
- 2021/5984 {height adjustable}
- 2021/5988 {Fluid mounting or the like, e.g. vortex}
- 2021/5992 {Double pass}
- 2021/5996 {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
- 2021/625 . . {Excitation by energised particles such as metastable molecules}
- 21/63 . . optically excited
- 21/631 . . . {using photolysis and investigating photolysed fragments}
- 2021/632 {Predissociation, e.g. for fluorescence of transient excited radicals}
- 2021/633 . . . {Photoinduced grating used for analysis}
- 2021/634 . . . {Photochromic material analysis}
- 2021/635 . . . {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 1/35](#))}
- 2021/637 {Lasing effect used for analysis}
- 2021/638 {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}
- 21/6428 {Measuring fluorescence of fluorescent products of reactions or of fluorochrome labelled reactive substances, e.g. measuring quenching effects, using measuring "optrodes" ([in vivo 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}
- 21/6445 {Measuring fluorescence polarisation}
- 21/6447 {by visual observation}
- 21/645 {Specially adapted constructive features of fluorimeters}
- 21/6452 {Individual samples arranged in a regular 2D-array, e.g. multiwell plates}
- 21/6454 {using an integrated detector array}
- 21/6456 {Spatial resolved fluorescence measurements; Imaging}
- 21/6458 {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}
- 21/648 {using evanescent coupling or surface plasmon coupling for the excitation of fluorescence}
- 2021/6482 {Sample cells, cuvettes}
- 2021/6484 {Optical fibres}
- 21/6486 {Measuring fluorescence of biological material, e.g. DNA, RNA, cells ([G01N 21/6428 takes precedence](#))}
- 21/6489 {Photoluminescence of semiconductors}
- 2021/6491 {Measuring fluorescence and transmission; Correcting inner filter effect}
- 2021/6493 {by alternating fluorescence/transmission or fluorescence/reflection}
- 2021/6495 {Miscellaneous methods}
- 2021/6497 {Miscellaneous applications}
- 21/65 . . . Raman scattering
- 2021/651 {Cuvettes therefore}
- 2021/653 {Coherent methods [CARS]}
- 2021/655 {Stimulated Raman}
- 2021/656 {Raman microprobe}
- 21/658 {enhancement Raman, e.g. surface plasmons}
- 21/66 . . electrically excited, e.g. electroluminescence
- 21/67 . . . using electric arcs or discharges ([spark gaps per se H01T](#))
- 21/68 . . . using high frequency electric fields
- 21/69 . . . specially adapted for fluids {, e.g. molten metal}
- 2021/695 {Molten metals}
- 21/70 . . mechanically excited, e.g. triboluminescence
- 21/71 . . thermally excited
- 2021/712 . . . {using formation of volatile hydride}
- 21/714 . . . {Sample nebulisers for flame burners or plasma burners ([nebulizers per se B05B](#))}
- 21/716 . . . {by measuring the radiation emitted by a test object treated by combustion gases for investigating the composition of gas mixtures}
- 21/718 . . . {Laser microanalysis, i.e. with formation of sample plasma}
- 21/72 . . . using flame burners
- 2021/725 {for determining of metalloids, using Beilstein type reaction}

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- 21/73 . . . using plasma burners or torches
- 21/74 . . . using flameless atomising, e.g. graphite furnaces
- 2021/745 {Control of temperature, heating, ashing}
- 21/75 . Systems in which material is subjected to a chemical reaction, the progress or the result of the reaction being investigated ([systems in which material is burnt in a flame or plasma G01N 21/72, G01N 21/73](#))
- 2021/751 . . {Comparing reactive/non reactive substances}
- 2021/752 . . {Devices comprising reaction zones}
- 2021/754 . . {Reagent flow and intermittent injection of sample or *vice versa*}
- 2021/755 . . {Comparing readings with/without reagents, or before/after reaction}
- 2021/757 . . {using immobilised reagents}
- 2021/758 . . {using reversible reaction}
- 21/76 . . Chemiluminescence; Bioluminescence
- 21/763 . . . {Bioluminescence}
- 21/766 . . . {of gases}
- 21/77 . . by observing the effect on a chemical indicator
- 21/7703 . . . {using reagent-clad optical fibres or optical waveguides ([using measurement of total internal reflection or attenuated total reflection G01N 21/552; optical fibres or waveguides per se G02B](#))}
- 2021/7706 {Reagent provision}
- 2021/7709 {Distributed reagent, e.g. over length of guide}
- 2021/7713 {in core}
- 2021/7716 {in cladding}
- 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 {Multilayers}
- 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 G01N 33/4875; analytical elements specific to chemical analysis of biological material G01N 33/52; autometer with reagent band G01N 35/04](#))}
- 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 {Immersed 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 21/8507](#))}
- 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 multidetectors, 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 21/89; 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 band}
- 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](#))}
- 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 11/00; optical scanning G02B 26/10; image transformation G06T 3/00; computerised image enhancement G06T 5/00; image processing \[per se\]\(#\) for flaw detection G06T 7/0002](#))}
- 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}
- 2021/889 {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 diffracted 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}
- 2021/9063 {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}
- 2021/933 {Adjusting baseline or gain (also for web inspection)}
- 2021/936 {Adjusting threshold, e.g. by way of moving average}
- 21/94 . . . Investigating contamination, e.g. dust ([G01N 21/85](#) takes precedence)
- 2021/945 {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 22/10](#))}
- 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
- 2021/9542 {using a probe}
- 2021/9544 {with emitter and receiver on the probe}
- 2021/9546 {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 22/10](#))}
- 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](#))}
- 2021/9583 {Lenses}
- 2021/9586 {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 not covered by groups [G01N 3/00](#) – [G01N 17/00](#), [G01N 21/00](#) or [G01N 22/00](#)**
- 23/005 . {by using neutrons ([G01N 23/02](#) - [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 23/04](#), [G01N 23/043](#), 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](#).
- All groups listed in this Warning 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 immersed 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 23/18](#), 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 specimens 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
- 23/201 . . 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.
- 23/202 . . . 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.
- 23/203 . . Measuring back scattering
- 23/204 . . . using neutrons
- 23/205 . . using diffraction cameras
- 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.
- 23/2055 . . Analysing diffraction patterns
- 23/207 . . 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.
- 23/2073 . . . {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.
- 23/2076 . . . {for spectrometry, i.e. using an analysing crystal, e.g. for measuring X-ray fluorescence spectrum of a sample with wavelength-dispersion, i.e. WDXFS}
- WARNING**
- Group [G01N 23/2076](#) is impacted by reclassification into group [G01N 23/223](#).
- Groups [G01N 23/2076](#) and [G01N 23/223](#) should be considered in order to perform a complete search.
- 23/22 . . 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.
- 23/2202 . . Preparing specimens therefor
- 23/2204 . . Specimen supports therefor; Sample conveying means therefor
- 23/2206 . . 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

- 23/2208 . . . all measurements being of a secondary emission, e.g. combination of SE measurement and characteristic X-ray measurement
- 23/2209 . . . 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.
- 23/221 . . . by activation analysis
- 23/222 . . . using neutron activation analysis [NAA]
- 23/223 . . . 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 23/2076](#).
- Groups [G01N 23/2076](#) and [G01N 23/223](#) should be considered in order to perform a complete search.
- 23/225 . . . using electron or ion
- 23/2251 . . . using incident electron beams, e.g. scanning electron microscopy [SEM]
- 23/2252 Measuring emitted X-rays, e.g. electron probe microanalysis [EPMA]
- 23/2254 Measuring cathodoluminescence
- 23/2255 . . . using incident ion beams, e.g. proton beams
- 23/2257 Measuring excited X-rays, i.e. particle-induced X-ray emission [PIXE]
- 23/2258 Measuring secondary ion emission, e.g. secondary ion mass spectrometry [SIMS] (mass-to-charge ratio analysis aspects of SIMS for material analysis [G01N 27/62](#))
- WARNING**
- Group [G01N 23/2258](#) is impacted by reclassification into group [G01N 27/62](#).
- Groups [G01N 23/2258](#) and [G01N 27/62](#) should be considered in order to perform a complete search.
- 23/227 . . . Measuring photoelectric effect, e.g. photoelectron emission microscopy [PEEM]
- 23/2273 . . . Measuring photoelectron spectrum, e.g. electron spectroscopy for chemical analysis [ESCA] or X-ray photoelectron spectroscopy [XPS]
- 23/2276 . . . using the Auger effect, e.g. Auger electron spectroscopy [AES]
- 24/00 Investigating or analyzing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects (arrangements or instruments for measuring magnetic resonance effects [G01R 33/20](#))**
- 24/002 . . . {Using resonance on molecular beams (atomic clocks [G04F 5/14](#); beam masers [H01S 1/06](#))}
- 24/004 . . . {Using acoustical resonance, i.e. phonon interactions}
- 24/006 . . . {using optical pumping (magnetometers using optical pumping [G01R 33/26](#), optical pumping of lasers [H01S 3/091](#))}
- 24/008 . . . {by using resonance effects in zero field, e.g. in microwave, submillimetric region (by measuring absorption of microwaves by the material [G01N 22/00](#))}
- 24/08 . . . by using nuclear magnetic resonance ([G01N 24/12](#) takes precedence)
- 24/081 . . . {Making measurements of geologic samples, e.g. measurements of moisture, pH, porosity, permeability, tortuosity or viscosity}
- 24/082 . . . {Measurement of solid, liquid or gas content}
- 24/084 . . . {Detection of potentially hazardous samples, e.g. toxic samples, explosives, drugs, firearms, weapons}
- 24/085 . . . {Analysis of materials for the purpose of controlling industrial production systems}
- 24/087 . . . {Structure determination of a chemical compound, e.g. of a biomolecule such as a protein}
- 24/088 . . . {Assessment or manipulation of a chemical or biochemical reaction, e.g. verification whether a chemical reaction occurred or whether a ligand binds to a receptor in drug screening or assessing reaction kinetics}
- 24/10 . . . by using electron paramagnetic resonance ([G01N 24/12](#) takes precedence)
- 24/12 . . . by using double resonance
- 24/14 . . . by using cyclotron resonance
- 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}
- 25/02 . . . by investigating changes of state or changes of phase; by investigating sintering ({investigating or analysing oils or hydrocarbon fluids by measuring cloud point or pour point [G01N 33/2811](#))}
- 25/04 . . . of melting point; of freezing point; of softening point
- 25/06 Analysis by measuring change of freezing point
- 25/08 . . . of boiling point
- 25/085 {Investigating nucleation}
- 25/10 Analysis by measuring change of boiling point
- 25/12 . . . of critical point; of other phase change
- 25/14 . . . by using distillation, extraction, sublimation, condensation, freezing, or crystallisation ([G01N 25/02](#) takes precedence)
- 25/142 . . . {by condensation}
- 25/145 . . . {Accessories, e.g. cooling devices (in general [B01L](#), [F25D](#))}
- 25/147 . . . {by crystallisation}
- 25/16 . . . by investigating thermal coefficient of expansion
- 25/18 . . . by investigating thermal conductivity (by calorimetry [G01N 25/20](#); by measuring change of resistance of an electrically-heated body [G01N 27/18](#))
- 25/20 . . . by investigating the development of heat, i.e. calorimetry, e.g. by measuring specific heat, by measuring thermal conductivity (calorimeters [per se](#) [G01K](#))
- 25/22 . . . on combustion or catalytic oxidation, e.g. of components of gas mixtures
- 25/24 . . . using combustion tubes, e.g. for microanalysis

