

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](#).

1/00	Sampling; Preparing specimens for investigation	2001/045	. . . {Laser ablation; Microwave vaporisation}
2001/002	. {Devices for supplying or distributing samples to an analysing apparatus}	1/06	. . . providing a thin slice, e.g. microtome
2001/005	. . {Packages for mailing or similar transport of samples}	2001/061	. . . . {Blade details}
2001/007	. . {Devices specially adapted for forensic samples, e.g. tamper-proofing, sample tracking}	2001/063	. . . . {with sawing action}
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 })	2001/065	. . . . {Drive details}
2001/021	. . {Correlating sampling sites with geographical information, e.g. GPS}	2001/066	. . . . {electric}
2001/022	. . {sampling for security purposes, e.g. contraband, warfare agents}	2001/068	. . . . {Illumination means}
2001/024	. . . {passengers or luggage}	1/08	. . . involving an extracting tool, e.g. core bit
2001/025	. . . {postal items}	2001/085	. . . . {Grabs}
2001/027	. . . {field kits / quick test kits}	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)}
2001/028	. . {Sampling from a surface, swabbing, vaporising}	2001/1006	. . . {Dispersed solids}
1/04	. . in the solid state, e.g. by cutting	2001/1012	. . . . {Suspensions}
		2001/1018	. . . . {Gas suspensions; Fluidised beds}
		2001/1025	. . . . {Liquid suspensions; Slurries; Mud; Sludge}
		2001/1031	. . . {Sampling from special places}
		2001/1037	. . . . {from an enclosure (hazardous waste, radioactive)}
		2001/1043	. . . . {from sewers}

2001/105	. . . .	{from high-pressure reactors or lines}	2001/2223	. . . . .	{aerosol sampling devices}
2001/1056	. . .	{Disposable (single-use) samplers}	1/2226	. . .	{Sampling from a closed space, e.g. food package, head space}
2001/1062	. . .	{Sampling under constant temperature, pressure, or the like}	2001/2229	. . . .	{Headspace sampling, i.e. vapour over liquid}
2001/1068	. . . .	{Cooling sample below melting point}	2001/2232	. . . . .	{using a membrane, i.e. pervaporation}
2001/1075	. . . .	{Trapping evaporated liquids by cooling}	2001/2235	. . . . .	{over a melt, e.g. furnace}
2001/1081	. . . .	{Storing samples under refrigeration}	2001/2238	. . . . .	{the gas being compressed or pressurized}
2001/1087	. . .	{Categories of sampling}	2001/2241	. . . . .	{purpose-built sampling enclosure for emissions}
2001/1093	. . . . .	{Composite sampling; Cumulative sampling}	2001/2244	. . .	{Exhaled gas, e.g. alcohol detecting}
1/12	. . .	Dippers; Dredgers	1/2247	. . .	{Sampling from a flowing stream of gas}
1/125	. . . .	{adapted for sampling molten metals}	2001/225	. . . .	{isokinetic, same flow rate for sample and bulk gas}
1/14	. . .	Suction devices, e.g. pumps; Ejector devices	1/2252	. . . . .	{in a vehicle exhaust}
1/1409	. . . .	{adapted for sampling molten metals}	2001/2255	. . . . .	{with dilution of the sample}
2001/1418	. . . . .	{Depression, aspiration}	1/2258	. . . . .	{in a stack or chimney}
2001/1427	. . . . .	{Positive displacement, piston, peristaltic}	2001/2261	. . . . .	{preventing condensation (heating lines)}
2001/1436	. . . . .	{Ejector}	2001/2264	. . . . .	{with dilution}
2001/1445	. . . . .	{Overpressure, pressurisation at sampling point}	2001/2267	. . . . .	{separating gas from liquid, e.g. bubbles}
2001/1454	. . . . .	{Positive displacement, piston}	2001/227	. . . . .	{separating gas from solid, e.g. filter}
2001/1463	. . . . .	{Injector; Air-lift}	1/2273	. . .	{Atmospheric sampling}
2001/1472	. . . . .	{Devices not actuated by pressure difference}	2001/2276	. . . . .	{Personal monitors}
2001/1481	. . . . .	{Archimedian screw; Auger}	2001/2279	. . . . .	{high altitude, e.g. rockets, balloons}
2001/149	. . . . .	{Capillaries; Sponges}	2001/2282	. . .	{with cooling means}
1/16	. . .	with provision for intake at several levels (G01N 1/2035 G01N 1/12 , G01N 1/14 take precedence)	2001/2285	. . .	{Details of probe structures}
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)	2001/2288	. . . . .	{Filter arrangements}
2001/185	. . . . .	{Conveyor of containers successively filled}	2001/2291	. . . . .	{Movable probes, e.g. swivelling, swinging}
1/20	. . .	for flowing or falling materials (G01N 1/2035 G01N 1/12 , G01N 1/14 take precedence)	1/2294	. . .	{Sampling soil gases or the like}
2001/2007	. . . . .	{Flow conveyors}	2001/2297	. . .	{Timing devices}
2001/2014	. . . . .	{Pneumatic conveyors}	1/24	. . .	Suction devices (G01N 1/22 - G01N 1/2294 take precedence)
2001/2021	. . . . .	{falling under gravity}	2001/241	. . . . .	{Bellows}
2001/2028	. . . . .	{Belts}	2001/242	. . . . .	{Injectors or ejectors}
1/2035	. . . . .	{by deviating part of a fluid stream, e.g. by drawing-off or tapping}	2001/244	. . . . .	{using critical flow orifices}
1/2042	. . . . .	{using a piston actuated by the pressure of the liquid to be sampled}	2001/245	. . . . .	{Fans}
2001/205	. . . . .	{using a valve}	2001/247	. . . . .	{Syringes}
2001/2057	. . . . .	{Sample chamber in a valve/piston}	2001/248	. . . . .	{Evacuated containers}
2001/2064	. . . . .	{using a by-pass loop}	1/26	. . .	with provision for intake from several spaces
2001/2071	. . . . .	{Removable sample 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)
2001/2078	. . . . .	{Pre-evacuated bottle}	1/2806	. . .	{Means for preparing replicas of specimens, e.g. for microscopical analysis}
2001/2085	. . . . .	{Non-pre-evacuated septum closed bottles}	1/2813	. . .	{Producing thin layers of samples on a substrate, e.g. smearing, spinning-on (G01N 1/30 takes precedence)}
2001/2092	. . . . .	{Cross-cut sampling}	2001/282	. . .	{with mapping; Identification of areas; Spatial correlated pattern}
1/22	. . .	in the gaseous state {(specially adapted for biological material G01N 33/497 ; measuring breath flow A61B 5/087)}	2001/2826	. . .	{Collecting by adsorption or absorption}
1/2202	. . .	{involving separation of sample components during sampling}	2001/2833	. . .	{Collecting samples on a sticky, tacky, adhesive surface}
1/2205	. . . . .	{with filters}	2001/284	. . . . .	{using local activation of adhesive, i.e. Laser Capture Microdissection}
1/2208	. . . . .	{with impactors}	2001/2846	. . .	{Cytocentrifuge method}
1/2211	. . . . .	{with cyclones}	1/2853	. . .	{Shadowing samples}
1/2214	. . . . .	{by sorption}			
2001/2217	. . . . .	{using a liquid}			
2001/222	. . . . .	{other features (not used)}			

- 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. onconductivity 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](#)
- 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](#)

- 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:

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#)
- image enhancement [G06T 5/00](#)
- image analysis [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](#))
- 19/10 . Measuring moisture content, e.g. by measuring change in length of hygroscopic filament; Hygrometers

