

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS (NOTES omitted)

INSTRUMENTS

G01 MEASURING; TESTING (NOTES omitted)

G01N INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing apparatus or processes other than immunoassay, involving enzymes or microorganisms [C12M](#), [C12Q](#))

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](#). }
- { Investigating the properties of materials, specially adapted for use in processes covered by subclass [B23K](#), is classified in group [B23K 31/12](#). }

WARNING

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

1/00	Sampling; Preparing specimens for investigation	2001/1006	. . . {Dispersed solids}
2001/002	. {Devices for supplying or distributing samples to an analysing apparatus}	2001/1012	. . . . {Suspensions}
2001/005	. . {Packages for mailing or similar transport of samples}	2001/1018	. . . . . {Gas suspensions; Fluidised beds}
2001/007	. . {Devices specially adapted for forensic samples, e.g. tamper-proofing, sample tracking}	2001/1025	. . . . . {Liquid suspensions; Slurries; Mud; Sludge}
1/02	. Devices for withdrawing samples {(sampling of foundation soil E02D 1/04 ; collecting or conveying radioactive samples G01T 7/00 , e.g. G01T 7/02 , G01T 7/08)}	2001/1031	. . . {Sampling from special places}
2001/021	. . {Correlating sampling sites with geographical information, e.g. GPS}	2001/1037	. . . . {from an enclosure (hazardous waste, radioactive)}
2001/022	. . {sampling for security purposes, e.g. contraband, warfare agents}	2001/1043	. . . . {from sewers}
2001/024	. . . {passengers or luggage}	2001/105	. . . . {from high-pressure reactors or lines}
2001/025	. . . {postal items}	2001/1056	. . . {Disposable (single-use) samplers}
2001/027	. . . {field kits / quick test kits}	2001/1062	. . . {Sampling under constant temperature, pressure, or the like}
2001/028	. . {Sampling from a surface, swabbing, vaporising}	2001/1068	. . . . {Cooling sample below melting point}
1/04	. . in the solid state, e.g. by cutting	2001/1075	. . . . {Trapping evaporated liquids by cooling}
2001/045	. . . {Laser ablation; Microwave vaporisation}	2001/1081	. . . . {Storing samples under refrigeration}
1/06	. . . providing a thin slice, e.g. microtome	2001/1087	. . . . {Categories of sampling}
2001/061	. . . . {Blade details}	2001/1093	. . . . {Composite sampling; Cumulative sampling}
2001/063	. . . . . {with sawing action}	1/12	. . . Dippers; Dredgers
2001/065	. . . . . {Drive details}	1/125	. . . . {adapted for sampling molten metals}
2001/066	. . . . . {electric}	1/14	. . . Suction devices, e.g. pumps; Ejector devices
2001/068	. . . . {Illumination means}	1/1409	. . . . {adapted for sampling molten metals}
1/08	. . . involving an extracting tool, e.g. core bit	2001/1418	. . . . {Depression, aspiration}
2001/085	. . . . {Grabs}	2001/1427	. . . . . {Positive displacement, piston, peristaltic}
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)}	2001/1436	. . . . . {Ejector}
		2001/1445	. . . . {Overpressure, pressurisation at sampling point}
		2001/1454	. . . . . {Positive displacement, piston}
		2001/1463	. . . . . {Injector; Air-lift}
		2001/1472	. . . . {Devices not actuated by pressure difference}
		2001/1481	. . . . . {Archimedian screw; Auger}

2001/149	. . . . . {Capillaries; Sponges}	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}	1/286	. {involving mechanical work, e.g. chopping, disintegrating, compacting, homogenising (microtomes G01N 1/06 ; pulverising in general B02C ; mixing in general B01F)}
2001/2217	. . . . {using a liquid}	2001/2866	. . . {Grinding or homogeneising}
2001/222	. . . . {Other features}	2001/2873	. . . {Cutting or cleaving}
2001/2223	. . . . {aerosol sampling devices}	2001/288	. . . . {Filter punches}
1/2226	. . . {Sampling from a closed space, e.g. food package, head space}	2001/2886	. . . . {Laser cutting, e.g. tissue catapult}
2001/2229	. . . . {Headspace sampling, i.e. vapour over liquid}	2001/2893	. {Preparing calibration standards}
2001/2232	. . . . {using a membrane, i.e. pervaporation}	1/30	. Staining; Impregnating (; Fixation; Dehydration; Multistep processes for preparing samples of tissue, cell or nucleic acid material and the like for analysis)
2001/2235	. . . . {over a melt, e.g. furnace}	2001/302	. . . {Stain compositions}
2001/2238	. . . . {the gas being compressed or pressurized}	2001/305	. . . {Fixative compositions}
2001/2241	. . . . {purpose-built sampling enclosure for emissions}	2001/307	. . . . {non-toxic, no Hg, no formaldehyde}
2001/2244	. . . {Exhaled gas, e.g. alcohol detecting}	1/31	. . . Apparatus therefor
1/2247	. . . {Sampling from a flowing stream of gas}	1/312	. . . . {for samples mounted on planar substrates}
2001/225	. . . . {isokinetic, same flow rate for sample and bulk gas}	2001/315	. . . . {Basket-type carriers for tissues}
1/2252	. . . . {in a vehicle exhaust}	2001/317	. . . . {spraying liquids onto surfaces}
2001/2255	. . . . {with dilution of the sample}	1/32	. Polishing; Etching
1/2258	. . . . {in a stack or chimney}	1/34	. Purifying; Cleaning ((processes or apparatus for extracting or separating nucleic acids from biological samples C12N 15/1003))
2001/2261	. . . . {preventing condensation (heating lines)}	1/36	. Embedding or analogous mounting of samples
2001/2264	. . . . {with dilution}	2001/362	. . . {using continuous plastic film to mount sample}
2001/2267	. . . . {separating gas from liquid, e.g. bubbles}		
2001/227	. . . . {separating gas from solid, e.g. filter}		
1/2273	. . . {Atmospheric sampling}		
2001/2276	. . . . {Personal monitors}		
2001/2279	. . . . {high altitude, e.g. rockets, balloons}		