- 25/26 . . . using combustion with oxygen under pressure, e.g. in bomb calorimeter
- 25/28 . . . the rise in temperature of the gases resulting from combustion being measured directly
- 25/30 using electric temperature-responsive elements
- 25/32 using thermoelectric elements
- 25/34 using mechanical temperature-responsive elements, e.g. bimetallic ([bimetallic elements per se G12B 1/02](#))
- 25/36 for investigating the composition of gas mixtures
- 25/38 using the melting or combustion of a solid
- 25/385 {for investigating the composition of gas mixtures}
- 25/40 . . . the heat developed being transferred to a flowing fluid
- 25/42 continuously
- 25/44 . . . the heat developed being transferred to a fixed quantity of fluid
- 25/46 for investigating the composition of gas mixtures
- 25/48 . . on solution, sorption, or a chemical reaction not involving combustion or catalytic oxidation
- 25/4806 . . . {Details not adapted to a particular type of sample}
- 25/4813 {concerning the measuring means}
- 25/482 {concerning the temperature responsive elements ([measuring temperature or quantity of heat, thermally-sensitive elements G01K; thermoelectric devices H01L 35/00, H01L 37/00](#))}
- 25/4826 {concerning the heating or cooling arrangements ([heating apparatus for chemical or physical laboratory apparatus in general B01L 7/00](#))}
- 25/4833 {specially adapted for temperature scanning}
- 25/484 {Heat insulation}
- 25/4846 . . . {for a motionless, e.g. solid sample}
- 25/4853 {Details}
- 25/486 {Sample holders}
- 25/4866 {by using a differential method}
- 25/4873 . . . {for a flowing, e.g. gas sample}
- 25/488 {Details}
- 25/4886 {concerning the circulation of the sample}
- 25/4893 {by using a differential method}
- 25/50 . . by investigating flash-point; by investigating explosibility
- 25/52 . . by determining flash-point of liquids
- 25/54 . . by determining explosibility
- 25/56 . . by investigating moisture content
- 25/58 . . by measuring changes of properties of the material due to heat, cold or expansion
- 25/60 . . . for determining the wetness of steam
- 25/62 . . by psychrometric means, e.g. wet-and-dry bulb thermometers
- 25/64 . . . using electric temperature-responsive elements
- 25/66 . . by investigating dew-point
- 25/68 . . . by varying the temperature of a condensing surface
- 25/70 . . . by varying the temperature of the material, e.g. by compression, by expansion
- 25/72 . . Investigating presence of flaws ([by investigating thermal conductivity G01N 25/18](#))
- 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 therefor ([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 27/00, 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; involving polarography G01N 27/48; measuring electric resistance of fluids G01R 27/22](#))
- 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 ([regulating G05D](#))
- 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](#))}
- 2027/222 {for analysing gases}
- 27/223 . . . {for determining moisture content, e.g. humidity (rain detectors on vehicle windows [B60S 1/0825](#))}
- 27/225 {by using hygroscopic materials}
- 27/226 . . . {Construction of measuring vessels; Electrodes therefor}
- 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 therefor (measuring capacitance [per se G01R 27/26](#))}
- 27/24 . . . Investigating the presence of flaws
- 27/26 . . by investigating electrochemical variables; by using electrolysis or electrophoresis (investigating resistance to corrosion [G01N 17/00](#); investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography, [G01N 30/00](#); immunoelectrophoresis [G01N 33/561](#); electrochemical processes or apparatus in general [B01J](#); standard cells [H01M 6/28](#))
- 27/27 . . Association of two or more measuring systems or cells, each measuring a different parameter, where the measurement results may be either used independently, the systems or cells being physically associated, or combined to produce a value for a further parameter {, e.g. electrochemical electrode arrays (gas sensor arrays [G01N 33/0031](#))}
- 27/28 . . Electrolytic cell components
- 27/283 . . . {Means for supporting or introducing electrochemical probes}
- 27/286 {Power or signal connectors associated therewith}
- 27/30 . . . Electrodes, e.g. test electrodes; Half-cells ([G01N 27/414](#) takes precedence)
- 27/301 {Reference electrodes}
- 27/302 {pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes (ion selective electrodes [G01N 27/333](#), glass electrodes [G01N 27/36](#))}
- 27/304 {Gas permeable electrodes}
- 27/305 {optically transparent or photoresponsive electrodes}
- 27/307 {Disposable laminated or multilayered electrodes ([G01N 27/3272](#) takes precedence)}
- 27/308 {at least partially made of carbon}
- 27/31 Half-cells with permeable membranes, e.g. semi-porous or perm-selective membranes
- 27/32 Calomel electrodes
- 27/327 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](#))}
- 27/3271 {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](#))}
- 27/3272 {Test elements therefor, i.e. disposable laminated substrates with electrodes, reagent and channels (optical biosensors [G01N 33/52](#))}
- 27/3273 {Devices therefor, e.g. test element readers, circuitry (details not specific to biochemical electrodes [G01N 33/4875](#))}
- 27/3274 {Corrective measures, e.g. error detection, compensation for temperature or hematocrit, calibration (coding of calibration information [G01N 33/48771](#))}
- 27/3275 {Sensing specific biomolecules, e.g. nucleic acid strands, based on an electrode surface reaction}
- 27/3276 {being a hybridisation with immobilised receptors (using a FET type sensor [G01N 27/4145](#); concerning the hybridisation [C12Q 1/68](#))}
- 27/3277 {being a redox reaction, e.g. detection by cyclic voltammetry (voltammetry [per se G01N 27/42](#), [G01N 27/48](#))}
- 27/3278 {involving nanosized elements, e.g. nanogaps or nanoparticles (nanopores [G01N 33/48721](#); magnetic beads [G01N 27/745](#))}
- 27/333 Ion-selective electrodes or membranes (glass electrodes [G01N 27/36](#))
- 27/3335 {the membrane containing at least one organic component ([G01N 27/3271](#) takes precedence; aspects concerning the enzyme reagent in enzyme electrodes [C12Q 1/001](#))}
- 27/34 Dropping-mercury electrodes
- 27/36 Glass electrodes
- 27/38 Cleaning of electrodes
- 27/40 . . . Semi-permeable membranes or partitions
- 27/401 . . . Salt-bridge leaks; Liquid junctions
- 27/403 . . Cells and electrode assemblies
- 27/4035 . . . {Combination of a single ion-sensing electrode and a single reference electrode ([G01N 27/406](#) and [G01N 27/413](#) take precedence)}
- 27/404 . . . Cells with anode, cathode and cell electrolyte on the same side of a permeable membrane which separates them from the sample fluid {, e.g. Clark-type oxygen sensors}
- 27/4045 {for gases other than oxygen}

- 27/406 . . . Cells and probes with solid electrolytes
- 27/4062 {Electrical connectors associated therewith}
- 27/4065 {Circuit arrangements specially adapted therefor}
- 27/4067 {Means for heating or controlling the temperature of the solid electrolyte}
- 27/407 for investigating or analysing gases
{(G01N 27/411 takes precedence)}
- 27/4071 {using sensor elements of laminated structure}
- 27/4072 {characterized by the diffusion barrier}
- 27/4073 {Composition or fabrication of the solid electrolyte}
- 27/4074 {for detection of gases other than oxygen}
- 27/4075 {Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts}
- 27/4076 {Reference electrodes or reference mixtures}
- 27/4077 {Means for protecting the electrolyte or the electrodes}
- 27/4078 {Means for sealing the sensor element in a housing}
- 27/409 Oxygen concentration cells
- 27/41 Oxygen pumping cells
- 27/411 for investigating liquid metals
- 27/4111 {using sensor elements of laminated structure}
- 27/4112 {Composition or fabrication of the solid electrolyte}
- 27/4114 {for detection of gases other than oxygen}
- 27/4115 {Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts}
- 27/4117 {Reference electrodes or reference mixtures}
- 27/4118 {Means for protecting the electrolyte or the electrodes}
- 27/413 . . . Concentration cells using liquid electrolytes
{measuring currents or voltages in voltaic cells}
- 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 [SG] 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 nanosized 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 flow testing ([G01N 27/007](#) takes precedence); by investigating capacitance [G01N 27/22](#))
- 27/605 . . {for determining moisture content, e.g. humidity}
- 27/61 . . 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 electric discharge to ionise a gas
- 27/70 . . . and measuring current or voltage
- 27/72 . by investigating magnetic variables
- 27/725 . . {by using magneto-acoustical effects or the Barkhausen effect}
- 27/74 . . of fluids ([G01N 24/00](#) takes precedence)
- 27/745 . . . {for detecting magnetic beads used in biochemical assays (concerning the assays [G01N 33/54326](#); sensors therefor [G01R 33/1269](#); automatic analysers therefor [G01N 35/0098](#))}
- 27/76 . . . by investigating susceptibility {(measuring susceptibility [G01R 33/16](#))}
- 27/80 . . for investigating mechanical hardness, e.g. by investigating saturation or remanence of ferromagnetic material
- 27/82 . . for investigating the presence of flaws
- 27/825 . . . {by using magnetic attraction force ([G01N 27/84](#) takes precedence)}
- 27/83 . . . by investigating stray magnetic fields
- 27/84 by applying magnetic powder or magnetic ink
- 27/85 using magnetographic methods
- 27/87 using probes
- 27/90 . . . using eddy currents {(for measuring thickness [G01B 7/06](#))}
- 27/9006 {Details}
- 27/9013 {specially adapted for scanning}
- 27/902 {by moving the sensors}
- 27/9026 {by moving the material}
- 27/9033 {Sensors}
- 27/904 {and more than one sensor}
- 27/9046 {by analysing electrical signals}
- 27/9053 {Compensating for probe to workpiece spacing}
- 27/906 {Compensating for velocity}
- 27/9066 {by measuring the propagation time, or delaying the signals}
- 27/9073 {Recording measured data (in general [G01D](#))}
- 27/908 {synchronously with scanning}
- 27/9086 {Calibrating of recording device}
- 27/9093 {arrangements for supporting or marking or rejecting, e.g. machines (sorting individual articles or bulk material fit to be sorted piece-meal, controlled indirectly by devices which detect or measure some feature of the article or material to be sorted [B07C 5/00](#))}
- 27/92 . by investigating breakdown voltage ([G01N 27/60](#), [G01N 27/62](#) take precedence; testing of articles or specimens of solids or fluids for dielectric strength or breakdown voltage [G01R 31/12](#))
- 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 27/00](#) take precedence; measuring or indicating of ultrasonic, sonic or infrasonic waves in general [G01H](#); systems using the reflection or reradiation of acoustic waves, e.g. acoustic imaging, [G01S 15/00](#); obtaining records by techniques analogous to photography using ultrasonic, sonic or infrasonic waves [G03B 42/06](#); {medical diagnosis by ultrasounds [A61B 8/00](#); generating or transmitting mechanical or acoustic waves [B06B](#), [G10K](#); seismic or acoustic prospecting or detecting [G01V 1/00](#))}**
- 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](#))}
- 29/022 . . {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](#))}
- 29/024 . . by measuring propagation velocity or propagation time of acoustic waves
- 29/028 . . by measuring mechanical or acoustic impedance
- 29/032 . . by measuring attenuation of acoustic waves
- 29/036 . . by measuring frequency or resonance of acoustic waves
- 29/04 . Analysing solids (using acoustic emission techniques [G01N 29/14](#))
- 29/041 . . {on the surface of the material, e.g. using Lamb, Rayleigh or shear waves}
- 29/043 . . {in the interior, e.g. by shear waves}

- 29/045 . . {by imparting shocks to the workpiece and detecting the vibrations or the acoustic waves caused by the shocks (measuring resonant frequency [G01H 13/00](#); measuring strength properties by application of mechanical stress [G01N 3/00](#))}
- 29/046 . . . {using the echo of particles imparting on a surface; using acoustic emission of particles (investigating concentration of particle suspensions [G01N 15/06](#); devices for measuring flow of solids in suspension [G01F 1/74](#))}
- 29/048 . . {Marking the faulty objects}
- 29/06 . . Visualisation of the interior, e.g. acoustic microscopy {(medical or veterinary diagnosis using sonic waves [A61B 8/00](#); representation of acoustic wave distribution [G01H 3/125](#), [G01H 9/002](#); short-range imaging systems using reflection of acoustic waves [G01S 15/8906](#))}
- 29/0609 . . . {Display arrangements, e.g. colour displays (indicating or recording in connection with measuring in general [G01D](#))}
- 29/0618 {synchronised with scanning, e.g. in real-time}
- 29/0627 {Cathode-ray tube displays (in general [G01R 13/20](#))}
- 29/0636 {with permanent recording}
- 29/0645 {Display representation or displayed parameters, e.g. A-, B- or C-Scan}
- 29/0654 . . . {Imaging}
- 29/0663 {by acoustic holography (acoustical holography *per se* [G03H 3/00](#))}
- 29/0672 {by acoustic tomography (medical tomography [A61B 8/13](#))}
- 29/0681 {by acoustic microscopy, e.g. scanning acoustic microscopy}
- 29/069 {Defect imaging, localisation and sizing using, e.g. time of flight diffraction [TOFD], synthetic aperture focusing technique [SAFT], Amplituden-Laufzeit-Ortskurven [ALOK] technique}
- 29/07 . . by measuring propagation velocity or propagation time of acoustic waves
- 29/075 . . . {by measuring or comparing phase angle (measuring frequencies or phase angles *per se* [G01R 23/00](#), [G01R 25/00](#))}
- 29/09 . . by measuring mechanical or acoustic impedance
- 29/11 . . by measuring attenuation of acoustic waves
- 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* [G06F 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}
- 29/449 . . {Statistical methods not provided for in [G01N 29/4409](#), e.g. averaging, smoothing and interpolation}
- 29/46 . . by spectral analysis, e.g. Fourier analysis {or wavelet analysis (spectral signal processing *per se* [G06F 17/14](#))}
- 29/48 . . by amplitude comparison
- 29/50 . . using auto-correlation techniques or cross-correlation techniques
- 29/52 . . using inversion methods other than spectral analysis, e.g. conjugated gradient inversion

30/00

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

NOTE

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

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

- 30/0005 . . {Field flow fractionation}
- 2030/001 . . {hydrodynamic fractionation, e.g. CHDF or HDC}
- 2030/0015 . . . {characterised by driving force}
- 2030/002 . . . {sedimentation or centrifugal FFF}
- 2030/0025 . . . {cross flow FFF}
- 2030/003 {Asymmetrical flow}
- 2030/0035 . . . {electrical field}
- 2030/004 . . {characterised by opposing force}
- 2030/0045 . . . {normal, i.e. diffusion or thermal FFF}
- 2030/005 . . . {steric FFF, i.e. diffusion negligible for larger particles; separation due to protrusion depth into carrier flow profile}
- 2030/0055 . . . {hyperlayer, i.e. different particle populations in hyperlayers elevated above wall}
- 2030/006 {lift hyperlayer, i.e. hydrodynamic lift forces dominate steric effect}
- 2030/0065 . . . {Dielectric FFF, i.e. opposing forces dominate hydrodynamic lift forces and steric effects}
- 2030/007 . . {programming of driving force (carrier programming [G01N 30/02](#))}
- 2030/0075 . . {Separation due to differential desorption}
- 2030/008 . . {Thermal desorption}
- 2030/0085 . . {the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds}
- 2030/009 . . {Extraction}
- 2030/0095 . . {Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments}
- 30/02 . . Column chromatography
- 2030/022 . . {characterised by the kind of separation mechanism}
- 2030/025 . . . {Gas chromatography}
- 2030/027 . . . {Liquid chromatography}
- 30/04 . . Preparation or injection of sample to be analysed
- 2030/042 . . . {Standards}
- 2030/045 {internal}
- 2030/047 {external}
- 30/06 . . . Preparation
- 2030/062 {extracting sample from raw material}
- 2030/065 {using different phases to separate parts of sample}
- 2030/067 {by reaction, e.g. derivatising the sample}
- 30/08 using an enricher