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)	2021/0346	. . . {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}
		2021/0392	. . . . {Nonplanar windows}
		2021/0396	. . . . {Oblique incidence}
21/01	. Arrangements or apparatus for facilitating the optical investigation	21/05	. . . Flow-through cuvettes (G01N 21/09 takes precedence; handling fluid samples G01N 1/10)
2021/0106	. . {General arrangement of respective parts}	2021/052	. . . . {Tubular type; cavity type; multireflective}
2021/0112	. . . {Apparatus in one mechanical, optical or electronic block}	2021/054	. . . . {Bubble trap; Debubbling}
2021/0118	. . . . {Apparatus with remote processing}	2021/056	. . . . {Laminated construction}
2021/0125	. . . . {with stored program or instructions}	2021/058	. . . . {Flat flow cell}
2021/0131	. . . . . {being externally stored}	21/07	. . . Centrifugal type cuvettes (G01N 21/09 takes precedence; centrifuges per se B04B)
2021/0137	. . . . . {with PC or the like}	21/09	. . . adapted to resist hostile environments or corrosive or abrasive materials
2021/0143	. . . . . {with internal and external computer}	21/11	. . Filling or emptying of cuvettes
2021/015	. . . {Apparatus with interchangeable optical heads or interchangeable block of optics and detector}	2021/115	. . . {Washing; Purging}
2021/0156	. . . . {with optics only in separate head, e.g. connection by optical fibres}	21/13	. . Moving of cuvettes or solid samples to or from the investigating station (handling materials for automatic analysis G01N 35/00)
2021/0162	. . {using microprocessors for control of a sequence of operations, e.g. test, powering, switching, processing}	2021/135	. . . {Sample holder displaceable (in automatised apparatus G01N 35/02)}
2021/0168	. . . {for the measurement cycle}	21/15	. . Preventing contamination of the components of the optical system or obstruction of the light path
2021/0175	. . . {for selecting operating means}	2021/151	. . . {Gas blown}
2021/0181	. . {Memory or computer-assisted visual determination}	2021/152	. . . {Scraping; Brushing; Moving band}
2021/0187	. . {Mechanical sequence of operations}	2021/154	. . . {Ultrasonic cleaning}
2021/0193	. . {the sample being taken from a stream or flow to the measurement cell}	2021/155	. . . {Monitoring cleanness of window, lens, or other parts}
21/03	. . Cuvette constructions	2021/157	. . . . {Monitoring by optical means}
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)}	2021/158	. . . {Eliminating condensation}
2021/0307	. . . . {Insert part in cell}	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)
21/031	. . . {Multipass arrangements}	21/1702	. . {with opto-acoustic detection, e.g. for gases or analysing solids}
2021/0314	. . . . {Double pass, autocollimated path}	2021/1704	. . . {in gases}
21/0317	. . . {High pressure cuvettes; (G01N 21/0332 - G01N 21/15 take precedence)}	2021/1706	. . . {in solids}
2021/0321	. . . {One time use cells, e.g. integrally moulded}	2021/1708	. . . {with piezotransducers (probes for investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves G01N 29/24)}
2021/0325	. . . {Cells for testing reactions, e.g. containing reagents}	21/171	. . {with calorimetric detection, e.g. with thermal lens detection}
2021/0328	. . . . {Arrangement of two or more cells having different functions for the measurement of reactions}	2021/1712	. . . {Thermal lens, mirage effect}
21/0332	. . . {with temperature control (control of temperature G05D 23/00; cryostats F17C 3/08)}	2021/1714	. . . {Photothermal radiometry with measurement of emission}
2021/0335	. . . . {Refrigeration of cells; Cold stages}	21/1717	. . {with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance}
2021/0339	. . . {Holders for solids, powders}		
2021/0342	. . . {Solid sample being immersed, e.g. equiindex fluid}		

- 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 {Variangle 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 magnetooptical 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}	21/37	. . . . .	using pneumatic detection {(opto-acoustic detection G01N 21/1702)}
2021/3159	. . . . .	{Special features of multiplexing circuits}	21/39	. . . . .	using tunable lasers
2021/3162	. . . . .	{with offset adjustment between filters}	2021/391	. . . . .	{Intracavity sample}
2021/3166	. . . . .	{using separate detectors and filters}	2021/392	. . . . .	{Measuring reradiation, e.g. fluorescence, backscatter}
2021/317	. . . . .	{Special constructive features}	2021/393	. . . . .	{and using a spectral variation of the interaction of the laser beam and the sample}
2021/3174	. . . . .	{Filter wheel}	2021/394	. . . . .	{DIAL method}
2021/3177	. . . . .	{Use of spatially separated filters in simultaneous way}	2021/395	. . . . .	{using a topographic target}
2021/3181	. . . . .	{using LEDs}	2021/396	. . . . .	{Type of laser source}
2021/3185	. . . . .	{typically monochromatic or band-limited}	2021/397	. . . . .	{Dye laser}
2021/3188	. . . . .	{band-limited}	2021/398	. . . . .	{CO ₂ laser}
2021/3192	. . . . .	{Absorption edge variation is measured}	2021/399	. . . . .	{Diode laser}
2021/3196	. . . . .	{Correlating located peaks in spectrum with reference data, e.g. fingerprint data}	21/41	. . .	Refractivity; Phase-affecting properties, e.g. optical path length (G01N 21/21 takes precedence)
21/33	. . . . .	using ultra-violet light (G01N 21/39 takes precedence)	2021/4106	. . . . .	{Atmospheric distortion; Turbulence}
2021/335	. . . . .	{Vacuum UV}	2021/4113	. . . . .	{Atmospheric dispersion}
21/35	. . . . .	using infra-red light (G01N 21/39 takes precedence)	21/412	. . . . .	{Index profiling of optical fibres}
21/3504	. . . . .	for analysing gases, e.g. multi-gas analysis	2021/4126	. . . . .	{Index of thin films}
2021/3509	. . . . .	{Correlation method, e.g. one beam alternating in correlator/sample field}	21/4133	. . . . .	{Refractometers, e.g. differential}
2021/3513	. . . . .	{Open path with an instrumental source}	2021/414	. . . . .	{Correcting temperature effect in refractometers}
21/3518	. . . . .	Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques	2021/4146	. . . . .	{Differential cell arrangements}
		NOTE	2021/4153	. . . . .	{Measuring the deflection of light in refractometers}
		This group also covers devices without instrumental sources, e.g. radiometric-type devices using ambient infra-red light.	2021/416	. . . . .	{Visualising flow by index measurement}
			2021/4166	. . . . .	{Methods effecting a waveguide mode enhancement through the property being measured}
2021/3522	. . . . .	{balancing by two filters on two detectors}	2021/4173	. . . . .	{Phase distribution}
2021/3527	. . . . .	{and using one filter cell as attenuator}	2021/418	. . . . .	{Frequency/phase diagrams}
2021/3531	. . . . .	{without instrumental source, i.e. radiometric}	2021/4186	. . . . .	{Phase modulation imaging}
2021/3536	. . . . .	{using modulation of pressure or density}	2021/4193	. . . . .	{using a PSD}
2021/354	. . . . .	{Hygrometry of gases}	21/43	. . . . .	by measuring critical angle
2021/3545	. . . . .	{Disposition for compensating effect of interfering gases}	21/431	. . . . .	{Dip refractometers, e.g. using optical fibres}
2021/355	. . . . .	{by using a third optical path, e.g. interference cuvette}	2021/432	. . . . .	{comprising optical fibres}
21/3554	. . . . .	for determining moisture content	2021/433	. . . . .	{with an unclad part on the fibre}
21/3559	. . . . .	in sheets, e.g. in paper	2021/434	. . . . .	{Dipping block in contact with sample, e.g. prism}
21/3563	. . . . .	for analysing solids; Preparation of samples therefor	2021/435	. . . . .	{Sensing drops on the contact surface}
2021/3568	. . . . .	{applied to semiconductors, e.g. Silicon}	2021/436	. . . . .	{Sensing resonant reflection}
2021/3572	. . . . .	{Preparation of samples, e.g. salt matrices}	2021/437	. . . . .	{with investigation of angle}
21/3577	. . . . .	for analysing liquids, e.g. polluted water	2021/438	. . . . .	{with investigation of wavelength}
21/3581	. . . . .	using far infra-red light; using Terahertz radiation	21/45	. . . . .	using interferometric methods; using Schlieren methods
21/3586	. . . . .	by Terahertz time domain spectroscopy [THz-TDS]	2021/451	. . . . .	{for determining the optical absorption}
21/359	. . . . .	using near infra-red light	21/453	. . . . .	{Holographic interferometry (for dimensional measurements G01B 9/021 - G01B 9/029) }
2021/3595	. . . . .	{using FTIR}	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}
			21/47	. . .	Scattering, i.e. diffuse reflection (G01N 21/25, G01N 21/41 take precedence (G01N 21/55 takes precedence))
			2021/4702	. . . . .	{Global scatter; Total scatter, excluding reflections}