2001/364	. . . {using resins, epoxy}	3/12	. . . Pressure testing
2001/366	. . . {Moulds; Demoulding}	3/14	. . generated by dead weight, e.g. pendulum; generated by springs tension (G01N 3/18 takes precedence)
2001/368	. . . {Mounting multiple samples in one block, e.g. TMA [Tissue Microarrays]}	3/16	. . applied through gearing (G01N 3/18 takes precedence)
1/38	. . Diluting, dispersing or mixing samples	3/165	. . . {generated by rotation, i.e. centrifugal force (for testing structures or apparatus G01M 99/004)}
2001/381	. . . {by membrane diffusion; Permeation tubes}	3/18	. . Performing tests at high or low temperatures
2001/382	. . . {using pistons of different sections}	3/20	. by applying steady bending forces (G01N 3/26 , G01N 3/28 take precedence)
2001/383	. . . {collecting and diluting in a flow of liquid}	3/22	. by applying steady torsional forces (G01N 3/26 , G01N 3/28 take precedence)
2001/385	. . . {diluting by adsorbing a fraction of the sample}	3/24	. by applying steady shearing forces (G01N 3/26 , G01N 3/28 take precedence)
2001/386	. . . {Other diluting or mixing processes}	3/26	. Investigating twisting or coiling properties
2001/387	. . . . {mixing by blowing a gas, bubbling}	3/28	. Investigating ductility, e.g. suitability of sheet metal for deep-drawing or spinning
2001/388	. . . . {mixing the sample with a tracer}	3/30	. by applying a single impulsive force, e.g. by falling weight
1/40	. . Concentrating samples	3/303	. . generated only by free-falling weight
1/4005	. . . {by transferring a selected component through a membrane}	3/307	. . generated by a compressed or tensile-stressed spring; generated by pneumatic or hydraulic means
2001/4011	. . . . {being a ion-exchange membrane}	3/31	. . generated by a rotating fly-wheel
2001/4016	. . . . {being a selective membrane, e.g. dialysis or osmosis}	3/313	. . generated by explosives
1/4022	. . . {by thermal techniques; Phase changes}	3/317	. . generated by electromagnetic means
2001/4027	. . . . {evaporation leaving a concentrated sample}	3/32	. by applying repeated or pulsating forces
2001/4033	. . . . {sample concentrated on a cold spot, e.g. condensation or distillation}	3/34	. . generated by mechanical means, e.g. hammer blows
2001/4038	. . . {electric methods, e.g. electromigration, electrophoresis, ionisation}	3/36	. . generated by pneumatic or hydraulic means
1/4044	. . . {by chemical techniques; Digestion; Chemical decomposition}	3/38	. . generated by electromagnetic means
1/405	. . . {by adsorption or absorption}	3/40	. Investigating hardness or rebound hardness
1/4055	. . . {by solubility techniques}	3/405	. . {by determining the vibration frequency of a sensing element in contact with the specimen}
2001/4061	. . . . {Solvent extraction}	3/42	. . by performing impressions under a steady load by indentors, e.g. sphere, pyramid (G01N 3/54 takes precedence)
2001/4066	. . . . {using difference of solubility between liquid and gas, e.g. bubbling, scrubbing or sparging}	3/44	. . . the indentors being put under a minor load and a subsequent major load, i.e. Rockwell system
2001/4072	. . . . {membraneless transfer of a component between two parallel laminar flows of fluid}	3/46	. . . the indentors performing a scratching movement
1/4077	. . . {by other techniques involving separation of suspended solids}	3/48	. . by performing impressions under impulsive load by indentors, e.g. falling ball (G01N 3/54 takes precedence)
2001/4083	. . . . {sedimentation}	3/50	. . by measuring rolling friction, e.g. by rocking pendulum (G01N 3/54 takes precedence)
2001/4088	. . . . {filtration}	3/52	. . by measuring extent of rebound of a striking body (G01N 3/54 takes precedence)
2001/4094	. . . . {using ultrasound}	3/54	. . Performing tests at high or low temperatures
1/42	. . Low-temperature sample treatment, e.g. cryofixation	3/56	. Investigating resistance to wear or abrasion
1/44	. . Sample treatment involving radiation, e.g. heat	3/562	. . {using radioactive tracers}
3/00	Investigating strength properties of solid materials by application of mechanical stress	3/565	. . {of granular or particulate material}
	NOTE	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)}
	{This group covers the stressing of materials not only below but also beyond the elastic limit, e.g. until breaking occurs.}	3/58	. Investigating machinability by cutting tools; Investigating the cutting ability of tools
3/02	. Details	3/60	. Investigating resistance of materials, e.g. refractory materials, to rapid heat changes {(thermal testing of structures or apparatus G01M 99/002)}
3/04	. . Chucks		
3/06	. . Special adaptations of indicating or recording means		
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)		