2030/085	. . . . .	{using absorbing precolumn}	2030/345	. . . . .	{fluid electrical conductivity fixed during analysis}
30/10	. . . .	using a splitter	2030/347	. . . . .	{mixers}
30/12	. . . .	by evaporation	30/36	. . . .	in high pressure liquid systems
2030/121	. . . . .	{cooling; cold traps}	30/38	. . .	Flow patterns
2030/122	. . . . .	{cryogenic focusing}	2030/381	. . . . .	{centrifugal chromatography}
2030/123	. . . . .	{using more than one trap}	2030/382	. . . . .	{flow switching in a single column}
2030/125	. . . . .	{pyrolysing}	2030/383	. . . . .	{by using auxiliary fluid}
2030/126	. . . . .	{evaporating sample}	2030/385	. . . . .	{by switching valves}
2030/127	. . . . .	{PTV evaporation}	2030/386	. . . . .	{Radial chromatography, i.e. with mobile phase traversing radially the stationary phase}
2030/128	. . . . .	{Thermal desorption analysis}	2030/387	. . . . .	{Turbulent flow of mobile phase}
30/14	. . . .	by elimination of some components	2030/388	. . . . .	{Elution in two different directions on one stationary phase}
2030/143	. . . . .	{selective absorption}	30/40	. . . . .	using back flushing
2030/146	. . . . .	{using membranes}	2030/402	. . . . .	{purging a device}
30/16	. . .	Injection (G01N 30/24 takes precedence)	2030/405	. . . . .	{re-concentrating or inverting previous separation}
2030/162	. . . . .	{electromigration}	2030/407	. . . . .	{carrying out another separation}
2030/165	. . . . .	{retention gaps}	30/42	. . . . .	using counter-current
2030/167	. . . . .	{on-column injection}	30/44	. . . . .	using recycling of the fraction to be distributed
30/18	. . . . .	using a septum or microsyringe	2030/445	. . . . .	{heart cut}
2030/185	. . . . .	{specially adapted to seal the inlet}	30/46	. . . . .	using more than one column (G01N 30/44 takes precedence)
30/20	. . . . .	using a sampling valve	30/461	. . . . .	{with serial coupling of separation columns}
2030/201	. . . . .	{multiport valves, i.e. having more than two ports}	30/462	. . . . .	{with different eluents or with eluents in different states (G01N 30/463 takes precedence)}
2030/202	. . . . .	{rotary valves}	30/463	. . . . .	{for multidimensional chromatography}
2030/204	. . . . .	{Linearly moving valves, e.g. sliding valves}	30/465	. . . . .	{with specially adapted interfaces between the columns}
2030/205	. . . . .	{Diaphragm valves, e.g. deformed member closing the passage}	30/466	. . . . .	{with separation columns in parallel}
2030/207	. . . . .	{with metering cavity, e.g. sample loop}	30/467	. . . . .	{all columns being identical}
2030/208	. . . . .	{with more than one cavity}	30/468	. . . . .	{involving switching between different column configurations}
30/22	. . . . .	in high pressure liquid systems	30/48	. . .	{Sorbent materials therefor}
30/24	. . . .	Automatic injection systems	30/482	. . . .	{Solid sorbents}
30/26	. . .	Conditioning of the fluid carrier; Flow patterns	2030/484	. . . .	{Solid sorbents}
30/28	. . . .	Control of physical parameters of the fluid carrier	2030/486	. . . .	{gels}
2030/285	. . . . .	{electrically driven carrier}	2030/488	. . . .	{liquid sorbents}
30/30	. . . . .	of temperature	30/50	. . .	Conditioning of the sorbent material or stationary liquid
2030/3007	. . . . .	{same temperature for whole column}	30/52	. . . .	Physical parameters
2030/3015	. . . . .	{temperature gradients along column}	2030/521	. . . . .	{form}
2030/3023	. . . . .	{using cryogenic fluids}	2030/522	. . . . .	{pressure}
2030/303	. . . . .	{using peltier elements}	2030/524	. . . . .	{structural properties}
2030/3038	. . . . .	{temperature control of column exit, e.g. of restrictors}	2030/525	. . . . .	{surface properties, e.g. porosity}
2030/3046	. . . . .	{temperature control of column inlet}	2030/527	. . . . .	{sorbent material in form of a membrane}
2030/3053	. . . . .	{using resistive heating}	2030/528	. . . . .	{Monolithic sorbent material}
2030/3061	. . . . .	{column or associated structural member used as heater}	30/54	. . . . .	Temperature
2030/3069	. . . . .	{electrical resistance used to determine control temperature}	30/56	. . . .	Packing methods or coating methods
2030/3076	. . . . .	{using specially adapted T(t) profile}	2030/562	. . . . .	{packing}
2030/3084	. . . . .	{ovens}	2030/565	. . . . .	{slurry packing}
2030/3092	. . . . .	{Heat exchange between incoming and outgoing mobile phase}	2030/567	. . . . .	{coating}
30/32	. . . . .	of pressure or speed (G01N 30/36 takes precedence)	30/58	. . . .	the sorbent moving as a whole
2030/322	. . . . .	{pulse dampers}	2030/582	. . . . .	{micellar electrokinetic capillary chromatography [MECC]}
2030/324	. . . . .	{speed, flow rate}	2030/585	. . . . .	{Parallel current chromatography}
2030/326	. . . . .	{pumps}	2030/587	. . . . .	{Continuous annular chromatography}
2030/328	. . . . .	{valves, e.g. check valves of pumps}			
30/34	. . . . .	of fluid composition, e.g. gradient (G01N 30/36 takes precedence)			
2030/342	. . . . .	{fluid composition fixed during analysis}			

- 30/60 . . . Construction of the column
- 30/6004 . . . {end pieces}
- 2030/6008 {capillary restrictors}
- 2030/6013 {interfaces to detectors}
- 30/6017 {Fluid distributors}
- 30/6021 {Adjustable pistons}
- 30/6026 {Fluid seals}
- 30/603 {retaining the stationary phase, e.g. Frits}
- 30/6034 . . . {joining multiple columns}
- 30/6039 {in series}
- 30/6043 {in parallel}
- 30/6047 . . . {with supporting means; Holders}
- 30/6052 . . . {body}
- 2030/6056 {using semiconductor micromachining techniques}
- 30/606 {with fluid access or exit ports}
- 30/6065 {with varying cross section}
- 30/6069 {with compartments or bed substructure}
- 30/6073 {in open tubular form}
- 30/6078 {Capillaries}
- 30/6082 {transparent to radiation}
- 30/6086 {form designed to optimise dispersion}
- 30/6091 . . . {Cartridges}
- 30/6095 . . . {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"
- 30/62 . . . Detectors specially adapted therefor
- 2030/621 {signal-to-noise ratio}
- 2030/623 {by modulation of sample feed or detector response}
- 2030/625 {by measuring reference material, e.g. carrier without sample}
- 2030/626 {calibration, baseline}
- 2030/628 {Multiplexing, i.e. several columns sharing a single detector}
- 30/64 . . . Electrical detectors
- 2030/642 {photoionisation detectors}
- 2030/645 {electrical conductivity detectors}
- 2030/647 {surface ionisation}
- 30/66 Thermal conductivity detectors
- 30/68 Flame ionisation detectors
- 2030/685 {flame photometry}
- 30/70 Electron capture detectors
- 30/72 . . . Mass spectrometers {(mass spectrometers per see [H01J 49/00](#))}
- 30/7206 {interfaced to gas chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see [H01J 49/04](#))}
- 30/7213 {splitting of the gaseous effluent}
- 30/722 {through a gas permeable barrier (membranes, porous layers)}
- 2030/7226 {OWTC, short capillaries or transfer line used as column}
- 30/7233 {interfaced to liquid or superfluid chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see [H01J 49/04](#))}
- 30/724 {Nebulising, aerosol formation or ionisation (spraying or atomising in general [B05B](#))}
- 30/7246 {by pneumatic means}
- 30/7253 {by thermal means, e.g. thermospray}
- 30/726 {by electrical or glow discharge}
- 30/7266 {by electric field, e.g. electrospray}
- 30/7273 {Desolvation chambers}
- 30/728 {Intermediate storage of effluent, including condensation on surface}
- 30/7286 {the store moving as a whole, e.g. moving wire}
- 30/7293 {Velocity or momentum separators}
- 30/74 Optical detectors {(measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light [G01J](#))}
- 2030/743 {FTIR}
- 2030/746 {detecting along the line of flow, e.g. axial}
- 30/76 Acoustical detectors {(measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves [G01H](#))}
- 2030/765 {for measuring mechanical vibrations}
- 2030/77 {detecting radioactive properties}
- 30/78 using more than one detector
- 30/80 . . . Fraction collectors
- 30/82 Automatic means therefor
- 30/84 Preparation of the fraction to be distributed
- 2030/8405 {using pyrolysis}
- 2030/8411 {Intermediate storage of effluent, including condensation on surface}
- 2030/8417 {the store moving as a whole, e.g. moving wire}
- 2030/8423 {using permeable separator tubes}
- 2030/8429 {adding modifying material}
- 2030/8435 {for chemical reaction}
- 2030/8441 {to modify physical properties}
- 2030/8447 {Nebulising, aerosol formation or ionisation}
- 2030/8452 {Generation of electrically charged aerosols or ions}
- 2030/8458 {of ions or clusters of individual ions}
- 2030/8464 {Uncharged atoms or aerosols}
- 2030/847 {by pneumatic means}
- 2030/8476 {by thermal means}
- 2030/8482 {by electrical or glow discharge}
- 2030/8488 {by electric field}
- 2030/8494 {Desolvation chambers}
- 30/86 . . . Signal analysis
- 30/8603 {with integration or differentiation}
- 30/8606 {Integration}
- 30/861 {Differentiation}
- 30/8613 {Dividing or multiplying by a constant}
- 30/8617 {Filtering, e.g. Fourier filtering}
- 2030/862 {Other mathematical operations for data preprocessing}
- 30/8624 {Detection of slopes or peaks; baseline correction}
- 30/8627 {Slopes}
- 30/8631 {Peaks}

- 30/8634 {Peak quality criteria}
- 30/8637 {Peak shape}
- 30/8641 {Baseline}
- 30/8644 {Data segmentation, e.g. time windows}
- 2030/8648 {Feature extraction not otherwise provided for}
- 30/8651 {Recording, data acquisition, archiving and storage}
- 30/8655 {Details of data formats}
- 30/8658 {Optimising operation parameters}
- 30/8662 {Expert systems; optimising a large number of parameters}
- 30/8665 {for calibrating the measuring apparatus}
- 30/8668 {using retention times}
- 30/8672 {not depending on an individual instrument, e.g. retention time indexes or calibration transfer}
- 30/8675 {Evaluation, i.e. decoding of the signal into analytical information (for analysis of specific compounds see also G01N 30/88 and subgroups of G01N 33/00; chemical libraries per se C40B)}
- 30/8679 {Target compound analysis, i.e. whereby a limited number of peaks is analysed}
- 30/8682 {Group type analysis, e.g. of components having structural properties in common}
- 30/8686 {Fingerprinting, e.g. without prior knowledge of the sample components}
- 30/8689 {Peak purity of co-eluting compounds}
- 30/8693 {Models, e.g. prediction of retention times, method development and validation}
- 30/8696 {Details of Software}
- 30/88 Integrated analysis systems specially adapted therefor, not covered by a single one of the groups [G01N 30/04](#) - [G01N 30/86](#) (signal analysis systems per se [G06F](#), [G06G](#))
- 2030/8804 {automated systems}
- 2030/8809 {analysis specially adapted for the sample}
- 2030/8813 {biological materials}
- 2030/8818 {involving amino acids}
- 2030/8822 {involving blood}
- 2030/8827 {involving nucleic acids}
- 2030/8831 {involving peptides or proteins}
- 2030/8836 {involving saccharides}
- 2030/884 {organic compounds}
- 2030/8845 {involving halogenated organic compounds}
- 2030/885 {involving polymers}
- 2030/8854 {involving hydrocarbons}
- 2030/8859 {inorganic compounds}
- 2030/8863 {Fullerenes}
- 2030/8868 {elemental analysis, e.g. isotope dilution analysis}
- 2030/8872 {impurities}
- 2030/8877 {optical isomers}
- 2030/8881 {Modular construction, specially adapted therefor}
- 2030/8886 {Analysis of industrial production processes}
- 2030/889 {monitoring the quality of the stationary phase; column performance}
- 2030/8895 {Independent juxtaposition of embodiments; Reviews}
- 30/89 Inverse chromatography
- 30/90 Plate chromatography, e.g. thin layer or paper chromatography
- 2030/903 {centrifugal chromatography}
- 2030/906 {pressurised fluid phase}
- 30/91 Application of the sample
- 30/92 Construction of the plate
- 30/93 Application of the sorbent layer
- 30/94 Development
- 2030/945 {Application of reagents to undeveloped plate}
- 30/95 Detectors specially adapted therefor; Signal analysis
- 30/96 using ion-exchange ([G01N 30/02](#), [G01N 30/90](#) take precedence)
- 2030/965 {suppressor columns}
- 31/00 Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup (testing the effectiveness or completeness of sterilisation procedures without using enzymes or microorganisms [A61L 2/28](#); measuring or testing processes involving enzymes or microorganisms [C12Q 1/00](#)); 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 (burettes in general [B01L 3/02](#))
- 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 nitrites}

- 31/228 . . {for peroxides}
- 31/229 . . {for investigating time/temperature history}
- 33/00 Investigating or analysing materials by specific methods not covered by groups**
G01N 1/00 - G01N 31/00
- 33/0001 . {by organoleptic means}
- 2033/0003 . {Composite materials}
- 33/0004 . {Gaseous mixtures, e.g. polluted air (gaseous biological material [G01N 33/497](#); exhaust gas of internal combustion engines [G01M 15/102](#))}
- 33/0006 . . {Calibrating gas analysers}
- 33/0008 . . . {Details concerning storage of calibration data, e.g. in EEPROM}
- 33/0009 . . {General constructional details of gas analysers, e.g. portable test equipment ([G01N 1/22](#) takes precedence)}
- 33/0011 . . . {Sample conditioning (in general [G01N 1/28](#))}
- 33/0013 {by a chemical reaction ([G01N 33/0024](#) takes precedence)}
- 33/0014 {by eliminating a gas ([G01N 33/0013](#) and [G01N 33/0024](#) take precedence)}
- 33/0016 {by regulating a physical variable, e.g. pressure, temperature}
- 33/0018 {by diluting a gas}
- 2033/0019 {by preconcentration}
- 33/0021 {involving the use of a carrier gas for transport to the sensor}
- 33/0022 . . . {using a number of analysing channels}
- 33/0024 {a chemical reaction taking place or a gas being eliminated in one or more channels}
- 33/0026 . . . {use of an alternating circulation of another gas (calibrating gas analysers [G01N 33/0006](#))}
- 33/0027 . . . {concerning the detector}
- 33/0029 {cleaning}
- 33/0031 {comprising two or more sensors, e.g. a sensor array (electrochemical electrode arrays [G01N 27/27](#))}
- 33/0032 {using two or more different physical functioning modes}
- 33/0034 {comprising neural networks or related mathematical techniques}
- 33/0036 {Specially adapted to detect a particular component (all the other sub-groups of [G01N 33/0004](#) take precedence)}
- 33/0037 {for NO_x}
- 33/0039 {for O₃}
- 33/004 {for CO, CO₂}
- 33/0042 {for SO₂, SO₃}
- 33/0044 {for H₂S, sulfides}
- 33/0045 {for Hg}
- 33/0047 {for organic compounds}
- 33/0049 {for halogenated organic compounds}
- 33/005 {for H₂}
- 33/0052 {for gaseous halogens}
- 33/0054 {for ammonia}
- 33/0055 {for radionuclides}
- 33/0057 {for warfare agents or explosives (properties of explosives [G01N 33/227](#))}
- 33/0059 {avoiding interference of a gas with the gas to be measured}
- 33/006 {avoiding interference of water vapour with the gas to be measured}
- 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 {using more than one threshold}
- 33/0067 {by measuring the rate of variation of the concentration}
- 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 . {Semiconductive 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 33/5008](#))}
- 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 33/2022](#), [G01N 33/2028](#), [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.
- 33/204 . . Structure thereof, e.g. crystal structure
- 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.
- 33/2045 . . . Defects
- WARNING**
- Group [G01N 33/2045](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/2045](#) should be considered in order to perform a complete search.
- 33/205 . . in liquid state, e.g. molten metals
- 33/207 . . Welded or soldered joints; Solderability
- WARNING**
- Group [G01N 33/207](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/207](#) should be considered in order to perform a complete search.
- 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 25/167](#))}
- 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](#))