2021/4704	. . . .	{Angular selective}	2021/516	. . . . .	{Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays}
2021/4707	. . . . .	{Forward scatter; Low angle scatter}	21/53	. . . . .	within a flowing fluid, e.g. smoke (alarm devices actuated by smoke G08B 17/10)
2021/4709	. . . . .	{Backscatter}	21/532	. . . . .	{with measurement of scattering and transmission}
2021/4711	. . . . .	{Multiangle measurement}	21/534	. . . . .	{by measuring transmission alone, i.e. determining opacity}
2021/4714	. . . . .	{Continuous plural angles}	2021/536	. . . . .	{Measurement device mounted at stack}
2021/4716	. . . . .	{Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}	21/538	. . . . .	{for determining atmospheric attenuation and visibility}
2021/4719	. . . . .	{using a optical fibre array}	21/55	. . .	Specular reflectivity
2021/4721	. . . . .	{using a PSD}	2021/551	. . . .	{Retroreflectance}
2021/4723	. . . . .	{Scanning scatter angles}	21/552	. . . .	Attenuated total reflection
2021/4726	. . . . .	{Detecting scatter at 90°}	21/553	. . . . .	{and using surface plasmons (fluorescence excitation G01N 21/648 ; enhanced Raman G01N 21/658)}
2021/4728	. . . . .	{Optical definition of scattering volume}	21/554	. . . . .	{detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}
2021/473	. . . .	{Compensating for unwanted scatter, e.g. reliefs, marks}	2021/555	. . . .	{Measuring total reflection power, i.e. scattering and specular}
2021/4733	. . . .	{Discriminating different types of scatterers}	2021/556	. . . .	{Measuring separately scattering and specular}
2021/4735	. . . .	{Solid samples, e.g. paper, glass}	2021/557	. . . .	{Detecting specular reflective parts on sample}
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}	2021/558	. . . .	{Measuring reflectivity and transmission}
21/474	. . . . .	{Details of optical heads therefor, e.g. using optical fibres}	2021/559	. . . .	{Determining variation of specular reflection within diffusively reflecting sample}
2021/4742	. . . . .	{comprising optical fibres}	21/57	. . . .	Measuring gloss
2021/4745	. . . . .	{Fused bundle, i.e. for backscatter}	2021/575	. . . . .	{Photogoniometering}
2021/4747	. . . . .	{Concentric bundles}	21/59	. . .	Transmissivity (G01N 21/25 takes precedence)
2021/475	. . . . .	{Bifurcated bundle}	2021/5903	. . . .	{using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}
2021/4752	. . . . .	{Geometry}	21/5907	. . . .	{Densitometers}
2021/4754	. . . . .	{Diffuse illumination}	21/5911	. . . . .	{of the scanning type (scanning per se G02B)}
2021/4757	. . . . .	{Geometry 0/45° or 45/0°}	2021/5915	. . . . .	{Processing scan data in densitometry}
2021/4759	. . . . .	{Annular illumination}	2021/5919	. . . . .	{Determining total density of a zone}
2021/4761	. . . . .	{Mirror arrangements, e.g. in IR range}	2021/5923	. . . . .	{Determining zones of density; quantitating spots}
2021/4764	. . . . .	{Special kinds of physical applications}	2021/5926	. . . . .	{Isodensitometers}
2021/4766	. . . . .	{Sample containing fluorescent brighteners}	2021/593	. . . . .	{Correcting from the background density}
2021/4769	. . . . .	{Fluid samples, e.g. slurries, granulates; Compressible powdery or fibrous samples}	2021/5934	. . . . .	{Averaging on a zone}
2021/4771	. . . . .	{Matte surfaces with reflecting particles}	2021/5938	. . . . .	{Features of monitor, display}
2021/4773	. . . . .	{Partly or totally translucent samples}	2021/5942	. . . . .	{for dot area ratio in printing applications}
2021/4776	. . . . .	{Miscellaneous in diffuse reflection devices}	2021/5946	. . . . .	{for binary signal}
2021/4778	. . . . .	{Correcting variations in front distance}	2021/5949	. . . . .	{Correcting nonlinearity of signal, e.g. in measurement of photomedium}
2021/478	. . . . .	{Application in testing analytical test strips}	2021/5953	. . . . .	{for detecting a spatial spectrum}
2021/4783	. . . . .	{Examining under varying incidence; Angularly adjustable head}	2021/5957	. . . . .	{using an image detector type detector, e.g. CCD}
21/4785	. . . .	{Standardising light scatter apparatus; Standards therefor}	2021/5961	. . . . .	{using arrays of sources and detectors}
21/4788	. . . .	{Diffraction (for sizing particles G01N 15/0205)}	2021/5965	. . . . .	{using selected detectors in an array}
2021/479	. . . . .	{Speckle}	2021/5969	. . . . .	{Scanning of a tube, a cuvette, a volume of sample}
2021/4792	. . . .	{Polarisation of scatter light}	2021/5973	. . . . .	{where the cuvette or tube is moved}
21/4795	. . . .	{spatially resolved investigating of object in scattering medium (in vivo A61B)}	2021/5976	. . . . .	{Image projected and scanning projected image}
2021/4797	. . . . .	{time resolved, e.g. analysis of ballistic photons}	2021/598	. . . . .	{Features of mounting, adjusting}
21/49	. . . .	within a body or fluid	2021/5984	. . . . .	{height adjustable}
2021/495	. . . . .	{the fluid being adsorbed, e.g. in porous medium}	2021/5988	. . . . .	{Fluid mounting or the like, e.g. vortex}
21/51	. . . . .	inside a container, e.g. in an ampoule (G01N 21/53 takes precedence ; checking containers for cleanliness B08B 9/46)	2021/5992	. . . . .	{Double pass}
2021/513	. . . . .	{Cuvettes for scattering measurements}	2021/5996	. . . . .	{Positioning the head}

21/61	. . . Non-dispersive gas analysers (G01N 21/3504 takes precedence)	21/6458	. . . . . {Fluorescence microscopy (fluorescence microscopes per se G02B 21/0076 and G02B 21/16)}
21/62	. Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light	2021/646	. . . . . {Detecting fluorescent inhomogeneities at a position, e.g. for detecting defects}
2021/625	. . {Excitation by energised particles such as metastable molecules}	2021/6463	. . . . . {Optics}
21/63	. . optically excited	2021/6465	. . . . . {Angular discrimination}
21/631	. . . {using photolysis and investigating photolysed fragments}	2021/6467	. . . . . {Axial flow and illumination}
2021/632	. . . . {Predissociation, e.g. for fluorescence of transient excited radicals}	2021/6469	. . . . . {Cavity, e.g. ellipsoid}
2021/633	. . . {Photoinduced grating used for analysis}	2021/6471	. . . . . {Special filters, filter wheel}
2021/634	. . . {Photochromic material analysis}	2021/6473	. . . . . {In-line geometry}
2021/635	. . . {Photosynthetic material analysis, e.g. chlorophyll}	2021/6476	. . . . . {Front end, i.e. backscatter, geometry}
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)}	2021/6478	. . . . . {Special lenses}
2021/637	. . . . {Lasing effect used for analysis}	21/648	. . . . . {using evanescent coupling or surface plasmon coupling for the excitation of fluorescence}
2021/638	. . . . {Brillouin effect, e.g. stimulated Brillouin effect}	2021/6482	. . . . . {Sample cells, cuvettes}
21/64	. . . Fluorescence; Phosphorescence	2021/6484	. . . . . {Optical fibres}
21/6402	. . . . {Atomic fluorescence; Laser induced fluorescence}	21/6486	. . . . . {Measuring fluorescence of biological material, e.g. DNA, RNA, cells (G01N 21/6428 takes precedence)}
21/6404	. . . . . {Atomic fluorescence}	21/6489	. . . . . {Photoluminescence of semiconductors}
2021/6406	. . . . . {multi-element}	2021/6491	. . . . . {Measuring fluorescence and transmission; Correcting inner filter effect}
21/6408	. . . . {with measurement of decay time, time resolved fluorescence}	2021/6493	. . . . . {by alternating fluorescence/transmission or fluorescence/reflection}
2021/641	. . . . . {Phosphorimetry, gated}	2021/6495	. . . . . {Miscellaneous methods}
2021/6413	. . . . . {Distinction short and delayed fluorescence or phosphorescence}	2021/6497	. . . . . {Miscellaneous applications}
2021/6415	. . . . . {with two excitations, e.g. strong pump/probe flash}	21/65	. . . Raman scattering
2021/6417	. . . . . {Spectrofluorimetric devices}	2021/651	. . . . . {Cuvettes therefore}
2021/6419	. . . . . {Excitation at two or more wavelengths}	2021/653	. . . . . {Coherent methods [CARS]}
2021/6421	. . . . . {Measuring at two or more wavelengths}	2021/655	. . . . . {Stimulated Raman}
2021/6423	. . . . . {Spectral mapping, video display}	2021/656	. . . . . {Raman microprobe}
2021/6426	. . . . . {Determining Fraunhofer lines}	21/658	. . . . . {enhancement Raman, e.g. surface plasmons}
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)}	21/66	. . electrically excited, e.g. electroluminescence
21/643	. . . . . {non-biological material}	21/67	. . . using electric arcs or discharges (spark gaps per se H01T)
2021/6432	. . . . . {Quenching}	21/68	. . . using high frequency electric fields
2021/6434	. . . . . {Optrodes}	21/69	. . . specially adapted for fluids {, e.g. molten metal}
2021/6436	. . . . . {for analysing tapes}	2021/695	. . . . . {Molten metals}
2021/6439	. . . . . {with indicators, stains, dyes, tags, labels, marks}	21/70	. . mechanically excited, e.g. triboluminescence
2021/6441	. . . . . {with two or more labels}	21/71	. . thermally excited
2021/6443	. . . . . {Fluorimetric titration}	2021/712	. . . {using formation of volatile hydride}
21/6445	. . . . . {Measuring fluorescence polarisation}	21/714	. . . {Sample nebulisers for flame burners or plasma burners (nebulizers per se B05B)}
21/6447	. . . . . {by visual observation}	21/716	. . . {by measuring the radiation emitted by a test object treated by combustion gases for investigating the composition of gas mixtures}
21/645	. . . . . {Specially adapted constructive features of fluorimeters}	21/718	. . . {Laser microanalysis, i.e. with formation of sample plasma}
21/6452	. . . . . {Individual samples arranged in a regular 2D-array, e.g. multiwell plates}	21/72	. . . using flame burners
21/6454	. . . . . {using an integrated detector array}	2021/725	. . . . {for determining of metalloids, using Beilstein type reaction}
21/6456	. . . . . {Spatial resolved fluorescence measurements; Imaging}	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](#))}