3/62	<ul style="list-style-type: none"> Manufacturing, calibrating, or repairing devices used in investigations covered by the preceding subgroups 	9/12	<ul style="list-style-type: none"> by observing the depth of immersion of the bodies, e.g. hydrometers
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)	9/14	<ul style="list-style-type: none"> the body being built into a container
5/02	<ul style="list-style-type: none"> 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)} 	9/16	<ul style="list-style-type: none"> the body being pivoted
5/025	<ul style="list-style-type: none"> {for determining moisture content} 	9/18	<ul style="list-style-type: none"> Special adaptations for indicating, recording, or control
5/04	<ul style="list-style-type: none"> by removing a component, e.g. by evaporation, and weighing the remainder 	9/20	<ul style="list-style-type: none"> by balancing the weight of the bodies
5/045	<ul style="list-style-type: none"> {for determining moisture content} 	9/22	<ul style="list-style-type: none"> with continuous circulation of the fluid
7/00	Analysing materials by measuring the pressure or volume of a gas or vapour	9/24	<ul style="list-style-type: none"> by observing the transmission of wave or particle radiation through the material
7/02	<ul style="list-style-type: none"> by absorption, adsorption, or combustion of components and measurement of the change in pressure or volume of the remainder {(absorption bulbs B01D 53/00)} 	9/26	<ul style="list-style-type: none"> by measuring pressure differences
7/04	<ul style="list-style-type: none"> by absorption or adsorption alone 	2009/263	<ul style="list-style-type: none"> {using vertically-movable pressure transducer}
7/06	<ul style="list-style-type: none"> by combustion alone 	9/266	<ul style="list-style-type: none"> {for determining gas density}
7/08	<ul style="list-style-type: none"> by combustion followed by absorption or adsorption of the combustion products 	9/28	<ul style="list-style-type: none"> by measuring the blowing pressure of gas bubbles escaping from nozzles at different depths in a liquid
7/10	<ul style="list-style-type: none"> by allowing diffusion of components through a porous wall and measuring a pressure or volume difference 	9/30	<ul style="list-style-type: none"> by using centrifugal effects
7/12	<ul style="list-style-type: none"> the diffusion being followed by combustion or catalytic oxidation 	9/32	<ul style="list-style-type: none"> by using flow properties of fluids, e.g. flow through tubes or apertures
7/14	<ul style="list-style-type: none"> 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)} 	9/34	<ul style="list-style-type: none"> by using elements moving through the fluid, e.g. vane
7/16	<ul style="list-style-type: none"> by heating the material 	9/36	<ul style="list-style-type: none"> 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)
7/18	<ul style="list-style-type: none"> by allowing the material to react 	11/00	Investigating flow properties of materials, e.g. viscosity, plasticity; Analysing materials by determining flow properties
7/20	<ul style="list-style-type: none"> the reaction being fermentation 	2011/0006	<ul style="list-style-type: none"> {Calibrating, controlling or cleaning viscometers}
7/22	<ul style="list-style-type: none"> of dough 	2011/0013	<ul style="list-style-type: none"> {Temperature compensation}
9/00	Investigating density or specific gravity of materials; Analysing materials by determining density or specific gravity	2011/002	<ul style="list-style-type: none"> {Controlling sample temperature; Thermal cycling during measurement}
9/002	<ul style="list-style-type: none"> {using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis (G01N 9/34 takes precedence)} 	2011/0026	<ul style="list-style-type: none"> {Investigating specific flow properties of non-Newtonian fluids}
2009/004	<ul style="list-style-type: none"> {comparing frequencies of two elements} 	2011/0033	<ul style="list-style-type: none"> {Yield stress; Residual stress at zero shear rate}
2009/006	<ul style="list-style-type: none"> {vibrating tube, tuning fork} 	2011/004	<ul style="list-style-type: none"> {Stress relaxation time}
2009/008	<ul style="list-style-type: none"> {Schlatter vibrating vane type} 	2011/0046	<ul style="list-style-type: none"> {In situ measurement during mixing process}
9/02	<ul style="list-style-type: none"> by measuring weight of a known volume 	2011/0053	<ul style="list-style-type: none"> {using ergometry; measuring power consumption}
2009/022	<ul style="list-style-type: none"> {of solids} 	2011/006	<ul style="list-style-type: none"> {Determining flow properties indirectly by measuring other parameters of the system}
2009/024	<ul style="list-style-type: none"> {the volume being determined directly, e.g. by size of container} 	2011/0066	<ul style="list-style-type: none"> {electrical properties}
2009/026	<ul style="list-style-type: none"> {the volume being determined by amount of fluid displaced} 	2011/0073	<ul style="list-style-type: none"> {acoustic properties}
2009/028	<ul style="list-style-type: none"> {a gas being used as displacement fluid} 	2011/008	<ul style="list-style-type: none"> {optical properties}
9/04	<ul style="list-style-type: none"> of fluids 	2011/0086	<ul style="list-style-type: none"> {magnetic properties}
9/06	<ul style="list-style-type: none"> with continuous circulation through a pivotally supported member 	2011/0093	<ul style="list-style-type: none"> {thermal properties}
9/08	<ul style="list-style-type: none"> by measuring buoyant force of solid materials by weighing both in air and in a liquid 	11/02	<ul style="list-style-type: none"> by measuring flow of the material
9/10	<ul style="list-style-type: none"> by observing bodies wholly or partially immersed in fluid materials 	11/04	<ul style="list-style-type: none"> through a restricted passage, e.g. tube, aperture
		11/06	<ul style="list-style-type: none"> by timing the outflow of a known quantity
		11/08	<ul style="list-style-type: none"> by measuring pressure required to produce a known flow
		11/10	<ul style="list-style-type: none"> by moving a body within the material
		11/105	<ul style="list-style-type: none"> {by detecting the balance position of a float moving in a duct conveying the fluid under test}
		11/12	<ul style="list-style-type: none"> by measuring rising or falling speed of the body; by measuring penetration of wedged gauges (G01N 11/16 takes precedence)