- 33/2805 . . . {investigating the resistance to heat or oxidation (to the weather, to corrosion, or to light [G01N 17/00](#))}
- 33/2811 . . . {by measuring cloud point or pour point of oils}
- 33/2817 . . . {using a test engine (testing of engines [G01M 15/00](#))}
- 33/2823 . . . {raw oil, drilling fluid or polyphasic mixtures (hydrocarbon content of earth materials [G01N 33/241](#); prospecting [G01V](#); drilling [per se E21B](#))}
- 33/2829 . . . {mixtures of fuels, e.g. determining the RON-number}
- 33/2835 . . . {specific substances contained in the oil or fuel}
- 33/2841 {gas in oil, e.g. hydrogen in insulating oil}
- 33/2847 {Water in oil (basic sediment and water [G01N 33/2823](#); oil in water [G01N 33/1833](#))}
- 33/2852 {alcohol/fuel mixtures}
- 33/2858 {metal particles}
- 33/2864 {lead content}
- 33/287 {Sulfur content}
- 33/2876 {Total acid number}
- 33/2882 {Markers (marking of fuels [C10L 1/003](#))}
- 33/2888 . . . {Lubricating oil characteristics, e.g. deterioration (lubricating properties [G01N 33/30](#))}
- 33/2894 . . . {for metal working or machining}
- 33/30 . . . for lubricating properties
- 33/32 . . . Paints; inks ({investigating resistance to the weather, to corrosion, to light [G01N 17/00](#))}
- 33/34 . . Paper
- 33/343 . . {paper pulp}
- 33/346 . . {paper sheets}
- 33/36 . . Textiles
- 33/362 . . {material before processing, e.g. bulk cotton or wool}
- 33/365 . . {filiform textiles, e.g. yarns (for measuring diameter [G01B](#))}
- 33/367 . . {Fabric or woven textiles (optical analysis of moving sheets [G01N 21/86](#))}
- 33/38 . . Concrete; ceramics; glass; bricks
- 33/381 . . {precious stones; pearls}
- 33/383 . . {Concrete, cement}
- 33/385 . . {Crystals}
- 33/386 . . {Glass}
- 33/388 . . {Ceramics}
- 33/40 . . Grinding-materials
- 33/42 . . Road-making materials ([G01N 33/38](#) takes precedence)
- 33/44 . . Resins; rubber; leather
- 33/442 . . {Resins, plastics}
- 33/445 . . {Rubber}
- 33/447 . . {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 corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- 33/483 . . Physical analysis of biological material
- 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 biological 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 nanoscale apertures [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}
- 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, photoplankton and photosynthetic bacteria in screening assays [C12Q 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 . . . Immunoassay; 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}

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- 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 { (insoluble carriers for immobilising immunochemicals [G01N 33/54313](#)) }
- 33/547 with antigen or antibody attached to the carrier via a bridging agent { (ligands attached to the carrier via a chemical coupling agent [G01N 33/54353](#)) }
- 33/548 Carbohydrates, e.g. dextran
- 33/549 with antigen or antibody entrapped within the carrier { (with ligand physically entrapped within the solid phase [G01N 33/5436](#)) }
- 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 Immunoelectrophoresis
- 33/563 involving antibody fragments { ([G01N 33/6857](#) takes precedence) }
- 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 lysate
- 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; for testing [in vivo](#) [A61K 49/00](#))
- 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}
- 33/60 involving radioactive labelled substances ([tracers G21H 5/02](#))
- 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 33/92](#))}
- 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, bromocresol 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-idiotypic}
- 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}	2035/00039	. . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}
33/726	. . . . . {Devices}	2035/00049	. . . {for loading/unloading a carousel}
33/728	. . . . . {Bilirubin; including biliverdin}	2035/00059	. . . {vacuum chucks}
33/74	. . . involving hormones {or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors}	35/00069	. . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}
33/743	. . . . . {Steroid hormones}	2035/00079	. . {Evaporation covers for slides}
33/746	. . . . . {Erythropoetin}	2035/00089	. . {Magazines}
33/76	. . . . . Human chorionic gonadotropin {including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors}	2035/00099	. . {Characterised by type of test elements}
33/78	. . . . . Thyroid gland hormones {, e.g. T3, T4, TBH, TBG or their receptors}	2035/00108	. . . {Test strips, e.g. paper}
33/80	. . . involving blood groups or blood types {or red blood cells (white blood cells G01N 33/56972)}	2035/00118	. . . . . {for multiple tests}
33/82	. . . involving vitamins {or their receptors}	2035/00128	. . . . . {with pressing or squeezing devices}
33/84	. . . involving inorganic compounds or pH	2035/00138	. . . {Slides}
33/86	. . . involving blood coagulating time {or factors, or their receptors}	2035/00148	. . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}
33/88	. . . involving prostaglandins {or their receptors}	2035/00158	. . . {Elements containing microarrays, i.e. "biochip"}
33/90	. . . involving iron binding capacity of blood	2035/00168	. . {Manufacturing or preparing test elements}
33/92	. . . involving lipids, e.g. cholesterol {, lipoproteins, or their receptors (steroid hormones G01N 33/743)}	2035/00178	. {Special arrangements of analysers}
33/94	. . . involving narcotics {or drugs or pharmaceuticals, neurotransmitters or associated receptors}	2035/00188	. . {the analyte being in the solid state}
33/9406	. . . . . {Neurotransmitters}	2035/00198	. . . {Dissolution analysers}
33/9413	. . . . . {Dopamine}	2035/00207	. . {Handling bulk quantities of analyte}
33/942	. . . . . {Serotonin, i.e. 5-hydroxy-tryptamine}	2035/00217	. . . {involving measurement of weight}
33/9426	. . . . . {GABA, i.e. gamma-amino-butyrate}	2035/00227	. . . {Monitoring a process (online)}
33/9433	. . . . . {(Nor)adrenaline}	2035/00237	. . {Handling microquantities of analyte, e.g. microvalves, capillary networks}
33/944	. . . . . {Acetylcholine}	2035/00247	. . . {Microvalves}
33/9446	. . . . . {Antibacterials}	2035/00257	. . . . . {Capillary stop flow circuits}
33/9453	. . . . . {Cardioregulators, e.g. antihypotensives, antiarrhythmics}	2035/00267	. . . . . {Meltable plugs}
33/946	. . . . . {CNS-stimulants, e.g. cocaine, amphetamines}	2035/00277	. . {Special precautions to avoid contamination (e.g. enclosures, glove- boxes, sealed sample carriers, disposal of contaminated material)}
33/9466	. . . . . {Antidepressants}	2035/00287	. . . {movable lid/cover for sample or reaction tubes}
33/9473	. . . . . {Anticonvulsants, e.g. phenobarbitol, phenytoin}	2035/00297	. . . {Antistatic arrangements}
33/948	. . . . . {Sedatives, e.g. cannabinoids, barbiturates (opiates G01N 33/9486)}	2035/00306	. . {Housings, cabinets, control panels (details)}
33/9486	. . . . . {Analgesics, e.g. opiates, aspirine}	2035/00316	. . . {Detecting door closure}
33/9493	. . . . . {Immunosuppressants}	2035/00326	. . {Analysers with modular structure}
33/96	. . . involving blood or serum control standard	2035/00336	. . . {Analysers adapted for operation in microgravity, i.e. spaceflight}
33/98	. . . involving alcohol, e.g. ethanol in breath	2035/00346	. {Heating or cooling arrangements}
		2035/00356	. . {Holding samples at elevated temperature (incubation)}
		2035/00366	. . . {Several different temperatures used}
		2035/00376	. . . {Conductive heating, e.g. heated plates}
		2035/00386	. . . {using fluid heat transfer medium}
		2035/00396	. . . . . {where the fluid is a liquid}
		2035/00405	. . . {Microwaves}
		2035/00415	. . . {Other radiation}
		2035/00425	. . {Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature}
		2035/00435	. . {Refrigerated reagent storage}
		2035/00445	. . {Other cooling arrangements}
		2035/00455	. . {Controlling humidity in analyser}
		2035/00465	. {Separating and mixing arrangements}
		2035/00475	. . {Filters}
		2035/00485	. . . {combined with sample carriers}
		2035/00495	. . {Centrifuges}
		2035/00504	. . . {combined with carousels}
		2035/00514	. . {Stationary mixing elements}
		2035/00524	. . {Mixing by agitating sample carrier}
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)}		

NOTE

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

- 2035/00534 . . . {Mixing by a special element, e.g. stirrer}
- 2035/00544 . . . {using fluid flow}
- 2035/00554 . . . {using ultrasound}
- 2035/00564 . . . {Handling or washing solid phase elements, e.g. beads}
- 2035/00574 {Means for distributing beads}
- 35/00584 . {Control arrangements for automatic analysers}
- 35/00594 . . . {Quality control, including calibration or testing of components of the analyser}
- 35/00603 {Reinspection of samples}
- 35/00613 {Quality control}
- 35/00623 {of instruments}
- 2035/00633 {logging process history of individual samples}
- 2035/00643 {detecting malfunctions in conveying systems}
- 2035/00653 {statistical methods comparing labs or apparatuses}
- 35/00663 {of consumables}
- 2035/00673 {of reagents}
- 2035/00683 {of detectors}
- 35/00693 {Calibration}
- 2035/00702 {Curve-fitting; Parameter matching; Calibration constants}
- 35/00712 {Automatic status testing, e.g. at start-up or periodic}
- 35/00722 . . . {Communications; Identification}
- 35/00732 {Identification of carriers, materials or components in automatic analysers}
- 2035/00742 {Type of codes}
- 2035/00752 {bar codes}
- 2035/00762 {magnetic code}
- 2035/00772 {mechanical or optical code other than bar code}
- 2035/00782 {reprogrammable code}
- 2035/00792 {Type of components bearing the codes, other than sample carriers}
- 2035/00801 {Holders for sample carriers, e.g. trays, carousel, racks}
- 2035/00811 {consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells}
- 2035/00821 {nature of coded information}
- 2035/00831 {identification of the sample, e.g. patient identity, place of sampling}
- 2035/00841 {results of the analyses}
- 2035/00851 {process control parameters}
- 2035/00861 {printing and sticking of identifiers}
- 35/00871 {Communications between instruments or with remote terminals}
- 2035/00881 {network configurations}
- 2035/00891 {Displaying information to the operator}
- 2035/009 {alarms, e.g. audible}
- 2035/0091 {GUI [graphical user interfaces]}
- 35/0092 {Scheduling}
- 2035/0093 {random access not determined by physical position}
- 2035/0094 {optimisation; experiment design}
- 35/0095 {introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS]}
- 2035/0096 {post analysis management of samples, e.g. marking, removing, storing}
- 2035/0097 {monitoring reactions as a function of time}
- 35/0098 {involving analyte bound to insoluble magnetic carrier, e.g. using magnetic separation ([magnetic particles used in immunoassays G01N 33/54326](#); [magnetic separation in general B03C](#))}
- 35/0099 {comprising robots or similar manipulators ([robots per se B25J](#))}
- 35/02 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)
- 35/021 {having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes}
- 2035/023 {forming cuvettes *in situ*, e.g. from plastic strip}
- 35/025 {having a carousel or turntable for reaction cells or cuvettes}
- 35/026 {having blocks or racks of reaction cells or cuvettes}
- 35/028 {having reaction cells in the form of microtitration plates}
- 35/04 Details of the conveyor system ([G01N 35/021 - G01N 35/028](#) take precedence)
- 2035/0401 {Sample carriers, cuvettes or reaction vessels}
- 2035/0403 {Sample carriers with closing or sealing means}
- 2035/0405 {manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers}
- 2035/0406 {Individual bottles or tubes}
- 2035/0408 {connected in a flexible chain}
- 2035/041 {lifting items out of a rack for access}
- 2035/0412 {Block or rack elements with a single row of samples}
- 2035/0413 {moving in one dimension}
- 2035/0415 {moving in two dimensions in a horizontal plane}
- 2035/0417 {forming an endless chain in a vertical plane}
- 2035/0418 {Plate elements with several rows of samples}
- 2035/042 {moved independently, e.g. by fork manipulator}
- 2035/0422 {carried on a linear conveyor}
- 2035/0424 {Two or more linear conveyors}
- 2035/0425 {Stacks, magazines or elevators for plates}
- 2035/0427 {nestable or stockable}
- 2035/0429 {Sample carriers adapted for special purposes}
- 2035/0431 {characterised by material of construction}
- 2035/0432 {integrated with measuring devices}
- 2035/0434 {in the form of a syringe or pipette tip}
- 2035/0436 {with pre-packaged reagents, i.e. test-packs}
- 2035/0437 {Cleaning cuvettes or reaction vessels}
- 2035/0439 {Rotary sample carriers, i.e. carousels}
- 2035/0441 {for samples}
- 2035/0443 {for reagents}
- 2035/0444 {for cuvettes or reaction vessels}
- 2035/0446 {Combinations of the above}
- 2035/0448 {composed of interchangeable ring elements}
- 2035/0449 {using centrifugal transport of liquid}
- 2035/0451 {composed of interchangeable sectors}
- 2035/0453 {Multiple carousels working in parallel}