G01N

2021/8672	. . . .	{Paper formation parameter}	2021/8893	. . . . .	{providing a video image and a processed signal for helping visual decision}
2021/8681	. . . .	{Paper fibre orientation}	2021/8896	. . . .	{Circuits specially adapted for system specific signal conditioning}
2021/869	. . .	{Plastics or polymeric material, e.g. polymers orientation in plastic, adhesive imprinted band}	21/89	. . .	in moving material, e.g. running paper or textiles (G01N 21/90 , G01N 21/91 , G01N 21/94 take precedence)
21/87	. .	Investigating jewels (G01N 21/88 takes precedence)	21/8901	. . . .	{Optical details; Scanning details (per se G02B)}
21/88	. .	Investigating the presence of flaws or contamination	2021/8902	. . . . .	{Anamorphic spot}
21/8803	. . .	{Visual inspection (measuring projectors G01B 9/08)}	21/8903	. . . . .	{using a multiple detector array}
21/8806	. . .	{Specially adapted optical and illumination features}	2021/8904	. . . . .	{Sheetwide light conductor on detecting side, e.g. fluorescing light rod}
2021/8809	. . . . .	{Adjustment for highlighting flaws}	2021/8905	. . . . .	{Directional selective optics, e.g. slits, spatial filters}
2021/8812	. . . . .	{Diffuse illumination, e.g. "sky"}	2021/8907	. . . . .	{Cylindrical optics}
2021/8816	. . . . .	{by using multiple sources, e.g. LEDs}	2021/8908	. . . . .	{Strip illuminator, e.g. light tube}
2021/8819	. . . . .	{by using retroreflecting screen}	2021/8909	. . . . .	{Scan signal processing specially adapted for inspection of running sheets}
2021/8822	. . . . .	{Dark field detection}	2021/891	. . . . .	{Edge discrimination, e.g. by signal filtering}
2021/8825	. . . . .	{Separate detection of dark field and bright field}	2021/8911	. . . . .	{Setting scan-width signals}
2021/8829	. . . . .	{Shadow projection or structured background, e.g. for deflectometry (three-dimensional metrology of surfaces G01B 11/25)}	2021/8912	. . . . .	{Processing using lane subdivision}
2021/8832	. . . . .	{Structured background, e.g. for transparent objects}	21/8914	. . . . .	{characterised by the material examined}
2021/8835	. . . . .	{Adjustable illumination, e.g. software adjustable screen}	21/8915	. . . . .	{non-woven textile material}
2021/8838	. . . . .	{Stroboscopic illumination; synchronised illumination}	21/8916	. . . . .	{for testing photographic material}
2021/8841	. . . . .	{Illumination and detection on two sides of object}	2021/8917	. . . . .	{Paper, also ondulated}
2021/8845	. . . . .	{Multiple wavelengths of illumination or detection}	2021/8918	. . . . .	{Metal}
2021/8848	. . . . .	{Polarisation of light}	21/892	. . . . .	characterised by the flaw, defect or object feature examined
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)}	21/8921	. . . . .	{Streaks}
2021/8854	. . . . .	{Grading and classifying of flaws}	21/8922	. . . . .	{Periodic flaws}
2021/8858	. . . . .	{Flaw counting}	2021/8924	. . . . .	{Dents; Relief flaws}
2021/8861	. . . . .	{Determining coordinates of flaws}	2021/8925	. . . . .	{Inclusions}
2021/8864	. . . . .	{Mapping zones of defects}	2021/8927	. . . . .	{Defects in a structured web}
2021/8867	. . . . .	{using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing}	2021/8928	. . . . .	{Haze defects, i.e. with a part of diffracted light}
2021/887	. . . . .	{the measurements made in two or more directions, angles, positions}	21/894	. . . . .	Pinholes
2021/8874	. . . . .	{Taking dimensions of defect into account}	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)}
2021/8877	. . . . .	{Proximity analysis, local statistics}	2021/8962	. . . . .	{for detecting separately opaque flaws and refracting flaws}
2021/888	. . . . .	{Marking defects}	2021/8965	. . . . .	{using slant illumination, using internally reflected light}
2021/8883	. . . . .	{involving the calculation of gauges, generating models}	2021/8967	. . . . .	{Discriminating defects on opposite sides or at different depths of sheet or rod}
2021/8887	. . . . .	{based on image processing techniques}	21/898	. . . . .	Irregularities in textured or patterned surfaces, e.g. textiles, wood
2021/889	. . . . .	{providing a bare video image, i.e. without visual measurement aids}	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}

G01N

- 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 . . Diffraction 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 the preceding groups**
- 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](#), [drug screening with microorganisms C12Q 1/025](#))}
- 33/18 . Water ([treatment of water C02F](#))}
- 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
- 33/203 . . {for the presence of a volatilizable, e.g. gaseous component}
- 33/206 . . {in molten state, e.g. after local fusion}
- 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 {; testing the nature of borehole walls, formation testing [E21B 49/00](#); investigation of foundation soil in situ [E02D 1/00](#); geophysics, e.g. prospecting [G01V](#))}
- 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 33/14](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence; determining the germinating capacity of seeds [A01C 1/02](#); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))}
- 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 {(taking blood samples [A61B 5/15](#); 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; test tubes *per se* [B01L 3/14](#))}
- 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 {(for evaluating respiratory organs [A61B 5/08](#))}
- 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}
- 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 physicochemical 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 {(not used, [see G01N 33/54313](#))}
- 33/547 with antigen or antibody attached to the carrier via a bridging agent {(not used, [see G01N 33/54353](#))}
- 33/548 Carbohydrates, e.g. dextran
- 33/549 with antigen or antibody entrapped within the carrier {(not used, [see 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 {(not used, [see G01N 33/6857](#))}

- 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](#)
- 2033/57403 {of breast}
- 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, 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}
- 2033/57453 {of lung}
- 2033/57457 {of skin}
- 2033/57461 {of liver, pancreas or kidney}
- 2033/57465 {of stomach or intestine}
- 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, bromcresol green}
- 33/6842 {Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins}
- 33/6845 {Methods of identifying protein-protein interactions in protein mixtures}
- 33/6848 {Methods of protein analysis involving mass spectrometry}
- 33/6851 {Methods of protein analysis involving laser desorption ionisation mass spectrometry}
- 33/6854 {Immunoglobulins}
- 33/6857 {Antibody fragments}
- 33/686 {Anti-idiotype}
- 33/6863 {Cytokines, i.e. immune system proteins modifying a biological response such as cell growth proliferation or differentiation, e.g. TNF, CNF, GM-CSF, lymphotoxin, MIF or their receptors}
- 33/6866 {Interferon}
- 33/6869 {Interleukin}
- 33/6872 {Intracellular protein regulatory factors and their receptors, e.g. including ion channels}
- 33/6875 {Nucleoproteins}
- 33/6878 {in epitope analysis}
- 33/6881 {from skin}
- 33/6884 {from lung}
- 33/6887 {from muscle, cartilage or connective tissue}
- 33/689 {related to pregnancy or the gonads}
- 33/6893 {related to diseases not provided for elsewhere}
- 33/6896 {Neurological disorders, e.g. Alzheimer's disease}
- 33/70 involving creatine or creatinine
- 33/72 involving blood pigments, e.g. haemoglobin, bilirubin {or other porphyrins; involving occult blood}
- 33/721 {Haemoglobin}
- 33/723 {Glycosylated haemoglobin}
- 33/725 {using peroxidative activity}
- 33/726 {Devices}
- 33/728 {Bilirubin; including biliverdin}
- 33/74 involving hormones {or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors}
- 33/743 {Steroid hormones}
- 33/746 {Erythropoetin}
- 33/76 Human chorionic gonadotropin {including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors}
- 33/78 Thyroid gland hormones {, e.g. T3, T4, TBH, TBG or their receptors}
- 33/80 involving blood groups or blood types {or red blood cells (white blood cells [G01N 33/56972](#))}
- 33/82 involving vitamins {or their receptors}
- 33/84 involving inorganic compounds or pH
- 33/86 involving blood coagulating time {or factors, or their receptors}
- 33/88 involving prostaglandins {or their receptors}
- 33/90 involving iron binding capacity of blood
- 33/92 involving lipids, e.g. cholesterol {, lipoproteins, or their receptors (steroid hormones [G01N 33/743](#))}
- 33/94 involving narcotics {or drugs or pharmaceuticals, neurotransmitters or associated receptors}
- 33/9406 {Neurotransmitters}
- 33/9413 {Dopamine}
- 33/942 {Serotonin, i.e. 5-hydroxy-tryptamine}
- 33/9426 {GABA, i.e. gamma-amino-butyrate}
- 33/9433 {(Nor)adrenaline}
- 33/944 {Acetylcholine}
- 33/9446 {Antibacterials}
- 33/9453 {Cardioregulators, e.g. antihypotensives, antiarrhythmics}
- 33/946 {CNS-stimulants, e.g. cocaine, amphetamines}
- 33/9466 {Antidepressants}
- 33/9473 {Anticonvulsants, e.g. phenobarbitol, phenytoin}
- 33/948 {Sedatives, e.g. cannabinoids, barbiturates ([opiates G01N 33/9486](#))}
- 33/9486 {Analgesics, e.g. opiates, aspirine}
- 33/9493 {Immunosuppressants}
- 33/96 involving blood or serum control standard
- 33/98 involving alcohol, e.g. ethanol in breath