		11/14	<ul style="list-style-type: none"> by using rotary bodies, e.g. vane (G01N 11/16 takes precedence)
		11/142	<ul style="list-style-type: none"> {Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer}
		2011/145	<ul style="list-style-type: none"> {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**
- 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}
- 2015/0092 . {Monitoring flocculation or agglomeration}
- 2015/0096 . {Investigating consistence of powders, dustability, dustiness}
- 15/01 . specially adapted for biological cells, e.g. blood cells (investigating sedimentation of particle suspensions in blood G01N 15/05)
- 2015/011 . . {with lysing, e.g. of erythrocytes}
- 2015/012 . . {Red blood cells}
- 2015/014 . . . {Reticulocytes}
- 2015/016 . . {White blood cells}
- 2015/018 . . {Platelets}
- 2015/019 . . {Biological contaminants; Fouling}
- 15/02 . Investigating particle size or size distribution (by measuring osmotic pressure G01N 7/10; investigating sedimentation of particle suspensions G01N 15/04; investigating individual particles G01N 15/10)
- 15/0205 . . by optical means
- 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; 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 (by weighing G01N 5/00; investigating sedimentation of particle suspensions G01N 15/04; investigating individual particles G01N 15/10)
- 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)}	2015/1029	. . . {Particle size}
15/0618	. . . {of the filter type (G01N 15/0643 takes precedence)}	2015/103	. . . {Particle shape}
15/0625	. . . . {Optical scan of the deposits}	15/1031	. . . by measuring electrical or magnetic effects
15/0631	. . . . {Separation of liquids, e.g. by absorption, wicking}	15/12	. . . by observing changes in resistance or impedance across apertures when traversed by individual particles, e.g. by using the Coulter principle
15/0637	. . . {Moving support}	15/13	. . . . Details pertaining to apertures
15/0643	. . . . {of the filter type}	15/131	. . . . {Details (G01N 15/13 takes precedence)}
15/065	. . {using condensation nuclei counters}	15/132	. . . . . {Circuits}
15/0656	. . {using electric, e.g. electrostatic methods or magnetic methods (by investigating individual particles G01N 15/1031, G01N 15/12)}	2015/133	. . . . . {Flow forming}
2015/0662	. . {Comparing before/after passage through filter}	15/134	. . . . . {Devices using two or more apertures}
2015/0668	. . {Comparing properties of sample and carrier fluid, e.g. oil in water}	2015/135	. . . . . {Electrodes}
2015/0675	. . {Comparing suspension before/after dilution}	2015/136	. . . . . {Scanning electrodes}
2015/0681	. . {Purposely modifying particles, e.g. humidifying for growing}	2015/137	. . . . . {Cleaning}
2015/0687	. . {in solutions, e.g. non volatile residue}	2015/138	. . . . . {Detecting blocking debris}
15/075	. . by optical means	2015/139	. . . . . {Measuring the ratio of AC/DC impedances}
15/08	. Investigating permeability, pore-volume, or surface area of porous materials	15/14	. . Optical investigation techniques, e.g. flow cytometry
15/0806	. . {Details, e.g. sample holders, mounting samples for testing}	2015/1402	. . . {Data analysis by thresholding or gating operations performed on the acquired signals or stored data}
2015/0813	. . {Measuring intrusion, e.g. of mercury}	15/1404	. . . Handling flow, e.g. hydrodynamic focusing
15/082	. . {Investigating permeability by forcing a fluid through a sample}	2015/1406	. . . . {Control of droplet point}
15/0826	. . . {and measuring fluid flow rate, i.e. permeation rate or pressure change}	15/1409	. . . . Handling samples, e.g. injecting samples
2015/0833	. . {Pore surface area}	2015/1411	. . . . . {Features of sheath fluids}
2015/084	. . {Testing filters}	2015/1413	. . . . . {Hydrodynamic focussing}
2015/0846	. . {by use of radiation, e.g. transmitted or reflected light}	2015/1415	. . . . . {Control of particle position}
2015/0853	. . {by electrical capacitance measurement}	2015/1418	. . . . . {Eliminating clogging of debris}
2015/086	. . {of films, membranes or pellicules}	2015/142	. . . . . {Acoustic or ultrasonic focussing}
2015/0866	. . {Sorption}	2015/1422	. . . . . {Electrical focussing}
2015/0873	. . . {Dynamic sorption, e.g. with flow control means}	15/1425	. . . {using an analyser being characterised by its control arrangement}
15/088	. . {Investigating volume, surface area, size or distribution of pores; Porosimetry}	15/1427	. . . . {with the synchronisation of components, a time gate for operation of components, or suppression of particle coincidences}
15/0886	. . . {Mercury porosimetry}	15/1429	. . . Signal processing
15/0893	. . . {by measuring weight or volume of sorbed fluid, e.g. B.E.T. method}	15/1431	. . . . {the electronics being integrated with the analyser, e.g. hand-held devices for on-site investigation}
15/10	. Investigating individual particles	15/1433	. . . . . using image recognition
2015/1006	. . {for cytology}	15/1434	. . . Optical arrangements
15/1012	. . {Calibrating particle analysers; References therefor}	15/1436	. . . . {the optical arrangement forming an integrated apparatus with the sample container, e.g. a flow cell}
2015/1014	. . . {Constitution of reference particles}	2015/1438	. . . . . {Using two lasers in succession}
2015/1016	. . . {Particle flow simulating, e.g. liquid crystal cell}	2015/144	. . . . . {Imaging characterised by its optical setup}
2015/1019	. . {Associating Coulter-counter and optical flow cytometer [OFC]}	2015/1443	. . . . . {Auxiliary imaging}
2015/1021	. . {Measuring mass of individual particles}	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}
2015/1022	. . {Measurement of deformation of individual particles by non-optical means}	2015/1447	. . . . . {Spatial selection}
15/1023	. . {Microstructural devices for non-optical measurement}	2015/145	. . . . . {by pattern of light, e.g. fringe pattern}
2015/1024	. . {Counting particles by non-optical means}	2015/1452	. . . . . {Adjustment of focus; Alignment}
2015/1026	. . {Recognising analyser failures, e.g. bubbles; Quality control for particle analysers}	2015/1454	. . . . . {using phase shift or interference, e.g. for improving contrast}
2015/1027	. . {Determining speed or velocity of a particle}	15/1456	. . . {without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals}
2015/1028	. . {Sorting particles}	15/1459	. . . . {the analysis being performed on a sample stream}