- 2035/0455 {Coaxial carousels}
- 2035/0456 {Spiral tracks}
- 2035/0458 {Multiple concentric rows of wells}
- 2035/046 {General conveyor features}
- 2035/0462 {Buffers [FIFO] or stacks [LIFO] for holding carriers between operations}
- 2035/0463 {in incubators}
- 2035/0465 {Loading or unloading the conveyor}
- 2035/0467 {Switching points ("aiguillages")}
- 2035/0468 {converging, e.g. selecting carriers from multiple incoming streams}
- 2035/047 {diverging, e.g. sending carriers to different analysers}
- 2035/0472 {for selective recirculation of carriers}
- 2035/0474 {Details of actuating means for conveyors or pipettes}
- 2035/0475 {electric, e.g. stepper motor, solenoid}
- 2035/0477 {Magnetic}
- 2035/0479 {hydraulic or pneumatic}
- 2035/0481 {Pneumatic tube conveyors; Tube mails; "Rohrpost"}
- 2035/0482 {Transmission}
- 2035/0484 {Belt or chain}
- 2035/0486 {Gearing, cams}
- 2035/0487 {Helix or lead screw}
- 2035/0489 {Self-propelled units}
- 2035/0491 {Position sensing, encoding; closed-loop control}
- 2035/0493 {Locating samples; identifying different tube sizes}
- 2035/0494 {Detecting or compensating positioning errors}
- 2035/0496 {Other details}
- 2035/0498 {Drawers used as storage or dispensing means for vessels or cuvettes}
- 35/08 using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis
- 35/085 {Flow Injection Analysis}
- 35/10 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)}
- 35/1002 {Reagent dispensers}
- 35/1004 {Cleaning sample transfer devices}
- 2035/1006 {Rinsing only the inside of the tip}
- 35/1009 {Characterised by arrangements for controlling the aspiration or dispense of liquids}
- 35/1011 {Control of the position or alignment of the transfer device}
- 2035/1013 {Confirming presence of tip}
- 35/1016 {Control of the volume dispensed or introduced}
- 2035/1018 {Detecting inhomogeneities, e.g. foam, bubbles, clots}
- 2035/102 {Preventing or detecting loss of fluid by dripping}
- 2035/1023 {using a valve in the tip or nozzle}
- 2035/1025 {Fluid level sensing}
- 2035/1027 {General features of the devices}
- 2035/103 {using disposable tips}
- 2035/1032 {Dilution or aliquotting}
- 2035/1034 {Transferring microquantities of liquid}
- 2035/1037 {Using surface tension, e.g. pins or wires}
- 2035/1039 {Micropipettes, e.g. microcapillary tubes}
- 2035/1041 {Ink-jet like dispensers}
- 2035/1044 {Using pneumatic means}
- 2035/1046 {Levitated, suspended drops}
- 2035/1048 {using the transfer device for another function}
- 2035/1051 {for transporting containers, e.g. retained by friction}
- 2035/1053 {for separating part of the liquid, e.g. filters, extraction phase}
- 2035/1055 {for immobilising reagents, e.g. dried reagents}
- 2035/1058 {for mixing}
- 2035/106 {by sucking and blowing}
- 2035/1062 {for testing the liquid while it is in the transfer device}
- 35/1065 {Multiple transfer devices}
- 35/1067 {for transfer to or from containers having different spacing}
- 2035/1069 {by adjusting the spacing between multiple probes of a single transferring head}
- 35/1072 {with provision for selective pipetting of individual channels}
- 35/1074 {arranged in a two-dimensional array}
- 2035/1076 {plurality or independently movable heads}
- 35/1079 {with means for piercing stoppers or septums}
- 35/1081 {characterised by the means for relatively moving the transfer device and the containers in an horizontal plane (G01N 35/1011 takes precedence)}
- 35/1083 {with one horizontal degree of freedom}
- 2035/1086 {Cylindrical, e.g. variable angle}
- 2035/1088 {Coaxial with a carousel}
- 35/109 {with two horizontal degrees of freedom}
- 2035/1093 {Cylindrical, e.g. variable radius and angle}
- 35/1095 {for supplying the samples to flow-through analysers (for a specific analyser see relevant groups, e.g. under G01N 15/00, G01N 21/00, G01N 27/00, G01N 30/00, H01J 49/00)}
- 35/1097 {characterised by the valves (valves in general F16K)}
- 37/00** **Details not covered by any other group of this subclass**
- 37/005 {Measurement methods not based on established scientific theories}
- 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
- 2201/025 . . Mechanical control of operations
- 2201/0253 . . . Switches mounted at the casing
- 2201/0256 . . . Sensor for insertion of sample, cuvette, test strip
- 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 multitest, 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
- 2201/06 . . Illumination; Optics
- 2201/061 . . 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 sequential as simultaneous operation
- 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
- 2201/0646 . . . Light seals
- 2201/0648 . . . Shutters
- 2201/065 . . 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 . . . Focussed 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 selectably 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
- 2201/1281 . . . Reflecting part, i.e. for autocollimation
- 2201/1283 . . . Opaque part
- 2201/1285 . . . Standard cuvette
- 2201/1286 More than one cuvette
- 2201/1288 . . . Calibration medium periodically inserted in one cell
- 2201/129 . . Using chemometrical methods
- 2201/1293 . . . resolving multicomponent spectra
- 2201/1296 . . . using neural networks
- 2201/13 . . Standards, constitution
- 2203/00 Investigating strength properties of solid materials by application of mechanical stress**
- 2203/0001 . Type of application of the stress
- 2203/0003 . . Steady
- 2203/0005 . . Repeated or cyclic
- 2203/0007 . . . Low frequencies up to 100 Hz
- 2203/0008 . . . High frequencies from 10 000 Hz
- 2203/001 . . Impulsive
- 2203/0012 . . . Constant speed test
- 2203/0014 . Type of force applied
- 2203/0016 . . Tensile or compressive
- 2203/0017 . . . Tensile
- 2203/0019 . . . Compressive
- 2203/0021 . . Torsional
- 2203/0023 . . Bending
- 2203/0025 . . Shearing
- 2203/0026 . . Combination of several types of applied forces
- 2203/0028 . . . Rotation and bending
- 2203/003 . Generation of the force
- 2203/0032 . . using mechanical means
- 2203/0033 . . . Weight
- 2203/0035 . . . Spring
- 2203/0037 . . . involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects
- 2203/0039 . . . Hammer or pendulum
- 2203/0041 . . . Human or animal power
- 2203/0042 . . Pneumatic or hydraulic means
- 2203/0044 . . . Pneumatic means
- 2203/0046 Vacuum
- 2203/0048 . . . Hydraulic means
- 2203/005 . . Electromagnetic means
- 2203/0051 . . . Piezoelectric means
- 2203/0053 . . Cutting or drilling tools
- 2203/0055 . . using mechanical waves, e.g. acoustic
- 2203/0057 . . using stresses due to heating, e.g. conductive heating, radiative heating
- 2203/0058 . Kind of property studied
- 2203/006 . . Crack, flaws, fracture or rupture
- 2203/0062 . . . Crack or flaws
- 2203/0064 Initiation of crack
- 2203/0066 Propagation of crack
- 2203/0067 . . . Fracture or rupture
- 2203/0069 . . Fatigue, creep, strain-stress relations or elastic constants
- 2203/0071 . . . Creep
- 2203/0073 . . . Fatigue

2203/0075	. . .	Strain-stress relations or elastic constants	2203/0268	. . . .	Dumb-bell specimens
2203/0076	. .	Hardness, compressibility or resistance to crushing	2203/027	. . . .	Specimens with holes or notches
2203/0078	. . .	using indentation	2203/0272	. . . .	Cruciform specimens
2203/008	. . . .	Residual indentation measurement	2203/0274	. . . .	Tubular or ring-shaped specimens
2203/0082	. . . .	Indentation characteristics measured during load	2203/0276	. . . .	Spherical specimens
2203/0083	. . .	Rebound strike or reflected energy	2203/0278	. . . .	Thin specimens
2203/0085	. . .	Compressibility	2203/028	. . . . .	One dimensional, e.g. filaments, wires, ropes or cables
2203/0087	. . .	Resistance to crushing	2203/0282	. . . . .	Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes
2203/0089	. .	Biorheological properties	2203/0284	. . .	Bulk material, e.g. powders
2203/0091	. .	Peeling or tearing	2203/0286	. . .	Miniature specimen; Testing on microregions of a specimen
2203/0092	. .	Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials	2203/0288	. . .	Springs
2203/0094	. . .	Visco-elasticity	2203/029	. . . .	Leaf spring
2203/0096	. .	Fibre-matrix interaction in composites	2203/0292	. . . .	Coil spring
2203/0098	. .	Tests specified by its name, e.g. Charpy, Brinell, Mullen	2203/0294	. . . .	Airs-spring, air bag spring or bellows
2203/02	. .	Details not specific for a particular testing method	2203/0296	. . .	Welds
2203/0202	. .	Control of the test	2203/0298	. . .	Manufacturing or preparing specimens
2203/0204	. . .	Safety arrangements, e.g. remote control, emergency stop	2203/04	. .	Chucks, fixtures, jaws, holders or anvils
2203/0206	. . .	Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...	2203/0405	. . .	Features allowing alignment between specimen and chucks
2203/0208	. . .	Specific programs of loading, e.g. incremental loading or pre-loading	2203/0411	. . .	using pneumatic or hydraulic pressure
2203/021	. . .	Treatment of the signal; Calibration	2203/0417	. . .	using vacuum
2203/0212	. . .	Theories, calculations	2203/0423	. . .	using screws
2203/0214	. . . .	Calculations a priori without experimental data	2203/0429	. . .	using adhesive bond; Gluing
2203/0216	. . . .	Finite elements	2203/0435	. . .	modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test
2203/0218	. . . .	Calculations based on experimental data	2203/0441	. . .	with dampers or shock absorbing means
2203/022	. .	Environment of the test	2203/0447	. . .	Holders for quick insertion/removal of test pieces
2203/0222	. . .	Temperature	2203/0452	. . .	Cushioning layer between test piece and grip
2203/0224	. . . .	Thermal cycling	2203/0458	. . .	characterised by their material
2203/0226	. . . .	High temperature; Heating means	2203/0464	. . .	with provisions for testing more than one specimen at the time
2203/0228	. . . .	Low temperature; Cooling means	2203/047	. . . .	in series
2203/023	. . .	Pressure	2203/0476	. . . .	in parallel
2203/0232	. . . .	High pressure	2203/0482	. . .	comprising sensing means
2203/0234	. . . .	Low pressure; Vacuum	2203/0488	. . . .	Diamond anvil cells
2203/0236	. . .	Other environments	2203/0494	. . . .	Clamping ring, "whole periphery" clamping
2203/0238	. . . .	Inert	2203/06	. .	Indicating or recording means; Sensing means
2203/024	. . . .	Corrosive	2203/0605	. . .	Mechanical indicating, recording or sensing means
2203/0242	. . . .	With circulation of a fluid	2203/0611	. . .	Hydraulic or pneumatic indicating, recording or sensing means
2203/0244	. . .	Tests performed "in situ" or after "in situ" use	2203/0617	. . .	Electrical or magnetic indicating, recording or sensing means
2203/0246	. . . .	Special simulation of "in situ" conditions, scale models or dummies	2203/0623	. . . .	using piezo-electric gauges
2203/0248	. . .	Tests "on-line" during fabrication	2203/0629	. . . .	using thin films, paintings
2203/025	. .	Geometry of the test	2203/0635	. . . .	using magnetic properties
2203/0252	. . .	Monoaxial, i.e. the forces being applied along a single axis of the specimen	2203/0641	. . .	using optical, X-ray, ultra-violet, infrared or similar detectors
2203/0254	. . .	Biaxial, the forces being applied along two normal axes of the specimen	2203/0647	. . . .	Image analysis
2203/0256	. . .	Triaxial, i.e. the forces being applied along three normal axes of the specimen	2203/0652	. . . .	using contrasting ink, painting, staining
2203/0258	. . .	Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen	2203/0658	. . .	using acoustic or ultrasonic detectors
2203/026	. .	Specifications of the specimen	2203/0664	. . .	using witness specimens
2203/0262	. . .	Shape of the specimen	2203/067	. . .	Parameter measured for estimating the property
2203/0264	. . . .	Beam	2203/0676	. . . .	Force, weight, load, energy, speed or acceleration
2203/0266	. . . .	Cylindrical specimens	2203/0682	. . . .	Spatial dimension, e.g. length, area, angle
			2203/0688	. . . .	Time or frequency