NOTE

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

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

- 35/00009 {provided with a sample supporting tape, e.g. with absorbent zones}
- 2035/00019 {cassette structures}
- 35/00029 {provided with flat sample substrates, e.g. slides ([G01N 35/028](#) takes precedence)}
- 2035/00039 {Transport arrangements specific to flat sample substrates, e.g. pusher blade}
- 2035/00049 {for loading/unloading a carousel}

- 2035/00059 . . . {vacuum chucks}
- 35/00069 . . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}
- 2035/00079 . . {Evaporation covers for slides}
- 2035/00089 . . {Magazines}
- 2035/00099 . . {Characterised by type of test elements}
- 2035/00108 . . . {Test strips, e.g. paper}
- 2035/00118 {for multiple tests}
- 2035/00128 {with pressing or squeezing devices}
- 2035/00138 . . . {Slides}
- 2035/00148 . . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}
- 2035/00158 . . . {Elements containing microarrays, i.e. "biochip"}
- 2035/00168 . . {Manufacturing or preparing test elements}
- 2035/00178 . {Special arrangements of analysers}
- 2035/00188 . . {the analyte being in the solid state}
- 2035/00198 . . . {Dissolution analysers}
- 2035/00207 . . {Handling bulk quantities of analyte}
- 2035/00217 . . . {involving measurement of weight}
- 2035/00227 . . . {Monitoring a process (online)}
- 2035/00237 . . {Handling microquantities of analyte, e.g. microvalves, capillary networks}
- 2035/00247 . . . {Microvalves}
- 2035/00257 {Capillary stop flow circuits}
- 2035/00267 {Meltable plugs}
- 2035/00277 . . {Special precautions to avoid contamination (e.g. enclosures, glove- boxes, sealed sample carriers, disposal of contaminated material)}
- 2035/00287 . . . {movable lid/cover for sample or reaction tubes}
- 2035/00297 . . . {Antistatic arrangements}
- 2035/00306 . . {Housings, cabinets, control panels (details)}
- 2035/00316 . . . {Detecting door closure}
- 2035/00326 . . {Analysers with modular structure}
- 2035/00336 . . . {Analysers adapted for operation in microgravity, i.e. spaceflight}
- 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}
- 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
- 2203/0076 Hardness, compressibility or resistance to crushing
- 2203/0078 using indentation
- 2203/008 Residual indentation measurement
- 2203/0082 Indentation characteristics measured during load
- 2203/0083 Rebound strike or reflected energy
- 2203/0085 Compressibility
- 2203/0087 Resistance to crushing
- 2203/0089 Biorheological properties
- 2203/0091 Peeling or tearing
- 2203/0092 Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
- 2203/0094 Visco-elasticity
- 2203/0096 Fibre-matrix interaction in composites
- 2203/0098 Tests specified by its name, e.g. Charpy, Brinell, Mullen
- 2203/02 Details not specific for a particular testing method
- 2203/0202 Control of the test
- 2203/0204 Safety arrangements, e.g. remote control, emergency stop
- 2203/0206 Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
- 2203/0208 Specific programs of loading, e.g. incremental loading or pre-loading
- 2203/021 Treatment of the signal; Calibration
- 2203/0212 Theories, calculations
- 2203/0214 Calculations a priori without experimental data
- 2203/0216 Finite elements
- 2203/0218 Calculations based on experimental data
- 2203/022 Environment of the test
- 2203/0222 Temperature
- 2203/0224 Thermal cycling
- 2203/0226 High temperature; Heating means
- 2203/0228 Low temperature; Cooling means
- 2203/023 Pressure
- 2203/0232 High pressure
- 2203/0234 Low pressure; Vacuum
- 2203/0236 Other environments
- 2203/0238 Inert
- 2203/024 Corrosive
- 2203/0242 With circulation of a fluid
- 2203/0244 Tests performed "in situ" or after "in situ" use
- 2203/0246 Special simulation of "in situ" conditions, scale models or dummies
- 2203/0248 Tests "on-line" during fabrication
- 2203/025 Geometry of the test
- 2203/0252 Monoaxial, i.e. the forces being applied along a single axis of the specimen
- 2203/0254 Biaxial, the forces being applied along two normal axes of the specimen
- 2203/0256 Triaxial, i.e. the forces being applied along three normal axes of the specimen
- 2203/0258 Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen
- 2203/026 Specifications of the specimen
- 2203/0262 Shape of the specimen
- 2203/0264 Beam
- 2203/0266 Cylindrical specimens

- 2203/0268 Dumb-bell specimens
- 2203/027 Specimens with holes or notches
- 2203/0272 Cruciform specimens
- 2203/0274 Tubular or ring-shaped specimens
- 2203/0276 Spherical specimens
- 2203/0278 Thin specimens
- 2203/028 One dimensional, e.g. filaments, wires, ropes or cables
- 2203/0282 Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes
- 2203/0284 . . . Bulk material, e.g. powders
- 2203/0286 . . . Miniature specimen; Testing on microregions of a specimen
- 2203/0288 . . . Springs
- 2203/029 Leaf spring
- 2203/0292 Coil spring
- 2203/0294 Air-spring, air bag spring or bellows
- 2203/0296 . . . Welds
- 2203/0298 . . . Manufacturing or preparing specimens
- 2203/04 . . Chucks, fixtures, jaws, holders or anvils
- 2203/0405 . . . Features allowing alignment between specimen and chucks
- 2203/0411 . . . using pneumatic or hydraulic pressure
- 2203/0417 . . . using vacuum
- 2203/0423 . . . using screws
- 2203/0429 . . . using adhesive bond; Gluing
- 2203/0435 . . . modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test
- 2203/0441 . . . with dampers or shock absorbing means
- 2203/0447 . . . Holders for quick insertion/removal of test pieces
- 2203/0452 . . . Cushioning layer between test piece and grip
- 2203/0458 . . . characterised by their material
- 2203/0464 . . . with provisions for testing more than one specimen at the time
- 2203/047 in series
- 2203/0476 in parallel
- 2203/0482 . . . comprising sensing means
- 2203/0488 Diamond anvil cells
- 2203/0494 Clamping ring, "whole periphery" clamping
- 2203/06 . . Indicating or recording means; Sensing means
- 2203/0605 . . . Mechanical indicating, recording or sensing means
- 2203/0611 . . . Hydraulic or pneumatic indicating, recording or sensing means
- 2203/0617 . . . Electrical or magnetic indicating, recording or sensing means
- 2203/0623 using piezo-electric gauges
- 2203/0629 using thin films, paintings
- 2203/0635 using magnetic properties
- 2203/0641 . . . using optical, X-ray, ultra-violet, infrared or similar detectors
- 2203/0647 Image analysis
- 2203/0652 using contrasting ink, painting, staining
- 2203/0658 . . . using acoustic or ultrasonic detectors
- 2203/0664 . . . using witness specimens
- 2203/067 . . . Parameter measured for estimating the property
- 2203/0676 Force, weight, load, energy, speed or acceleration
- 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
- 2223/40 . Imaging
- 2223/401 . . . image processing
- 2223/402 . . . mapping distribution of elements
- 2223/403 . . . mapping with false colours
- 2223/404 . . . contrast medium
- 2223/405 . . . mapping of a material property
- 2223/406 . . . fluoroscopic image
- 2223/407 . . . stimulable phosphor sheet
- 2223/408 . . . display on monitor
- 2223/409 . . . embedding or impregnating the object
- 2223/41 . . . imaging specifically internal structure
- 2223/411 . . . tv imaging from fluorescent screen
- 2223/412 . . . use of image converter tube [PMT]
- 2223/413 . . . sensor array [CCD]
- 2223/414 . . . stereoscopic system
- 2223/415 . . . radiographic film
- 2223/416 . . . wrap around
- 2223/417 . . . recording with co-ordinate markings
- 2223/418 . . . electron microscope
- 2223/419 . . . computed tomograph
- 2223/42 . . . image digitised, -enhanced in an image processor
- 2223/421 . . . digitised image, analysed in real time (recognition algorithms)
- 2223/422 . . . windows within the image
- 2223/423 . . . multispectral imaging-multiple energy imaging
- 2223/424 . . . energy subtraction image processing (dual energy processing)
- 2223/425 . . . temporal (time difference) subtraction processing
- 2223/426 . . . image comparing, unknown with known substance
- 2223/427 . . . stepped imaging (selected area of sample is changed)
- 2223/50 . Detectors
- 2223/501 . . . array
- 2223/5015 linear array
- 2223/502 . . . ionisation chamber
- 2223/503 . . . auxiliary reference detector
- 2223/504 . . . pin-diode
- 2223/505 . . . scintillation
- 2223/5055 scintillation crystal coupled to PMT
- 2223/506 . . . time-of-flight
- 2223/507 . . . secondary-emission detector
- 2223/508 . . . photo-acoustic
- 2223/509 . . . infra-red
- 2223/60 . Specific applications or type of materials
- 2223/601 . . . density profile
- 2223/602 . . . crystal growth
- 2223/603 . . . superlattices
- 2223/604 . . . monocrystal
- 2223/605 . . . phases
- 2223/606 . . . texture
- 2223/607 . . . strain
- 2223/608 . . . superconductors
- 2223/61 . . . thin films, coatings
- 2223/611 . . . patterned objects; electronic devices
- 2223/6113 printed circuit board [PCB]
- 2223/6116 semiconductor wafer
- 2223/612 . . . biological material
- 2223/6123 bone mineral