- 2015/1461 {Coincidence detecting; Circuits therefor}
 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 [G06V 10/40](#)
- specific image analysis method for the recognition of microscopic objects [G06V 20/69](#)
- image enhancement [G06T 5/00](#)
- image analysis [G06T 7/00](#)

- 15/147 {the analysis being performed on a sample stream}
 2015/1472 {with colour}
 2015/1477 . . . {Multiparameters}
 2015/1479 {Using diffuse illumination or excitation}
 2015/1481 . . . {Optical analysis of particles within droplets (sorting particles within droplets [G01N 15/1492](#))}
 15/1484 . . . {microstructural devices}
 2015/1486 . . . {Counting the particles}
 2015/1488 . . . {Methods for deciding}
 15/149 . . . specially adapted for sorting particles, e.g. by their size or optical properties
 15/1492 within droplets
 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
 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 sub-millimetre waves, infrared, visible or ultraviolet light ([G01N 3/00](#) - [G01N 19/00](#) take precedence)**NOTE**

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

- 21/01 . Arrangements or apparatus for facilitating the optical investigation
 2021/0106 . . {General arrangement of respective parts}
 2021/0112 . . . {Apparatus in one mechanical, optical or electronic block}
 2021/0118 . . . {Apparatus with remote processing}
 2021/0125 {with stored program or instructions}
 2021/0131 {being externally stored}
 2021/0137 {with PC or the like}
 2021/0143 {with internal and external computer}
 2021/015 . . . {Apparatus with interchangeable optical heads or interchangeable block of optics and detector}
 2021/0156 {with optics only in separate head, e.g. connection by optical fibres}
 2021/0162 . . {using microprocessors for control of a sequence of operations, e.g. test, powering, switching, processing}
 2021/0168 . . . {for the measurement cycle}
 2021/0175 . . . {for selecting operating means}
 2021/0181 . . {Memory or computer-assisted visual determination}
 2021/0187 . . {Mechanical sequence of operations}
 2021/0193 . . {the sample being taken from a stream or flow to the measurement cell}
 21/03 . . Cuvette constructions
 21/0303 . . . {Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment ([G01N 21/031](#) - [G01N 21/15](#) take precedence)}
 2021/0307 {Insert part in cell}
 21/031 . . . {Multipass arrangements}
 2021/0314 {Double pass, autocollimated path}
 21/0317 . . . {High pressure cuvettes; ([G01N 21/0332](#) - [G01N 21/15](#) take precedence)}
 2021/0321 . . . {One time use cells, e.g. integrally moulded}
 2021/0325 . . . {Cells for testing reactions, e.g. containing reagents}
 2021/0328 {Arrangement of two or more cells having different functions for the measurement of reactions}
 21/0332 . . . {with temperature control ([control of temperature G05D 23/00](#); cryostats [F17C 3/08](#))}
 2021/0335 {Refrigeration of cells; Cold stages}
 2021/0339 . . . {Holders for solids, powders}
 2021/0342 . . . {Solid sample being immersed, e.g. equiindex fluid}