- 2203/0694 Temperature
- 2223/00 Investigating materials by wave or particle radiation**
- 2223/01 . by radioactivity, nuclear decay
- 2223/03 . by transmission
- 2223/04 . . and measuring absorption
- 2223/041 . . . X-ray absorption fine structure [EXAFS]
- 2223/043 . . . gamma ray resonance absorption (Mossbauer effect)
- 2223/045 . combination of at least 2 measurements (transmission and scatter)
- 2223/05 . by diffraction, scatter or reflection
- 2223/051 . . correcting for scatter
- 2223/052 . . reflection
- 2223/053 . . back scatter
- 2223/054 . . small angle scatter
- 2223/055 . . scatter raster collimator
- 2223/056 . . diffraction
- 2223/0561 . . . diffraction cameras
- 2223/0563 . . . measure of energy-dispersion spectrum of diffracted radiation
- 2223/0565 . . . diffraction of electrons, e.g. LEED
- 2223/0566 . . . analysing diffraction pattern
- 2223/0568 . . . spectro-diffractometry
- 2223/063 . . inelastic scatter, e.g. Compton effect
- 2223/064 . . interference of radiation, e.g. Borrmann effect
- 2223/07 . secondary emission
- 2223/071 . . combination of measurements, at least 1 secondary emission
- 2223/072 . . combination of measurements, 2 kinds of secondary emission
- 2223/073 . . use of a laser
- 2223/074 . . activation analysis
- 2223/0745 . . . neutron-gamma activation analysis
- 2223/076 . . X-ray fluorescence
- 2223/0763 . . . Compton background correcting
- 2223/0766 . . . X-ray fluorescence with indicator, tags
- 2223/079 . . incident electron beam and measuring excited X-rays
- 2223/08 . . incident electron beam and measuring cathode luminescence (U.V.)
- 2223/081 . . incident ion beam, e.g. proton
- 2223/0813 . . . incident ion beam and measuring X-rays [PIXE]
- 2223/0816 . . . incident ion beam and measuring secondary ion beam [SIMS]
- 2223/084 . . photo-electric effect
- 2223/085 . . photo-electron spectrum [ESCA, XPS]
- 2223/086 . . Auger electrons
- 2223/09 . . exo-electron emission
- 2223/095 . . tribo-emission
- 2223/10 . Different kinds of radiation or particles
- 2223/1003 . . monochromatic
- 2223/1006 . . different radiations, e.g. X and alpha
- 2223/101 . . electromagnetic radiation
- 2223/1013 . . . gamma
- 2223/1016 . . . X-ray
- 2223/102 . . beta or electrons
- 2223/104 . . ions
- 2223/1045 . . . alpha
- 2223/105 . . molecular or atomic beams
- 2223/106 . . neutrons
- 2223/1063 . . . fast
- 2223/1066 . . . thermal
- 2223/107 . . protons
- 2223/108 . . 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 . . immersed 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
- 2223/335 . . 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	2223/6126	. . . tissue
2223/40	. Imaging	2223/613	. . moisture
2223/401	. . image processing	2223/614	. . road surface
2223/402	. . mapping distribution of elements	2223/615	. . composite materials, multilayer laminates
2223/403	. . mapping with false colours	2223/616	. . earth materials
2223/404	. . contrast medium	2223/617	. . ash in coal
2223/405	. . mapping of a material property	2223/618	. . food
2223/406	. . fluoroscopic image	2223/619	. . wood
2223/407	. . stimutable phosphor sheet	2223/62	. . powders
2223/408	. . display on monitor	2223/621	. . tobacco
2223/409	. . embedding or impregnating the object	2223/622	. . paper
2223/41	. . imaging specifically internal structure	2223/623	. . plastics
2223/411	. . tv imaging from fluorescent screen	2223/624	. . steel, castings
2223/412	. . use of image converter tube [PMT]	2223/625	. . nuclear fuels, laser imploded targets
2223/413	. . sensor array [CCD]	2223/626	. . radioactive material
2223/414	. . stereoscopic system	2223/6265	. . . sample with radioactive tracer, tag, label
2223/415	. . radiographic film	2223/627	. . tyres
2223/416	. . wrap around	2223/628	. . tubes, pipes
2223/417	. . recording with co-ordinate markings	2223/629	. . welds, bonds, sealing compounds
2223/418	. . electron microscope	2223/63	. . turbine blades
2223/419	. . computed tomograph	2223/631	. . large structures, walls
2223/42	. . image digitised, -enhanced in an image processor	2223/632	. . residual life, life expectancy
2223/421	. . digitised image, analysed in real time (recognition algorithms)	2223/633	. . thickness, density, surface weight (unit area)
2223/422	. . windows within the image	2223/634	. . wear behaviour, roughness
2223/423	. . multispectral imaging-multiple energy imaging	2223/635	. . fluids, granulates
2223/424	. . energy subtraction image processing (dual energy processing)	2223/636	. . fluid sample with radioactive sources
2223/425	. . temporal (time difference) subtraction processing	2223/637	. . liquid
2223/426	. . image comparing, unknown with known substance	2223/638	. . gas
2223/427	. . stepped imaging (selected area of sample is changed)	2223/639	. . material in a container
2223/50	. Detectors	2223/64	. . multiple-sample chamber, multiplicity of materials
2223/501	. . array	2223/641	. . particle sizing
2223/5015	. . . linear array	2223/642	. . moving sheet, web
2223/502	. . ionisation chamber	2223/6425	. . . correcting for web flutter
2223/503	. . auxiliary reference detector	2223/643	. . object on conveyor
2223/504	. . pin-diode	2223/645	. . quality control
2223/505	. . scintillation	2223/646	. . flaws, defects
2223/5055	. . . scintillation crystal coupled to PMT	2223/6462	. . . microdefects
2223/506	. . time-of-flight	2223/6464	. . . radioactive substance into defect site
2223/507	. . secondary-emission detector	2223/6466	. . . flaws comparing to predetermined standards
2223/508	. . photo-acoustic	2223/6468	. . . at different temperatures
2223/509	. . infra-red	2223/647	. . leak detection
2223/60	. Specific applications or type of materials	2223/648	. . voids
2223/601	. . density profile	2223/649	. . porosity
2223/602	. . crystal growth	2223/65	. . cavitation pits
2223/603	. . superlattices	2223/651	. . dust
2223/604	. . monocrystal	2223/652	. . impurities, foreign matter, trace amounts
2223/605	. . phases	2223/66	. . multiple steps inspection, e.g. coarse/fine
2223/606	. . texture	2291/00	Indexing codes associated with group G01N 29/00
2223/607	. . strain	2291/01	. Indexing codes associated with the measuring variable
2223/608	. . superconductors	2291/011	. . Velocity or travel time
2223/61	. . thin films, coatings	2291/012	. . Phase angle
2223/611	. . patterned objects; electronic devices	2291/014	. . Resonance or resonant frequency
2223/6113	. . . printed circuit board [PCB]	2291/015	. . Attenuation, scattering
2223/6116	. . . semiconductor wafer	2291/017	. . Doppler techniques
2223/612	. . biological material	2291/018	. . Impedance
2223/6123	. . . bone mineral	2291/02	. Indexing codes associated with the analysed material
		2291/021	. . Gases
		2291/0212	. . . Binary gases

G01N

- 2291/0215 . . . Mixtures of three or more gases, e.g. air
- 2291/0217 . . . Smoke, combustion gases
- 2291/022 . . Liquids
- 2291/0222 . . . Binary liquids
- 2291/0224 . . . Mixtures of three or more liquids
- 2291/0226 . . . Oils, e.g. engine oils
- 2291/0228 . . . Aqueous liquids
- 2291/023 . . Solids
- 2291/0231 . . . Composite or layered materials
- 2291/0232 . . . Glass, ceramics, concrete or stone
- 2291/0234 . . . Metals, e.g. steel
- 2291/0235 . . . Plastics; polymers; soft materials, e.g. rubber
- 2291/0237 . . . Thin materials, e.g. paper, membranes, thin films
- 2291/0238 . . . Wood
- 2291/024 . . Mixtures
- 2291/02408 . . . Solids in gases, e.g. particle suspensions
- 2291/02416 . . . Solids in liquids
- 2291/02425 . . . Liquids in gases, e.g. sprays
- 2291/02433 . . . Gases in liquids, e.g. bubbles, foams
- 2291/02441 . . . Liquids in porous solids
- 2291/0245 . . . Gases in porous solids
- 2291/02458 . . . Solids in solids, e.g. granules
- 2291/02466 . . . Biological material, e.g. blood
- 2291/02475 . . . Tissue characterisation
- 2291/02483 . . . Other human or animal parts, e.g. bones
- 2291/02491 . . . Materials with nonlinear acoustic properties
- 2291/025 . . Change of phase or condition
- 2291/0251 . . . Solidification, icing, curing composites, polymerisation
- 2291/0252 . . . Melting, molten solids
- 2291/0253 . . . Condensation
- 2291/0254 . . . Evaporation
- 2291/0255 . . . (Bio)chemical reactions, e.g. on biosensors
- 2291/0256 . . . Adsorption, desorption, surface mass change, e.g. on biosensors
- 2291/0257 with a layer containing at least one organic compound
- 2291/0258 . . . Structural degradation, e.g. fatigue of composites, ageing of oils
- 2291/028 . . Material parameters
- 2291/02809 . . . Concentration of a compound, e.g. measured by a surface mass change
- 2291/02818 . . . Density, viscosity
- 2291/02827 . . . Elastic parameters, strength or force
- 2291/02836 . . . Flow rate, liquid level
- 2291/02845 . . . Humidity, wetness
- 2291/02854 . . . Length, thickness
- 2291/02863 . . . Electric or magnetic parameters
- 2291/02872 . . . Pressure
- 2291/02881 . . . Temperature
- 2291/0289 . . . Internal structure, e.g. defects, grain size, texture
- 2291/04 . . Wave modes and trajectories
- 2291/042 . . Wave modes
- 2291/0421 . . . Longitudinal waves
- 2291/0422 . . . Shear waves, transverse waves, horizontally polarised waves
- 2291/0423 . . . Surface waves, e.g. Rayleigh waves, Love waves
- 2291/0425 . . . Parallel to the surface, e.g. creep waves
- 2291/0426 . . . Bulk waves, e.g. quartz crystal microbalance, torsional waves
- 2291/0427 . . . Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever
- 2291/0428 . . . Mode conversion
- 2291/043 . . Complex trajectories
- 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 rhinotracheitis 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.
- 2333/20 . . from Spirochaetales (O), e.g. Treponema, Leptospira
- 2333/205 . . from Campylobacter (G)
- 2333/21 . . from Pseudomonadaceae (F)
- 2333/212 . . . Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter
- 2333/215 . . from Halobacteriaceae (F)
- 2333/22 . . from Neisseriaceae (F), e.g. Acinetobacter
- 2333/225 . . from Alcaligenes (G)
- 2333/23 . . from Brucella (G)
- 2333/235 . . from Bordetella (G)
- 2333/24 . . from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
- 2333/245 . . . Escherichia (G)
- 2333/25 . . . Shigella (G)
- 2333/255 . . . Salmonella (G)
- 2333/26 . . . Klebsiella (G)
- 2333/265 . . . Enterobacter (G)
- 2333/27 . . . Erwinia (G)
- 2333/275 . . . Hafnia (G)
- 2333/28 . . from Vibrionaceae (F)
- 2333/285 . . from Pasteurellaceae (F), e.g. Haemophilus influenza
- 2333/29 . . from Rickettsiales (o)
- 2333/295 . . from Chlamydiales (o)
- 2333/30 . . from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]
- 2333/305 . . from Micrococcaceae (F)
- 2333/31 . . from Staphylococcus (G)
- 2333/315 . . from Streptococcus (G), e.g. Enterococci
- 2333/3153 . . . Streptokinase
- 2333/3156 . . from Streptococcus pneumoniae (Pneumococcus) ([Streptokinase G01N 2333/3153](#))
- 2333/32 . . from Bacillus (G)
- 2333/325 . . . Bacillus thuringiensis crystal protein (delta-endotoxin)
- 2333/33 . . from Clostridium (G)
- 2333/335 . . from Lactobacillus (G)
- 2333/34 . . from Corynebacterium (G)
- 2333/345 . . from Brevibacterium (G)
- 2333/35 . . from Mycobacteriaceae (F)
- 2333/355 . . from Nocardia (G)
- 2333/36 . . from Actinomyces; from Streptomyces (G)
- 2333/365 . . from Actinoplanes (G)
- 2333/37 . . from fungi
- 2333/375 . . from Basidiomycetes
- 2333/38 . . from Aspergillus
- 2333/385 . . from Penicillium
- 2333/39 . . from yeasts
- 2333/395 . . from Saccharomyces
- 2333/40 . . from Candida
- 2333/405 . . from algae

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2333/41	. from lichens	2333/4704 Inhibitors; Suppressors
2333/415	. from plants	2333/4706 stimulating, promoting or activating activity
2333/42	. . Lectins, e.g. concanavalin, phytohaemagglutinin	2333/4707	. . . . . Guanosine triphosphatase activating protein, GAP
2333/425	. . Zeins	2333/4709	. . . . . Amyloid plaque core protein
2333/43	. . Sweetening agents, e.g. thaumatin, monellin	2333/4711	. . . . . Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein
2333/435	. from animals; from humans	2333/4712	. . . . . Muscle proteins, e.g. myosin, actin, protein
2333/43504	. . from invertebrates	2333/4713	. . . . . Plasma globulins, lactoglobulin
2333/43508	. . . from crustaceans	2333/4715	. . . . . Cytokine-induced proteins
2333/43513	. . . from arachnidae	2333/4716	. . . . . Complement proteins, e.g. anaphylatoxin, C3a, C5a
2333/43517	. . . . from spiders	2333/4718	. . . . . Lipocortins
2333/43521	. . . . from scorpions	2333/4719	. . . . . G-proteins
2333/43526	. . . from worms	2333/4721	. . . . . Cationic antimicrobial peptides, e.g. defensins
2333/4353	. . . . from nematodes	2333/4722	. . . . . Proteoglycans, e.g. aggrecan
2333/43534	. . . . . from Caenorhabditis	2333/4724	. . . . . Lectins
2333/43539	. . . . from cestodes	2333/4725	. . . . . Mucins, e.g. human intestinal mucin
2333/43543	. . . . . from Taenia	2333/4727	. . . . . Calcium binding proteins, e.g. calmodulin
2333/43547	. . . . from trematodes	2333/4728	. . . . . alpha-Glycoproteins
2333/43552	. . . from insects	2333/473	. . . . . Recognins, e.g. malignin
2333/43556	. . . . from ticks	2333/4731	. . . . . Casein
2333/4356	. . . . from wasps	2333/4733	. . . . . Acute pancreatitis-associated protein
2333/43565	. . . . from bees	2333/4734	. . . . . Villin
2333/43569	. . . . from flies	2333/4736	. . . . . Retinoblastoma protein
2333/43573	. . . . . from Drosophila	2333/4737	. . . . . C-reactive protein
2333/43578	. . . . from silkworm	2333/4739	. . . . . Cyclin; Prad 1
2333/43582	. . . . from mites	2333/474	. . . . . Pancreatic thread protein; Reg protein
2333/43586	. . . . from fleas	2333/4742	. . . . . Keratin; Cytokeratin
2333/43591	. . . . from mosquitoes	2333/4743	. . . . . Bactericidal/Permeability-increasing protein BPI
2333/43595	. . . from coelenteratae, e.g. medusae	2333/4745	. . . . . Insulin-like growth factor binding protein
2333/44	. . from protozoa	2333/4746	. . . . . Cancer-associated SCM-recognition factor, CRISPP
2333/445	. . . Plasmodium	2333/4748	. . . . . p53
2333/45	. . . Toxoplasma	2333/475	. . Assays involving growth factors
2333/455	. . . Eimeria	2333/4753	. . . Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II
2333/46	. . from vertebrates	2333/4756	. . . Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor
2333/4603	. . . from fish	2333/48	. . . Nerve growth factor [NGF]
2333/4606	. . . from amphibians	2333/485	. . . Epidermal growth factor [EGF] (urogastrone)
2333/4609	. . . from reptiles	2333/49	. . . Platelet-derived growth factor [PDGF]
2333/4613	. . . . Snake venom	2333/495	. . . Transforming growth factor [TGF]
2333/4616	. . . . . from Russell's viper	2333/50	. . . Fibroblast growth factors [FGF]
2333/462	. . . . . from Agkistrodon sp., e.g. acutase, ACTE	2333/501	. . . . acidic FGF [aFGF]
2333/4623	. . . . . from Agkistrodon rhodostoma (Malayan pit viper); Arvin (R); Batroboxin; Ancrod	2333/503	. . . . basic FGF [bFGF]
2333/4626	. . . . . from Agkistrodon contortrix contortrix (copperhead snake); Protac (R)	2333/505	. . . Erythropoietin [EPO]
2333/463	. . . . . from Croatalus adamanteus (Eastern Diamondback rattlesnake); Crotolase	2333/51	. . . Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor
2333/4633	. . . . . from Echis carinatus; Ecarin	2333/515	. . . Angiogenesis factors; Angiogenin
2333/4636	. . . . . from Bothrops sp.	2333/52	. . Assays involving cytokines
2333/464	. . . . . from Bothrops atrox; Reptilase; Atroxin	2333/521	. . . Chemokines
2333/4643	. . . . . from Bothrops jararaca; Botrocetin	2333/522	. . . . Alpha-chemokines, e.g. NAP-2, ENA-78, GRO-alpha/MGSA/NAP-3, GRO-beta/MIP-2alpha, GRO-gamma/MIP-2beta, IP-10, GCP-2, MIG, PBSF, PF-4 or KC
2333/4646	. . . . . from Oxyuran(eo)us scutellatus (Taipan snake of Elapidae family)		
2333/465	. . . from birds		
	NOTE		
	In groups G01N 2333/47 - G01N 2333/994 indexing codes are assigned irrespective to the source of the indicated proteins.		
2333/47	. . . Assays involving proteins of known structure or function as defined in the subgroups		
2333/4701	. . . . (not used)		
2333/4703	. . . . . Regulators; Modulating activity		