G01N

2223/6126	. . . tissue	2291/0215	. . . Mixtures of three or more gases, e.g. air
2223/613	. . moisture	2291/0217	. . . Smoke, combustion gases
2223/614	. . road surface	2291/022	. . Liquids
2223/615	. . composite materials, multilayer laminates	2291/0222	. . . Binary liquids
2223/616	. . earth materials	2291/0224	. . . Mixtures of three or more liquids
2223/617	. . ash in coal	2291/0226	. . . Oils, e.g. engine oils
2223/618	. . food	2291/0228	. . . Aqueous liquids
2223/619	. . wood	2291/023	. . Solids
2223/62	. . powders	2291/0231	. . . Composite or layered materials
2223/621	. . tobacco	2291/0232	. . . Glass, ceramics, concrete or stone
2223/622	. . paper	2291/0234	. . . Metals, e.g. steel
2223/623	. . plastics	2291/0235	. . . Plastics; polymers; soft materials, e.g. rubber
2223/624	. . steel, castings	2291/0237	. . . Thin materials, e.g. paper, membranes, thin films
2223/625	. . nuclear fuels, laser imploded targets	2291/0238	. . . Wood
2223/626	. . radioactive material	2291/024	. . Mixtures
2223/6265	. . . sample with radioactive tracer, tag, label	2291/02408	. . . Solids in gases, e.g. particle suspensions
2223/627	. . tyres	2291/02416	. . . Solids in liquids
2223/628	. . tubes, pipes	2291/02425	. . . Liquids in gases, e.g. sprays
2223/629	. . welds, bonds, sealing compounds	2291/02433	. . . Gases in liquids, e.g. bubbles, foams
2223/63	. . turbine blades	2291/02441	. . . Liquids in porous solids
2223/631	. . large structures, walls	2291/0245	. . . Gases in porous solids
2223/632	. . residual life, life expectancy	2291/02458	. . . Solids in solids, e.g. granules
2223/633	. . thickness, density, surface weight (unit area)	2291/02466	. . . Biological material, e.g. blood
2223/634	. . wear behaviour, roughness	2291/02475	. . . Tissue characterisation
2223/635	. . fluids, granulates	2291/02483	. . . Other human or animal parts, e.g. bones
2223/636	. . fluid sample with radioactive sources	2291/02491	. . . Materials with nonlinear acoustic properties
2223/637	. . liquid	2291/025	. . Change of phase or condition
2223/638	. . gas	2291/0251	. . . Solidification, icing, curing composites, polymerisation
2223/639	. . material in a container	2291/0252	. . . Melting, molten solids
2223/64	. . multiple-sample chamber, multiplicity of materials	2291/0253	. . . Condensation
2223/641	. . particle sizing	2291/0254	. . . Evaporation
2223/642	. . moving sheet, web	2291/0255	. . . (Bio)chemical reactions, e.g. on biosensors
2223/6425	. . . correcting for web flutter	2291/0256	. . . Adsorption, desorption, surface mass change, e.g. on biosensors
2223/643	. . object on conveyor	2291/0257	. . . . with a layer containing at least one organic compound
2223/645	. . quality control	2291/0258	. . . Structural degradation, e.g. fatigue of composites, ageing of oils
2223/646	. . flaws, defects	2291/028	. . Material parameters
2223/6462	. . . microdefects	2291/02809	. . . Concentration of a compound, e.g. measured by a surface mass change
2223/6464	. . . radioactive substance into defect site	2291/02818	. . . Density, viscosity
2223/6466	. . . flaws comparing to predetermined standards	2291/02827	. . . Elastic parameters, strength or force
2223/6468	. . . at different temperatures	2291/02836	. . . Flow rate, liquid level
2223/647	. . leak detection	2291/02845	. . . Humidity, wetness
2223/648	. . voids	2291/02854	. . . Length, thickness
2223/649	. . porosity	2291/02863	. . . Electric or magnetic parameters
2223/65	. . cavitation pits	2291/02872	. . . Pressure
2223/651	. . dust	2291/02881	. . . Temperature
2223/652	. . impurities, foreign matter, trace amounts	2291/0289	. . . Internal structure, e.g. defects, grain size, texture
2223/66	. . multiple steps inspection, e.g. coarse/fine	2291/04	. . Wave modes and trajectories
2291/00	Indexing codes associated with group G01N 29/00	2291/042	. . Wave modes
2291/01	. . Indexing codes associated with the measuring variable	2291/0421	. . . Longitudinal waves
2291/011	. . Velocity or travel time	2291/0422	. . . Shear waves, transverse waves, horizontally polarised waves
2291/012	. . Phase angle	2291/0423	. . . Surface waves, e.g. Rayleigh waves, Love waves
2291/014	. . Resonance or resonant frequency	2291/0425	. . . Parallel to the surface, e.g. creep waves
2291/015	. . Attenuation, scattering		
2291/017	. . Doppler techniques		
2291/018	. . Impedance		
2291/02	. . Indexing codes associated with the analysed material		
2291/021	. . Gases		
2291/0212	. . . Binary gases		

G01N

- 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
- 2333/41 . . from lichens
- 2333/415 . . from plants
- 2333/42 . . . Lectins, e.g. concanavalin, phytohaemagglutinin
- 2333/425 . . . Zeins
- 2333/43 . . . Sweetening agents, e.g. thaumatin, monellin
- 2333/435 . . from animals; from humans
- 2333/43504 . . . from invertebrates
- 2333/43508 from crustaceans
- 2333/43513 from arachnidae
- 2333/43517 from spiders
- 2333/43521 from scorpions
- 2333/43526 from worms
- 2333/4353 from nematodes
- 2333/43534 from Caenorhabditis
- 2333/43539 from cestodes
- 2333/43543 from Taenia
- 2333/43547 from trematodes
- 2333/43552 from insects
- 2333/43556 from ticks
- 2333/4356 from wasps
- 2333/43565 from bees
- 2333/43569 from flies
- 2333/43573 from Drosophila
- 2333/43578 from silkworm
- 2333/43582 from mites
- 2333/43586 from fleas
- 2333/43591 from mosquitoes
- 2333/43595 . . . from coelenteratae, e.g. medusae
- 2333/44 . . from protozoa
- 2333/445 . . . Plasmodium
- 2333/45 . . . Toxoplasma
- 2333/455 . . . Eimeria
- 2333/46 . . from vertebrates
- 2333/4603 . . . from fish
- 2333/4606 . . . from amphibians
- 2333/4609 . . . from reptiles
- 2333/4613 Snake venom
- 2333/4616 from Russell's viper
- 2333/462 from Agkistrodon sp., e.g. acutase, ACTE
- 2333/4623 from Agkistrodon rhodostoma (Malayan pit viper); Arvin (R); Batroboxin; Ancrod
- 2333/4626 from Agkistrodon contortrix contortrix (copperhead snake); Protac (R)
- 2333/463 from Croतालus adamanteus (Eastern Diamondback rattlesnake); Crotochrome
- 2333/4633 from Echis carinatus; Ecarin
- 2333/4636 from Bothrops sp.
- 2333/464 from Bothrops atrox; Reptilase; Atoxine
- 2333/4643 from Bothrops jararaca; Botrocetin
- 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