2021/0346	. . .	{Capillary cells; Microcells}	2021/1725	. . .	{Modulation of properties by light, e.g. photorefectance}
2021/035	. . . .	{Supports for sample drops}	2021/1727	. . .	{Magnetomodulation}
2021/0353	. . . . .	{Conveyor of successive sample drops}	2021/1729	. . .	{Piezomodulation}
2021/0357	. . .	{Sets of cuvettes}	2021/1731	. . .	{Temperature modulation}
2021/036	. . .	{transformable, modifiable}	2021/1734	. .	{Sequential different kinds of measurements; Combining two or more methods}
2021/0364	. . .	{flexible, compressible}	2021/1736	. . .	{with two or more light sources}
2021/0367	. . .	{Supports of cells, e.g. pivotable}	2021/1738	. .	{Optionally different kinds of measurements; Method being valid for different kinds of measurement}
2021/0371	. . . .	{Supports combined with sample intake}	2021/174	. . .	{either absorption-reflection or emission-fluorescence}
2021/0375	. . . .	{Slidable cells}	2021/1742	. . .	{either absorption or reflection}
2021/0378	. . .	{Shapes}	2021/1744	. . .	{either absorption or scatter}
2021/0382	. . . .	{Frustoconical, tapered cell}	2021/1746	. .	{Method using tracers}
2021/0385	. . .	{Diffusing membrane; Semipermeable membrane}	2021/1748	. .	{Comparative step being essential in the method}
2021/0389	. . .	{Windows}	2021/1751	. . .	{Constructive features therefore, e.g. using two measurement cells}
2021/0392	. . . .	{Nonplanar windows}	2021/1753	. . . .	{and using two light sources}
2021/0396	. . . .	{Oblique incidence}	2021/1755	. . . .	{and using two apparatus or two probes}
21/05	. . .	Flow-through cuvettes (G01N 21/09 takes precedence; handling fluid samples G01N 1/10)	2021/1757	. .	{Time modulation of light being essential to the method of light modification, e.g. using single detector}
2021/052	. . . .	{Tubular type; cavity type; multireflective}	2021/1759	. . .	{Jittering, dithering, optical path modulation}
2021/054	. . . .	{Bubble trap; Debubbling}	2021/1761	. .	{A physical transformation being implied in the method, e.g. a phase change}
2021/056	. . . .	{Laminated construction}	2021/1763	. . .	{Gas to liquid phase change}
2021/058	. . . .	{Flat flow cell}	2021/1765	. .	{Method using an image detector and processing of image signal}
21/07	. . .	Centrifugal type cuvettes (G01N 21/09 takes precedence)	2021/1768	. . .	{using photographic film}
21/09	. . .	adapted to resist hostile environments or corrosive or abrasive materials	2021/177	. . .	{Detector of the video camera type}
21/11	. .	Filling or emptying of cuvettes	2021/1772	. . . .	{Array detector}
2021/115	. . .	{Washing; Purging}	2021/1774	. . . . .	{Line array detector}
21/13	. .	Moving of cuvettes or solid samples to or from the investigating station {(handling materials for automatic analysis G01N 35/00)}	2021/1776	. . . .	{Colour camera}
2021/135	. . .	{Sample holder displaceable}	2021/1778	. . . .	{IIT [intensified image tube]}
21/15	. .	Preventing contamination of the components of the optical system or obstruction of the light path	2021/178	. .	{Methods for obtaining spatial resolution of the property being measured}
2021/151	. . .	{Gas blown}	2021/1782	. . .	{In-depth resolution}
2021/152	. . .	{Scraping; Brushing; Moving band}	2021/1785	. . .	{Three dimensional}
2021/154	. . .	{Ultrasonic cleaning}	2021/1787	. . . .	{Tomographic, i.e. computerised reconstruction from projective measurements}
2021/155	. . .	{Monitoring cleanness of window, lens, or other parts}	2021/1789	. .	{Time resolved}
2021/157	. . . .	{Monitoring by optical means}	2021/1791	. . .	{stroboscopic; pulse gated; time range gated}
2021/158	. . .	{Eliminating condensation}	2021/1793	. .	{Remote sensing}
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)	2021/1795	. . .	{Atmospheric mapping of gases}
21/1702	. .	{with opto-acoustic detection, e.g. for gases or analysing solids}	2021/1797	. . .	{in landscape, e.g. crops}
2021/1704	. . .	{in gases}	21/19	. .	Dichroism
2021/1706	. . .	{in solids}	21/21	. .	Polarisation-affecting properties (G01N 21/19 takes precedence)
2021/1708	. . .	{with piezotransducers}	21/211	. . .	{Ellipsometry (optical thickness measurement G01B 11/06)}
21/171	. .	{with calorimetric detection, e.g. with thermal lens detection}	2021/212	. . . .	{Arrangement with total internal reflection}
2021/1712	. . .	{Thermal lens, mirage effect}	2021/213	. . . .	{Spectrometric ellipsometry}
2021/1714	. . .	{Photothermal radiometry with measurement of emission}	2021/214	. . . .	{Variance incidence arrangement}
21/1717	. .	{with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance}	2021/215	. . . .	{Brewster incidence arrangement}
2021/1719	. . .	{Carrier modulation in semiconductors}	2021/216	. . .	{using circular polarised light}