2333/523	. . . .	Beta-chemokines, e.g. RANTES, I-309/ TCA-3, MIP-1alpha, MIP-1beta/ACT-2/ LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1or LDCF-2	2333/635	. . . .	Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
2333/524	. . . .	Thrombopoietin, i.e. C-MPL ligand	2333/64	. . . .	Relaxins
2333/525	. . . .	Tumor necrosis factor [TNF]	2333/645	. . . .	Secretins
2333/5255	. . . .	Lymphotoxin [LT]	2333/65	. . . .	Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
2333/53	. . . .	Colony-stimulating factor [CSF]	2333/655	. . . .	Somatostatins
2333/535	. . . .	Granulocyte CSF; Granulocyte-macrophage CSF	2333/66	. . . .	Thymopoietins
2333/54	. . . .	Interleukins [IL]	2333/665	. . . .	Assays involving proteins derived from pro- opiomelanocortin, pro-enkephalin or pro- dynorphin
2333/5403	. . . .	IL-3	2333/67	. . . .	Lipotropins, e.g. beta, gamma lipotropin
2333/5406	. . . .	IL-4	2333/675	. . . .	beta-Endorphins
2333/5409	. . . .	IL-5	2333/68	. . . .	Melanocyte-stimulating hormone [MSH]
2333/5412	. . . .	IL-6	2333/685	. . . .	alpha-Melanotropin
2333/5415	. . . .	Leukaemia inhibitory factor [LIF]	2333/69	. . . .	beta-Melanotropin
2333/5418	. . . .	IL-7	2333/695	. . . .	Corticotropin [ACTH]
2333/5421	. . . .	IL-8	2333/70	. . . .	Enkephalins
2333/5425	. . . .	IL-9	2333/705	. . . .	Assays involving receptors, cell surface antigens or cell surface determinants
2333/5428	. . . .	IL-10	2333/70503	. . . .	Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3
2333/5431	. . . .	IL-11	2333/70507	. . . .	C2D
2333/5434	. . . .	IL-12	2333/7051	. . . .	T-cell receptor (TcR)-CD3 complex
2333/5437	. . . .	IL-13	2333/70514	. . . .	CD4
2333/544	. . . .	IL-14	2333/70517	. . . .	CD8
2333/5443	. . . .	IL-15	2333/70521	. . . .	CD28, CD152
2333/5446	. . . .	IL-16	2333/70525	. . . .	ICAM molecules, e.g. CD50, CD54, CD102
2333/545	. . . .	IL-1	2333/70528	. . . .	CD58
2333/55	. . . .	IL-2	2333/70532	. . . .	B7 molecules, e.g. CD80, CD86
2333/555	. . . .	Interferons [IFN]	2333/70535	. . . .	Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)
2333/56	. . . .	IFN-alpha	2333/70539	. . . .	MHC-molecules, e.g. HLA-molecules
2333/565	. . . .	IFN-beta	2333/70542	. . . .	CD106
2333/57	. . . .	IFN-gamma	2333/70546	. . . .	Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM
2333/575	. . . .	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin G01N 2333/665 , corticotropin G01N 2333/695)	2333/7055	. . . .	Integrin beta1-subunit-containing molecules, e.g. CD29, CD49
2333/5751	. . . .	Corticotropin releasing factor [CRF] (Urotensin)	2333/70553	. . . .	Integrin beta2-subunit-containing molecules, e.g. CD11, CD18
2333/5752	. . . .	Placental lactogen; Chorionic Somatomammotropin	2333/70557	. . . .	Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61
2333/5753	. . . .	Calcitonin gene related peptide	2333/7056	. . . .	Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
2333/5754	. . . .	Endothelin, vasoactive intestinal contractor [VIC]	2333/70564	. . . .	Selectins, e.g. CD62
2333/5755	. . . .	Neuropeptide Y	2333/70567	. . . .	Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors
2333/5756	. . . .	Prolactin	2333/70571	. . . .	for neuromediators, e.g. serotonin receptor, dopamine receptor
2333/5757	. . . .	Vasoactive intestinal peptide [VIP] or related peptides	2333/70575	. . . .	NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 (NGF G01N 2333/48 , TNF G01N 2333/525)
2333/5758	. . . .	Gastrin releasing peptide	2333/70578	. . . .	NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 (NGF- receptor G01N 2333/71 , TNF-receptor G01N 2333/7151)
2333/5759	. . . .	Thymosin or related peptides	2333/70582	. . . .	CD71
2333/58	. . . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatin; Cardiodilatin	2333/70585	. . . .	CD44
2333/585	. . . .	Calcitonins	2333/70589	. . . .	CD45
2333/59	. . . .	Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]	2333/70592	. . . .	CD52
2333/595	. . . .	Gastrins; Cholecystokinins [CCK]	2333/70596	. . . .	Molecules with a "CD"-designation not provided for elsewhere in G01N 2333/705
2333/60	. . . .	Growth-hormone releasing factors (GH-RF) (Somatoliberin)	2333/71	. . . .	for growth factors; for growth regulators
2333/605	. . . .	Glucagons			
2333/61	. . . .	Growth hormones [GH] (Somatotropin)			
2333/62	. . . .	Insulins			
2333/63	. . . .	Motilins			

- 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 neuromediators [G01N 2333/70571](#))
- 2333/723 Steroid/thyroid 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 haptens 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. lactoferrins, ovotransferrins
- 2333/795 . Porphyrin- or corrin-ring-containing peptides
- 2333/80 . . Cytochromes
- 2333/805 . . Haemoglobins; Myoglobins
- 2333/81 . . Protease inhibitors
- 2333/8103 . . Exopeptidase (E.C. 3.4.11-19) inhibitors
- 2333/8107 . . Endopeptidase (E.C. 3.4.21-99) inhibitors
- 2333/811 . . . 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 . . . Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metalloproteinase, TIMP
- 2333/815 . . from leeches, e.g. hirudin, eglin
- 2333/82 . . Translation products from oncogenes
- 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.
- 2333/9005 . . Enzymes with nucleic acid structure; e.g. ribozymes
- 2333/901 . . Antibodies with enzymatic activity; e.g. abzymes
- 2333/9015 . . Ligases (6)
- 2333/902 . . Oxidoreductases (1.)
- 2333/90203 . . . acting on the aldehyde or oxo group of donors (1.2)
- 2333/90206 . . . acting on the CH-CH group of donors (1.3)
- 2333/90209 . . . acting on NADH or NADPH (1.6), e.g. those with a heme protein as acceptor (1.6.2) (general), Cytochrome-b5 reductase (1.6.2.2) or NADPH-cytochrome P450 reductase (1.6.2.4)
- 2333/90212 . . . acting on a sulfur group of donors (1.8)
- 2333/90216 . . . acting on a heme group of donors (1.9)
- 2333/90219 . . . acting on diphenols and related substances as donors (1.10)
- 2333/90222 with oxygen as acceptor (1.10.3) in general
- 2333/90225 with a definite EC number (1.10.3.-)
- 2333/90229 Catechol oxidase, i.e. Tyrosinase (1.10.3.1)
- 2333/90232 Laccase (1.10.3.2)
- 2333/90235 Ascorbate oxidase (1.10.3.3)
- 2333/90238 . . . acting on hydrogen as donor (1.12)
- 2333/90241 . . . acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)
- 2333/90245 . . . acting on paired donors with incorporation of molecular oxygen (1.14)
- 2333/90248 with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13
- 2333/90251 with a definite EC number (1.14.13.-)
- 2333/90254 Nitric-oxide synthase (NOS; 1.14.13.39)
- 2333/90258 with a reduced iron-sulfur protein as one donor (1.14.15) in general
- 2333/90261 with a definite EC number (1.14.15.-)
- 2333/90264 Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)
- 2333/90267 Cholesterol monooxygenase (cytochrome P 450_{sc})(1.14.15.6)
- 2333/9027 Miscellaneous (1.14.99) (not used)
- 2333/90274 with a definite EC number (1.14.99.-) (not used)
- 2333/90277 Steroid 17 alpha-monooxygenase (1.14.99.9)
- 2333/9028 Steroid 21-monooxygenase (1.14.99.10)
- 2333/90283 . . . acting on superoxide radicals as acceptor (1.15)
- 2333/90287 . . . oxidising metal ions (1.16)
- 2333/9029 . . . acting on -CH₂- groups (1.17)
- 2333/90293 . . . acting on reduced ferredoxin as donor (1.18)
- 2333/90296 . . . acting on reduced flavodoxin as donor (1.19)
- 2333/904 . . . acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)
- 2333/906 . . . acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)

- 2333/90605 acting on the CH-NH₂ group of donors (1.4)
- 2333/90611 with NAD or NADP as acceptor (1.4.1) in general
- 2333/90616 with a definite EC number (1.4.1.-)
- 2333/90622 Phenylalanine dehydrogenase (1.4.1.20)
- 2333/90627 with a cytochrome as acceptor (1.4.2)
- 2333/90633 with oxygen as acceptor (1.4.3) in general
- 2333/90638 with a definite EC number (1.4.3.-)
- 2333/90644 D-Amino acid oxidase (1.4.3.3)
- 2333/9065 acting on CH-NH groups of donors (1.5)
- 2333/90655 with NAD or NADP as acceptor (1.5.1) in general
- 2333/90661 with a definite EC number (1.5.1.-)
- 2333/90666 Dihydrofolate reductase [DHFR] (1.5.1.3)
- 2333/90672 with oxygen as acceptor (1.5.3) in general
- 2333/90677 with a definite EC number (1.5.3.-)
- 2333/90683 Sarcosine oxidase (1.5.3.1)
- 2333/90688 acting on other nitrogen compounds as donors (1.7)
- 2333/90694 with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
- 2333/908 acting on hydrogen peroxide as acceptor (1.11)
- 2333/91 Transferases (2.)
- 2333/91005 transferring one-carbon groups (2.1)
- 2333/91011 Methyltransferases (general) (2.1.1.)
- 2333/91017 with definite EC number (2.1.1.-)
- 2333/91022 Catecholmethyltransferases (2.1.1.6)
- 2333/91028 Hydroxymethyl-, formyl-transferases (2.1.2)
- 2333/91034 Carboxyl- and carbamoyl transferases (2.1.3)
- 2333/9104 Aldehyde and ketone transferases (2.2)
- 2333/91045 Acyltransferases (2.3)
- 2333/91051 Acyltransferases other than aminoacyltransferases (general) (2.3.1)
- 2333/91057 with definite EC number (2.3.1.-)
- 2333/91062 Chloramphenicol-acetyltransferases (2.3.1.28)
- 2333/91068 Chalcone synthases (2.3.1.74)
- 2333/91074 Aminoacyltransferases (general) (2.3.2)
- 2333/9108 with definite EC number (2.3.2.-)
- 2333/91085 Transglutaminases; Factor XIIIq (2.3.2.13)
- 2333/91091 Glycosyltransferases (2.4)
- 2333/91097 Hexosyltransferases (general) (2.4.1)
- 2333/91102 with definite EC number (2.4.1.-)
- 2333/91108 Levansucrases (2.4.1.10)
- 2333/91114 Cellulose synthases (2.4.1.12)
- 2333/91112 Sucrose synthases (2.4.1.13)
- 2333/91125 Sucrose phosphate synthases (2.4.1.14)
- 2333/91131 Glucan branching enzymes (2.4.1.18)
- 2333/91137 Cyclomalto dextrin glucano transferases (2.4.1.19)
- 2333/91142 Pentosyltransferases (2.4.2)
- 2333/91148 transferring other glycosyl groups (2.4.99)
- 2333/91154 transferring alkyl or aryl groups other than methyl groups (2.5)
- 2333/9116 transferring alkyl or aryl groups other than methyl groups (2.5)
- 2333/91165 general (2.5.1)
- 2333/91171 with definite EC number (2.5.1.-)
- 2333/91177 Glutathione transferases (2.5.1.18)
- 2333/91182 Enolpyruvylshikimate-phosphate synthases (2.5.1.19)
- 2333/91188 transferring nitrogenous groups (2.6)
- 2333/91194 transferring sulfur containing groups (2.8)
- 2333/912 transferring phosphorus containing groups, e.g. kinases (2.7)
- 2333/91205 Phosphotransferases in general
- 2333/9121 with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases
- 2333/91215 with a definite EC number (2.7.1.-)
- 2333/9122 Thymidine kinase (2.7.1.21)
- 2333/91225 with a carboxyl group as acceptor (2.7.2)
- 2333/9123 with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases
- 2333/91235 with a phosphate group as acceptor (2.7.4)
- 2333/9124 Diphosphotransferases (2.7.6)
- 2333/91245 Nucleotidyltransferases (2.7.7)
- 2333/9125 with a definite EC number (2.7.7.-)
- 2333/91255 DNA-directed RNA polymerase (2.7.7.6)
- 2333/9126 DNA-directed DNA polymerase (2.7.7.7)
- 2333/91265 Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)
- 2333/9127 DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)
- 2333/91275 RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)
- 2333/9128 RNA-directed DNA polymerases, e.g. RT (2.7.7.49)
- 2333/91285 RNA uridyltransferases (2.7.7.52)
- 2333/9129 Transferases for other substituted phosphate groups (2.7.8)
- 2333/91295 with paired acceptors (2.7.9)
- 2333/914 Hydrolases (3)
- 2333/916 acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)
- 2333/918 Carboxylic ester hydrolases (3.1.1)
- 2333/92 Triglyceride splitting, e.g. by means of lipase
- 2333/922 Ribonucleases (RNAses); Deoxyribonucleases (DNAses)
- 2333/924 acting on glycosyl compounds (3.2)
- 2333/926 acting on alpha -1, 4-glycosidic bonds, e.g. hyaluronidase, invertase, amylase
- 2333/928 acting on alpha -1, 4-glycosidic bonds, e.g. hyaluronidase, invertase, amylase
- 2333/93 Fungal source
- 2333/932 alpha-amylase from plant source
- 2333/934 Glucoamylase
- 2333/936 acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme
- 2333/938 acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase
- 2333/94 acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase
- 2333/942 acting on beta-1, 4-glycosidic bonds, e.g. cellulase