G01N

2333/4704	. . . . .	Inhibitors; Suppressors	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
2333/4706	. . . . .	stimulating, promoting or activating activity	2333/524	. . . . .	Thrombopoietin, i.e. C-MPL ligand
2333/4707	. . . . .	Guanosine triphosphatase activating protein, GAP	2333/525	. . . . .	Tumor necrosis factor [TNF]
2333/4709	. . . . .	Amyloid plaque core protein	2333/5255	. . . . .	Lymphotoxin [LT]
2333/471	. . . . .	Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein	2333/53	. . . . .	Colony-stimulating factor [CSF]
2333/4712	. . . . .	Muscle proteins, e.g. myosin, actin, protein	2333/535	. . . . .	Granulocyte CSF; Granulocyte-macrophage CSF
2333/4713	. . . . .	Plasma globulins, lactoglobulin	2333/54	. . . . .	Interleukins [IL]
2333/4715	. . . . .	Cytokine-induced proteins	2333/5403	. . . . .	IL-3
2333/4716	. . . . .	Complement proteins, e.g. anaphylatoxin, C3a, C5a	2333/5406	. . . . .	IL-4
2333/4718	. . . . .	Lipocortins	2333/5409	. . . . .	IL-5
2333/4719	. . . . .	G-proteins	2333/5412	. . . . .	IL-6
2333/4721	. . . . .	Cationic antimicrobial peptides, e.g. defensins	2333/5415	. . . . .	Leukaemia inhibitory factor [LIF]
2333/4722	. . . . .	Proteoglycans, e.g. aggrecan	2333/5418	. . . . .	IL-7
2333/4724	. . . . .	Lectins	2333/5421	. . . . .	IL-8
2333/4725	. . . . .	Mucins, e.g. human intestinal mucin	2333/5425	. . . . .	IL-9
2333/4727	. . . . .	Calcium binding proteins, e.g. calmodulin	2333/5428	. . . . .	IL-10
2333/4728	. . . . .	alpha-Glycoproteins	2333/5431	. . . . .	IL-11
2333/473	. . . . .	Recognins, e.g. malignin	2333/5434	. . . . .	IL-12
2333/4731	. . . . .	Casein	2333/5437	. . . . .	IL-13
2333/4733	. . . . .	Acute pancreatitis-associated protein	2333/544	. . . . .	IL-14
2333/4734	. . . . .	Villin	2333/5443	. . . . .	IL-15
2333/4736	. . . . .	Retinoblastoma protein	2333/5446	. . . . .	IL-16
2333/4737	. . . . .	C-reactive protein	2333/545	. . . . .	IL-1
2333/4739	. . . . .	Cyclin; Prad 1	2333/55	. . . . .	IL-2
2333/474	. . . . .	Pancreatic thread protein; Reg protein	2333/555	. . . . .	Interferons [IFN]
2333/4742	. . . . .	Keratin; Cytokeratin	2333/56	. . . . .	IFN-alpha
2333/4743	. . . . .	Bactericidal/Permeability-increasing protein BPI	2333/565	. . . . .	IFN-beta
2333/4745	. . . . .	Insulin-like growth factor binding protein	2333/57	. . . . .	IFN-gamma
2333/4746	. . . . .	Cancer-associated SCM-recognition factor, CRISPP	2333/575	. . . . .	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin G01N 2333/665, corticotropin G01N 2333/695)
2333/4748	. . . . .	p53	2333/5751	. . . . .	Corticotropin releasing factor [CRF] (Urotensin)
2333/475	. . . . .	Assays involving growth factors	2333/5752	. . . . .	Placental lactogen; Chorionic Somatomammotropin
2333/4753	. . . . .	Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II	2333/5753	. . . . .	Calcitonin gene related peptide
2333/4756	. . . . .	Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor	2333/5754	. . . . .	Endothelin, vasoactive intestinal contractor [VIC]
2333/48	. . . . .	Nerve growth factor [NGF]	2333/5755	. . . . .	Neuropeptide Y
2333/485	. . . . .	Epidermal growth factor [EGF] (urogastrone)	2333/5756	. . . . .	Prolactin
2333/49	. . . . .	Platelet-derived growth factor [PDGF]	2333/5757	. . . . .	Vasoactive intestinal peptide [VIP] or related peptides
2333/495	. . . . .	Transforming growth factor [TGF]	2333/5758	. . . . .	Gastrin releasing peptide
2333/50	. . . . .	Fibroblast growth factors [FGF]	2333/5759	. . . . .	Thymosin or related peptides
2333/501	. . . . .	acidic FGF [aFGF]	2333/58	. . . . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatin; Cardiodilatin
2333/503	. . . . .	basic FGF [bFGF]	2333/585	. . . . .	Calcitonins
2333/505	. . . . .	Erythropoietin [EPO]	2333/59	. . . . .	Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]
2333/51	. . . . .	Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor	2333/595	. . . . .	Gastrins; Cholecystokinins [CCK]
2333/515	. . . . .	Angiogenesis factors; Angiogenin	2333/60	. . . . .	Growth-hormone releasing factors (GH-RF) (Somatoliberin)
2333/52	. . . . .	Assays involving cytokines	2333/605	. . . . .	Glucagons
2333/521	. . . . .	Chemokines	2333/61	. . . . .	Growth hormones [GH] (Somatotropin)
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	2333/62	. . . . .	Insulins
			2333/63	. . . . .	Motilins

G01N

- 2333/635 . . . Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
- 2333/64 . . . Relaxins
- 2333/645 . . . Secretins
- 2333/65 . . . Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
- 2333/655 . . . Somatostatins
- 2333/66 . . . Thymopoietins
- 2333/665 . . Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
- 2333/67 . . . Lipotropins, e.g. beta, gamma lipotropin
- 2333/675 . . . beta-Endorphins
- 2333/68 . . . Melanocyte-stimulating hormone [MSH]
- 2333/685 alpha-Melanotropin
- 2333/69 beta-Melanotropin
- 2333/695 . . . Corticotropin [ACTH]
- 2333/70 . . . Enkephalins
- 2333/705 . . Assays involving receptors, cell surface antigens or cell surface determinants
- 2333/70503 . . . Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3
- 2333/70507 C2D
- 2333/7051 T-cell receptor (TcR)-CD3 complex
- 2333/70514 CD4
- 2333/70517 CD8
- 2333/70521 CD28, CD152
- 2333/70525 ICAM molecules, e.g. CD50, CD54, CD102
- 2333/70528 CD58
- 2333/70532 B7 molecules, e.g. CD80, CD86
- 2333/70535 Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)
- 2333/70539 MHC-molecules, e.g. HLA-molecules
- 2333/70542 CD106
- 2333/70546 . . . Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM
- 2333/7055 Integrin beta1-subunit-containing molecules, e.g. CD29, CD49
- 2333/70553 Integrin beta2-subunit-containing molecules, e.g. CD11, CD18
- 2333/70557 Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61
- 2333/7056 . . . Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
- 2333/70564 Selectins, e.g. CD62
- 2333/70567 . . . Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors
- 2333/70571 . . . for neuromediators, e.g. serotonin receptor, dopamine receptor
- 2333/70575 . . . NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 ([NGF G01N 2333/48](#), [TNF G01N 2333/525](#))
- 2333/70578 . . . NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 ([NGF-receptor G01N 2333/71](#), [TNF-receptor G01N 2333/7151](#))
- 2333/70582 . . . CD71
- 2333/70585 . . . CD44
- 2333/70589 . . . CD45
- 2333/70592 . . . CD52
- 2333/70596 . . . Molecules with a "CD"-designation not provided for elsewhere in [G01N 2333/705](#)
- 2333/71 . . . for growth factors; for growth regulators
- 2333/715 . . . for cytokines; for lymphokines; for interferons
- 2333/7151 for tumor necrosis factor [TNF]; for lymphotoxin [LT]
- 2333/7153 or colony-stimulating factors [CSF]
- 2333/7155 for interleukins [IL]
- 2333/7156 for interferons [IFN]
- 2333/7158 for chemokines
- 2333/72 . . . for hormones ([for 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 . . . Apolipopptides
- 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 metallo proteinase, TIMP
- 2333/815 . . . from leeches, e.g. hirudin, eglin
- 2333/82 . . . Translation products from oncogenes
- 2333/825 . . . Metallothioneins