2021/1721	. . .	{Electromodulation}	2021/217	. . .	{Measuring depolarisation or comparing polarised and depolarised parts of light}
2021/1723	. . .	{Fluid modulation}	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	2021/3174	. . . . . {Filter wheel}
21/251	. . . {Colorimeters; Construction thereof}	2021/3177	. . . . . {Use of spatially separated filters in simultaneous way}
21/253	. . . . {for batch operation, i.e. multisample apparatus (analytical automats G01N 35/00)}	2021/3181	. . . . . {using LEDs}
21/255	. . . {Details, e.g. use of specially adapted sources, lighting or optical systems}	2021/3185	. . . . . {typically monochromatic or band-limited}
21/256	. . . {Arrangements using two alternating lights and one detector}	2021/3188	. . . . . {band-limited}
2021/258	. . . {Surface plasmon spectroscopy, e.g. micro- or nanoparticles in suspension}	2021/3192	. . . . . {Absorption edge variation is measured}
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)}	2021/3196	. . . . . {Correlating located peaks in spectrum with reference data, e.g. fingerprint data}
21/272	. . . . {for following a reaction, e.g. for determining photometrically a reaction rate (photometric kinetic analysis)}	21/33	. . . . . using ultraviolet light (G01N 21/39 takes precedence)
21/274	. . . . {Calibration, base line adjustment, drift correction}	2021/335	. . . . . {Vacuum UV}
21/276	. . . . . {with alternation of sample and standard in optical path}	21/35	. . . . . using infrared light (G01N 21/39 takes precedence)
21/278	. . . . . {Constitution of standards}	21/3504	. . . . . for analysing gases, e.g. multi-gas analysis
21/29	. . . using visual detection (G01N 21/31 takes precedence)	2021/3509	. . . . . {Correlation method, e.g. one beam alternating in correlator/sample field}
21/293	. . . . {with colour charts, graduated scales or turrets}	2021/3513	. . . . . {Open path with an instrumental source}
2021/296	. . . . {Visually measuring scintillation effect}	21/3518	. . . . . Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques
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)}	NOTE {This group also covers devices without instrumental sources, e.g. radiometric-type devices using ambient infrared light. }	
21/3103	. . . . {Atomic absorption analysis}	2021/3522	. . . . . {balancing by two filters on two detectors}
2021/3107	. . . . . {Cold vapor, e.g. determination of Hg}	2021/3527	. . . . . {and using one filter cell as attenuator}
2021/3111	. . . . . {using Zeeman split}	2021/3531	. . . . . {without instrumental source, i.e. radiometric}
2021/3114	. . . . . {Multi-element AAS arrangements}	2021/3536	. . . . . {using modulation of pressure or density}
2021/3118	. . . . . {Commutating sources, e.g. line source/broad source, chopping for comparison of broad/narrow regimes}	2021/354	. . . . . {Hygrometry of gases}
2021/3122	. . . . . {using a broad source with a monochromator}	2021/3545	. . . . . {Disposition for compensating effect of interfering gases}
2021/3125	. . . . {Measuring the absorption by excited molecules}	2021/355	. . . . . {by using a third optical path, e.g. interference cuvette}
2021/3129	. . . . {Determining multicomponents by multiwavelength light}	21/3554	. . . . . for determining moisture content
2021/3133	. . . . . {with selection of wavelengths before the sample}	21/3559	. . . . . in sheets, e.g. in paper
2021/3137	. . . . . {with selection of wavelengths after the sample}	21/3563	. . . . . for analysing solids; Preparation of samples therefor
21/314	. . . . {with comparison of measurements at specific and non-specific wavelengths (dual wavelength spectrometry G01J 3/427)}	2021/3568	. . . . . {applied to semiconductors, e.g. Silicon}
2021/3144	. . . . . {for oxymetry}	2021/3572	. . . . . {Preparation of samples, e.g. salt matrices}
2021/3148	. . . . . {using three or more wavelengths}	21/3577	. . . . . for analysing liquids, e.g. polluted water
21/3151	. . . . . {using two sources of radiation of different wavelengths (G01N 21/33 - G01N 21/39 take precedence)}	21/3581	. . . . . using far infrared light; using Terahertz radiation
2021/3155	. . . . . {Measuring in two spectral ranges, e.g. UV and visible}	21/3586	. . . . . by Terahertz time domain spectroscopy [THz-TDS]
2021/3159	. . . . . {Special features of multiplexing circuits}	21/359	. . . . . using near infrared light
2021/3162	. . . . . {with offset adjustment between filters}	2021/3595	. . . . . {using FTIR}
2021/3166	. . . . . {using separate detectors and filters}	21/37	. . . . . using pneumatic detection (opto-acoustic detection G01N 21/1702)}
2021/317	. . . . . {Special constructive features}	21/39	. . . . . using tunable lasers
		2021/391	. . . . . {Intracavity sample}
		2021/392	. . . . . {Measuring reradiation, e.g. fluorescence, backscatter}