- 2333/944 acting on alpha-1, 6-glycosidic bonds, e.g. isoamylase, pullulanase
- 2333/946 Dextranase
- 2333/948 acting on peptide bonds (3.4)
- 2333/95 Proteinases, i.e. endopeptidases (3.4.21-3.4.99)
- 2333/9506 derived from viruses
- 2333/9513 derived from RNA viruses
- 2333/952 derived from bacteria
- 2333/954 bacteria being Bacillus
- 2333/956 Bacillus subtilis or Bacillus licheniformis
- 2333/958 derived from fungi
- 2333/96 from yeast
- 2333/962 from Aspergillus
- 2333/964 derived from animal tissue
- 2333/96402 from non-mammals
- 2333/96405 in general (**not used**)
- 2333/96408 with EC number (**not used**)
- 2333/96411 Serine endopeptidases (3.4.21)
- 2333/96413 Cysteine endopeptidases (3.4.22)
- 2333/96416 Aspartic endopeptidases (3.4.23)
- 2333/96419 Metalloendopeptidases (3.4.24)
- 2333/96422 from snakes
- 2333/96425 from mammals
- 2333/96427 in general (**not used**)
- 2333/9643 with EC number (**not used**)
- 2333/96433 Serine endopeptidases (3.4.21)
- 2333/96436 Granzymes
- 2333/96438 Dibasic site splicing serine proteases, e.g. furin
- 2333/96441 with definite EC number (**not used**)
- 2333/96444 Factor X (3.4.21.6)
- 2333/96447 Factor VII (3.4.21.21)
- 2333/9645 Factor IX (3.4.21.22)
- 2333/96452 Factor XI (3.4.21.27)
- 2333/96455 Kallikrein (3.4.21.34; 3.4.21.35)
- 2333/96458 Factor XII (3.4.21.38)
- 2333/96461 Protein C (3.4.21.69)
- 2333/96463 Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
- 2333/96466 Cysteine endopeptidases (3.4.22)
- 2333/96469 Interleukin 1-beta convertase-like enzymes
- 2333/96472 Aspartic endopeptidases (3.4.23)
- 2333/96475 with definite EC number (**not used**)
- 2333/96477 Pepsin (3.4.23.1; 3.4.23.2; 3.4.23.3)
- 2333/9648 Chymosin, i.e. rennin (3.4.23.4)
- 2333/96483 Renin (3.4.23.15)
- 2333/96486 Metalloendopeptidases (3.4.24)
- 2333/96488 Phosphoramidon sensitive endothelin converting enzymes
- 2333/96491 with definite EC number (**not used**)
- 2333/96494 Matrix metalloproteases, e.g. 3.4.24.7
- 2333/96497 Enkephalinase (3.4.24.11)
- 2333/966 Elastase
- 2333/968 Plasmin, i.e. fibrinolysin
- 2333/972 Plasminogen activators
- 2333/9723 Urokinase
- 2333/9726 Tissue plasminogen activator
- 2333/974 Thrombin
- 2333/976 Trypsin; Chymotrypsin
- 2333/978 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 Pancreatin
- 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. levan, 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 Guluromannuronans, 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, palmitoylation
- 2440/12 . alkylation, e.g. methylation, (iso-)prenylation, farnesylation
- 2440/14 . phosphorylation
- 2440/16 . (de-)amidation
- 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-)glutamylolation, (poly-)glycylation
- 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. adenylation, 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
- 2446/62 . . Magnetic material dispersed in water drop
- 2446/64 . . Magnetic material dispersed in oil drop
- 2446/66 . . Magnetic material dispersed in surfactant
- 2446/80 . characterised by the agent used to coat the magnetic particles, e.g. lipids
- 2446/84 . . Polymer coating, e.g. gelatin
- 2446/86 . . the coating being pre-functionalised for attaching immunoreagents, e.g. aminodextran
- 2446/90 . . characterised by small molecule linker used to couple immunoreagents to magnetic particles
- 2458/00 Labels used in chemical analysis of biological material**
- 2458/10 . Oligonucleotides as tagging agents for labelling antibodies
- 2458/15 . Non-radioactive isotope labels, e.g. for detection by mass spectrometry
- 2458/20 . Labels for detection by gas chromatography, e.g. haloaryl systems
- 2458/30 . Electrochemically active labels
- 2458/40 . Rare earth chelates
- 2469/00 Immunoassays for the detection of microorganisms**
- 2469/10 . Detection of antigens from microorganism in sample from host
- 2469/20 . Detection of antibodies in sample from host which are directed against antigens from microorganisms
- 2496/00 Reference solutions for assays of biological material**
- 2496/05 . containing blood cells or plasma
- 2496/10 . containing particles to mimic blood cells
- 2496/15 . containing dyes to mimic optical absorption of, e.g. hemoglobin
- 2496/25 . containing added polymers to stabilise biological material against degradation or maintain viscosity or density, e.g. gelatin, polyacrylamides, polyvinyl alcohol ([casein \[G01N 2333/4731\]\(#\), albumins \[G01N 2333/76\]\(#\), polysaccharides \[G01N 2400/10\]\(#\)\)](#)
- 2496/30 . . Polyethylene glycol, e.g. PEG
- 2496/35 . . Polyvinylpyrrolidone, e.g. PVP
- 2496/45 . containing protease inhibitors, e.g. sulfonylfluorides, chloromethylketones, organophosphates ([peptide-based protease inhibitors \[G01N 2333/81\]\(#\)](#))
- 2496/70 . Blood gas control solutions containing dissolved oxygen, bicarbonate and the like
- 2496/80 . Multi-analyte reference solutions containing cholesterol, glucose and the like
- 2500/00 Screening for compounds of potential therapeutic value**

- 2500/02 . Screening involving studying the effect of compounds C on the interaction between interacting molecules A and B (e.g. A = enzyme and B = substrate for A, or A = receptor and B = ligand for the receptor)
- 2500/04 . Screening involving studying the effect of compounds C directly on molecule A (e.g. C are potential ligands for a receptor A, or potential substrates for an enzyme A)
- 2500/10 . involving cells
- 2500/20 . cell-free systems
- 2510/00 Detection of programmed cell death, i.e. apoptosis**
- 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, glycomes or lipidomes**
- 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**
1. The indexing codes [G01N 2800/02](#) - [G01N 2800/44](#) are based on The Merck Manual of Diagnosis and Therapy (17th. Edition, Mark Beers and Robert Berkow).
 2. For diseases caused by 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
- 2800/067 . . Pancreatitis or colitis
- 2800/08 . Hepato-biliary disorders other than hepatitis
- 2800/085 . . Liver diseases, e.g. portal hypertension, fibrosis, cirrhosis, bilirubin
- 2800/10 . Musculoskeletal or connective tissue disorders
- 2800/101 . . Diffuse connective tissue disease, e.g. Sjögren, Wegener's granulomatosis
- 2800/102 . . . Arthritis; Rheumatoid arthritis, i.e. inflammation of peripheral joints
- 2800/104 . . . Lupus erythematosus [SLE]
- 2800/105 . . Osteoarthritis, e.g. cartilage alteration, hypertrophy of bone
- 2800/107 . . Crystal induced conditions; Gout
- 2800/108 . . Osteoporosis
- 2800/12 . Pulmonary diseases
- 2800/122 . . Chronic or obstructive airway disorders, e.g. asthma COPD
- 2800/125 . . Adult respiratory distress syndrome
- 2800/127 . . Bronchitis
- 2800/14 . Disorders of ear, nose or throat
- 2800/16 . Ophthalmology
- 2800/162 . . Conjunctival disorders, e.g. conjunctivitis
- 2800/164 . . Retinal disorders, e.g. retinopathy
- 2800/166 . . Cataract
- 2800/168 . . Glaucoma
- 2800/18 . Dental and oral disorders
- 2800/20 . Dermatological disorders
- 2800/202 . . Dermatitis
- 2800/205 . . Scaling palmar diseases, e.g. psoriasis, pityriasis
- 2800/207 . . Pigmentation disorders
- 2800/22 . Haematology
- 2800/222 . . Platelet disorders
- 2800/224 . . Haemostasis or coagulation
- 2800/226 . . Thrombotic disorders, i.e. thrombo-embolism irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis
- 2800/228 . . Disorders of the spleen, e.g. splenic rupture, splenomegaly
- 2800/24 . Immunology or allergic disorders ([SLE](#) [G01N 2800/104](#))
- 2800/245 . . Transplantation related diseases, e.g. graft versus host disease
- 2800/26 . Infectious diseases, e.g. generalised sepsis
- NOTE**
- Indexing code [G01N 2800/26](#) is not used for documents already classified in one or

G01N

G01N 2800/26

(continued)

more of groups [G01N 33/569](#) and subgroups, [G01N 33/571](#) or [G01N 33/576](#) and subgroups

- 2800/28 . . Neurological disorders
- 2800/2807 . . Headache; Migraine
- 2800/2814 . . Dementia; Cognitive disorders
- 2800/2821 . . . Alzheimer
- 2800/2828 . . . Prion diseases
- 2800/2835 . . Movement disorders, e.g. Parkinson, Huntington, Tourette
- 2800/2842 . . Pain, e.g. neuropathic pain, psychogenic pain
- 2800/285 . . Demyelinating diseases; Multiple sclerosis
- 2800/2857 . . Seizure disorders; Epilepsy
- 2800/2864 . . Sleep disorders
- 2800/2871 . . Cerebrovascular disorders, e.g. stroke, cerebral infarct, cerebral haemorrhage, transient ischemic event
- 2800/2878 . . Muscular dystrophy
- 2800/2885 . . . Duchenne dystrophy
- 2800/2892 . . . Myotonic dystrophy
- 2800/30 . . Psychoses; Psychiatry
- 2800/301 . . Anxiety or phobic disorders
- 2800/302 . . Schizophrenia
- 2800/303 . . Eating disorders, e.g. anorexia, bulimia
- 2800/304 . . Mood disorders, e.g. bipolar, depression
- 2800/305 . . Attention deficit disorder; Hyperactivity
- 2800/306 . . Chronic fatigue syndrome
- 2800/307 . . Drug dependency, e.g. alcoholism
- 2800/308 . . Psychosexual disorders, e.g. sexual arousal disorder
- 2800/32 . . Cardiovascular disorders
- 2800/321 . . Arterial hypertension
- 2800/322 . . Orthostatic hypertension or syncope
- 2800/323 . . Arteriosclerosis, Stenosis
- 2800/324 . . Coronary artery diseases, e.g. angina pectoris, myocardial infarction
- 2800/325 . . Heart failure or cardiac arrest, e.g. cardiomyopathy, congestive heart failure
- 2800/326 . . Arrhythmias, e.g. ventricular fibrillation, tachycardia, atrioventricular block, torsade de pointes
- 2800/327 . . Endocarditis
- 2800/328 . . Vasculitis, i.e. inflammation of blood vessels
- 2800/329 . . Diseases of the aorta or its branches, e.g. aneurysms, aortic dissection
- 2800/34 . . Genitourinary disorders
- 2800/341 . . Urinary incontinence
- 2800/342 . . Prostate diseases, e.g. BPH, prostatitis
- 2800/344 . . Disorders of the penis and the scrotum and erectile dysfunction
- 2800/345 . . Urinary calculi
- 2800/347 . . Renal failures; Glomerular diseases; Tubulointerstitial diseases, e.g. nephritic syndrome, glomerulonephritis; Renovascular diseases, e.g. renal artery occlusion, nephropathy
- 2800/348 . . Urinary tract infections
- 2800/36 . . Gynecology or obstetrics
- 2800/361 . . Menstrual abnormalities or abnormal uterine bleeding, e.g. dysmenorrhea
- 2800/362 . . Menopause
- 2800/364 . . Endometriosis, i.e. non-malignant disorder in which functioning endometrial tissue is present outside the uterine cavity
- 2800/365 . . Breast disorders, e.g. mastalgia, mastitis, Paget's disease
- 2800/367 . . Infertility, e.g. sperm disorder, ovulatory dysfunction
- 2800/368 . . Pregnancy complicated by disease or abnormalities of pregnancy, e.g. preeclampsia, preterm labour
- 2800/38 . . Pediatrics
- 2800/382 . . Cystic fibrosis
- 2800/385 . . Congenital anomalies
- 2800/387 . . . Down syndrome; Trisomy 18; Trisomy 13
- 2800/40 . . Disorders due to exposure to physical agents, e.g. heat disorders, motion sickness, radiation injuries, altitude sickness, decompression illness
- 2800/42 . . Poisoning, e.g. from bites or stings
- 2800/44 . . Multiple drug resistance
- 2800/50 . . Determining the risk of developing a disease
- 2800/52 . . Predicting or monitoring the response to treatment; Prognosis
- 2800/54 . . Determining the risk of relapse
- 2800/56 . . Staging of a disease; Further complications associated with the disease
- 2800/60 . . Complex ways of combining multiple protein biomarkers for diagnosis
- 2800/70 . . Mechanisms involved in disease identification ([G01N 2800/02](#) - [G01N 2800/44](#) take precedence)
- 2800/7004 . . Stress
- 2800/7009 . . . Oxidative stress
- 2800/7014 . . (Neo)vascularisation - Angiogenesis
- 2800/7019 . . Ischaemia
- 2800/7023 . . (Hyper)proliferation
- 2800/7028 . . . Cancer
- 2800/7033 . . Non-proliferative mechanisms
- 2800/7038 . . Hypoxia
- 2800/7042 . . Aging, e.g. cellular aging
- 2800/7047 . . Fibrils-Filaments-Plaque formation
- 2800/7052 . . Fibrosis
- 2800/7057 . . (Intracellular) signaling and trafficking pathways
- 2800/7061 . . . Endoplasmic reticulum to Golgi trafficking
- 2800/7066 . . . Metabolic pathways
- 2800/7071 Carbohydrate metabolism, e.g. glycolysis, gluconeogenesis
- 2800/7076 Amino acid metabolism
- 2800/708 Nitrogen metabolism, e.g. urea cycle
- 2800/7085 Lipogenesis or lipolysis, e.g. fatty acid metabolism
- 2800/709 . . Toxin induced
- 2800/7095 . . Inflammation