2333/90	. Enzymes; Proenzymes	2333/90605	. . . . acting on the CH-NH ₂ group of donors (1.4)
	NOTE	2333/90611	. . . . with NAD or NADP as acceptor (1.4.1) in general
	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.	2333/90616	. . . . with a definite EC number (1.4.1.-)
2333/9005	. . Enzymes with nucleic acid structure; e.g. ribozymes	2333/90622	. . . . Phenylalanine dehydrogenase (1.4.1.20)
2333/901	. . Antibodies with enzymatic activity; e.g. abzymes	2333/90627	. . . . with a cytochrome as acceptor (1.4.2)
2333/9015	. . Ligases (6)	2333/90633	. . . . with oxygen as acceptor (1.4.3) in general
2333/902	. . Oxidoreductases (1.)	2333/90638	. . . . with a definite EC number (1.4.3.-)
2333/90203	. . . acting on the aldehyde or oxo group of donors (1.2)	2333/90644	. . . . D-Amino acid oxidase (1.4.3.3)
2333/90206	. . . acting on the CH-CH group of donors (1.3)	2333/9065	. . . . acting on CH-NH groups of donors (1.5)
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)	2333/90655	. . . . with NAD or NADP as acceptor (1.5.1) in general
2333/90212	. . . acting on a sulfur group of donors (1.8)	2333/90661	. . . . with a definite EC number (1.5.1.-)
2333/90216	. . . acting on a heme group of donors (1.9)	2333/90666	. . . . Dihydrofolate reductase [DHFR] (1.5.1.3)
2333/90219	. . . acting on diphenols and related substances as donors (1.10)	2333/90672	. . . . with oxygen as acceptor (1.5.3) in general
2333/90222	. . . . with oxygen as acceptor (1.10.3) in general	2333/90677	. . . . with a definite EC number (1.5.3.-)
2333/90225	. . . . with a definite EC number (1.10.3.-)	2333/90683	. . . . Sarcosine oxidase (1.5.3.1)
2333/90229	. . . . Catechol oxidase, i.e. Tyrosinase (1.10.3.1)	2333/90688	. . . . acting on other nitrogen compounds as donors (1.7)
2333/90232	. . . . Laccase (1.10.3.2)	2333/90694	. . . . with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
2333/90235	. . . . Ascorbate oxidase (1.10.3.3)	2333/908	. . . acting on hydrogen peroxide as acceptor (1.11)
2333/90238	. . . acting on hydrogen as donor (1.12)	2333/91	. . Transferases (2.)
2333/90241	. . . acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)	2333/91005	. . . transferring one-carbon groups (2.1)
2333/90245	. . . acting on paired donors with incorporation of molecular oxygen (1.14)	2333/91011	. . . Methyltransferases (general) (2.1.1.)
2333/90248	. . . . with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13	2333/91017	. . . . with definite EC number (2.1.1.-)
2333/90251	. . . . with a definite EC number (1.14.13.-)	2333/91022	. . . . Catecholmethyltransferases (2.1.1.6)
2333/90254	. . . . Nitric-oxide synthase (NOS; 1.14.13.39)	2333/91028	. . . . Hydroxymethyl-, formyl-transferases (2.1.2)
2333/90258	. . . . with a reduced iron-sulfur protein as one donor (1.14.15) in general	2333/91034	. . . . Carboxyl- and carbamoyl transferases (2.1.3)
2333/90261	. . . . with a definite EC number (1.14.15.-)	2333/9104	. . . Aldehyde and ketone transferases (2.2)
2333/90264	. . . . Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)	2333/91045	. . . Acyltransferases (2.3)
2333/90267	. . . . Cholesterol monooxygenase (cytochrome P 450sc)(1.14.15.6)	2333/91051	. . . . Acyltransferases other than aminoacyltransferases (general) (2.3.1)
2333/9027	. . . . Miscellaneous (1.14.99) (not used)	2333/91057	. . . . with definite EC number (2.3.1.-)
2333/90274	. . . . with a definite EC number (1.14.99.-) (not used)	2333/91062	. . . . Chloramphenicol-acetyltransferases (2.3.1.28)
2333/90277	. . . . Steroid 17 alpha-monooxygenase (1.14.99.9)	2333/91068	. . . . Chalcone synthases (2.3.1.74)
2333/9028	. . . . Steroid 21-monooxygenase (1.14.99.10)	2333/91074	. . . . Aminoacyltransferases (general) (2.3.2)
2333/90283	. . . acting on superoxide radicals as acceptor (1.15)	2333/9108	. . . . with definite EC number (2.3.2.-)
2333/90287	. . . oxidising metal ions (1.16)	2333/91085	. . . . Transglutaminases; Factor XIIIq (2.3.2.13)
2333/9029	. . . acting on -CH ₂ - groups (1.17)	2333/91091	. . . Glycosyltransferases (2.4)
2333/90293	. . . acting on reduced ferredoxin as donor (1.18)	2333/91097	. . . . Hexosyltransferases (general) (2.4.1)
2333/90296	. . . acting on reduced flavodoxin as donor (1.19)	2333/91102	. . . . with definite EC number (2.4.1.-)
2333/904	. . . acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)	2333/91108	. . . . Levansucrases (2.4.1.10)
2333/906	. . . acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)	2333/91114	. . . . Cellulose synthases (2.4.1.12)
		2333/9112	. . . . 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)	2333/944	. . . . . acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
2333/91188	. . . . . transferring nitrogenous groups (2.6)	2333/946	. . . . . Dextranase
2333/91194	. . . . . transferring sulfur containing groups (2.8)	2333/948	. . . . . acting on peptide bonds (3.4)
2333/912	. . . . . transferring phosphorus containing groups, e.g. kinases (2.7)	2333/95	. . . . . Proteinases, i.e. endopeptidases (3.4.21-3.4.99)
2333/91205	. . . . . Phosphotransferases in general	2333/9506	. . . . . derived from viruses
2333/9121	. . . . . with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases	2333/9513	. . . . . derived from RNA viruses
2333/91215	. . . . . with a definite EC number (2.7.1.-)	2333/952	. . . . . derived from bacteria
2333/9122	. . . . . Thymidine kinase (2.7.1.21)	2333/954	. . . . . bacteria being Bacillus
2333/91225	. . . . . with a carboxyl group as acceptor (2.7.2)	2333/956	. . . . . Bacillus subtilis or Bacillus licheniformis
2333/9123	. . . . . with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases	2333/958	. . . . . derived from fungi
2333/91235	. . . . . with a phosphate group as acceptor (2.7.4)	2333/96	. . . . . from yeast
2333/9124	. . . . . Diphosphotransferases (2.7.6)	2333/962	. . . . . from Aspergillus
2333/91245	. . . . . Nucleotidyltransferases (2.7.7)	2333/964	. . . . . derived from animal tissue
2333/9125	. . . . . with a definite EC number (2.7.7.-)	2333/96402	. . . . . from non-mammals
2333/91255	. . . . . DNA-directed RNA polymerase (2.7.7.6)	2333/96405	. . . . . in general (not used)
2333/9126	. . . . . DNA-directed DNA polymerase (2.7.7.7)	2333/96408	. . . . . with EC number (not used)
2333/91265	. . . . . Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)	2333/96411	. . . . . Serine endopeptidases (3.4.21)
2333/9127	. . . . . DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)	2333/96413	. . . . . Cysteine endopeptidases (3.4.22)
2333/91275	. . . . . RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)	2333/96416	. . . . . Aspartic endopeptidases (3.4.23)
2333/9128	. . . . . RNA-directed DNA polymerases, e.g. RT (2.7.7.49)	2333/96419	. . . . . Metalloendopeptidases (3.4.24)
2333/91285	. . . . . RNA uridyltransferases (2.7.7.52)	2333/96422	. . . . . from snakes
2333/9129	. . . . . Transferases for other substituted phosphate groups (2.7.8)	2333/96425	. . . . . from mammals
2333/91295	. . . . . with paired acceptors (2.7.9)	2333/96427	. . . . . in general (not used)
2333/914	. . . . . Hydrolases (3)	2333/9643	. . . . . with EC number (not used)
2333/916	. . . . . acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)	2333/96433	. . . . . Serine endopeptidases (3.4.21)
2333/918	. . . . . Carboxylic ester hydrolases (3.1.1)	2333/96436	. . . . . Granzymes
2333/92	. . . . . Triglyceride splitting, e.g. by means of lipase	2333/96438	. . . . . Dibasic site splicing serine proteases, e.g. furin
2333/922	. . . . . Ribonucleases (RNAses); Deoxyribonucleases (DNAses)	2333/96441	. . . . . with definite EC number (not used)
2333/924	. . . . . acting on glycosyl compounds (3.2)	2333/96444	. . . . . Factor X (3.4.21.6)
2333/926	. . . . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/96447	. . . . . Factor VII (3.4.21.21)
2333/928	. . . . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/9645	. . . . . Factor IX (3.4.21.22)
2333/93	. . . . . Fungal source	2333/96452	. . . . . Factor XI (3.4.21.27)
2333/932	. . . . . alpha-amylase from plant source	2333/96455	. . . . . Kallikrein (3.4.21.34; 3.4.21.35)
2333/934	. . . . . Glucoamylase	2333/96458	. . . . . Factor XII (3.4.21.38)
2333/936	. . . . . acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme	2333/96461	. . . . . Protein C (3.4.21.69)
2333/938	. . . . . acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase	2333/96463	. . . . . Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
2333/94	. . . . . acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase	2333/96466	. . . . . Cysteine endopeptidases (3.4.22)
2333/942	. . . . . acting on beta-1, 4-glucosidic bonds, e.g. cellulase	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

G01N

G01N 2800/00

(continued)

is made for thrombosis which is indexed with haematological disorders.

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

- 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
- 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

NOTE

Indexing code [G01N 2800/26](#) is not used for documents already classified in one or

G01N

- 2800/365 . . Breast disorders, e.g. mastalgia, mastitits, 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