2021/393	. . . . .	{and using a spectral variation of the interaction of the laser beam and the sample}	2021/4716	. . . . .	{Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}
2021/394	. . . . .	{DIAL method}	2021/4719	. . . . .	{using an optical fibre array}
2021/395	. . . . .	{using a topographic target}	2021/4721	. . . . .	{using a PSD}
2021/396	. . . . .	{Type of laser source}	2021/4723	. . . . .	{Scanning scatter angles}
2021/397	. . . . .	{Dye laser}	2021/4726	. . . . .	{Detecting scatter at 90°}
2021/398	. . . . .	{CO ₂ laser}	2021/4728	. . . . .	{Optical definition of scattering volume}
2021/399	. . . . .	{Diode laser}	2021/473	. . . . .	{Compensating for unwanted scatter, e.g. reliefs, marks}
21/41	. . . . .	Refractivity; Phase-affecting properties, e.g. optical path length (G01N 21/21 takes precedence)	2021/4733	. . . . .	{Discriminating different types of scatterers}
2021/4106	. . . . .	{Atmospheric distortion; Turbulence}	2021/4735	. . . . .	{Solid samples, e.g. paper, glass}
2021/4113	. . . . .	{Atmospheric dispersion}	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}
21/412	. . . . .	{Index profiling of optical fibres}	21/474	. . . . .	{Details of optical heads therefor, e.g. using optical fibres}
2021/4126	. . . . .	{Index of thin films}	2021/4742	. . . . .	{comprising optical fibres}
21/4133	. . . . .	{Refractometers, e.g. differential}	2021/4745	. . . . .	{Fused bundle, i.e. for backscatter}
2021/414	. . . . .	{Correcting temperature effect in refractometers}	2021/4747	. . . . .	{Concentric bundles}
2021/4146	. . . . .	{Differential cell arrangements}	2021/475	. . . . .	{Bifurcated bundle}
2021/4153	. . . . .	{Measuring the deflection of light in refractometers}	2021/4752	. . . . .	{Geometry}
2021/416	. . . . .	{Visualising flow by index measurement}	2021/4754	. . . . .	{Diffuse illumination}
2021/4166	. . . . .	{Methods effecting a waveguide mode enhancement through the property being measured}	2021/4757	. . . . .	{Geometry 0/45° or 45/0°}
2021/4173	. . . . .	{Phase distribution}	2021/4759	. . . . .	{Annular illumination}
2021/418	. . . . .	{Frequency/phase diagrams}	2021/4761	. . . . .	{Mirror arrangements, e.g. in IR range}
2021/4186	. . . . .	{Phase modulation imaging}	2021/4764	. . . . .	{Special kinds of physical applications}
2021/4193	. . . . .	{using a PSD}	2021/4766	. . . . .	{Sample containing fluorescent brighteners}
21/43	. . . . .	by measuring critical angle	2021/4769	. . . . .	{Fluid samples, e.g. slurries, granulates; Compressible powdery of fibrous samples}
21/431	. . . . .	{Dip refractometers, e.g. using optical fibres}	2021/4771	. . . . .	{Matte surfaces with reflecting particles}
2021/432	. . . . .	{comprising optical fibres}	2021/4773	. . . . .	{Partly or totally translucent samples}
2021/433	. . . . .	{with an unclad part on the fibre}	2021/4776	. . . . .	{Miscellaneous in diffuse reflection devices}
2021/434	. . . . .	{Dipping block in contact with sample, e.g. prism}	2021/4778	. . . . .	{Correcting variations in front distance}
2021/435	. . . . .	{Sensing drops on the contact surface}	2021/478	. . . . .	{Application in testing analytical test strips}
2021/436	. . . . .	{Sensing resonant reflection}	2021/4783	. . . . .	{Examining under varying incidence; Angularly adjustable head}
2021/437	. . . . .	{with investigation of angle}	21/4785	. . . . .	{Standardising light scatter apparatus; Standards therefor}
2021/438	. . . . .	{with investigation of wavelength}	21/4788	. . . . .	{Diffraction (for sizing particles G01N 15/0205)}
21/45	. . . . .	using interferometric methods; using Schlieren methods	2021/479	. . . . .	{Speckle}
2021/451	. . . . .	{for determining the optical absorption}	2021/4792	. . . . .	{Polarisation of scatter light}
21/453	. . . . .	{Holographic interferometry (for dimensional measurements G01B 9/021 - G01B 9/029)}	21/4795	. . . . .	{spatially resolved investigating of object in scattering medium (in vivo A61B)}
21/455	. . . . .	{Schlieren methods, e.g. for gradient index determination; Shadowgraph}	2021/4797	. . . . .	{time resolved, e.g. analysis of ballistic photons}
2021/456	. . . . .	{Moire deflectometry}	21/49	. . . . .	within a body or fluid
2021/458	. . . . .	{using interferential sensor, e.g. sensor fibre, possibly on optical waveguide}	2021/495	. . . . .	{the fluid being adsorbed, e.g. in porous medium}
21/47	. . . . .	Scattering, i.e. diffuse reflection (G01N 21/25, G01N 21/41 take precedence {G01N 21/55 takes precedence})	21/51	. . . . .	inside a container, e.g. in an ampoule (G01N 21/53 takes precedence)
2021/4702	. . . . .	{Global scatter; Total scatter, excluding reflections}	2021/513	. . . . .	{Cuvettes for scattering measurements}
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
2021/4709	. . . . .	{Backscatter}	21/532	. . . . .	{with measurement of scattering and transmission}
2021/4711	. . . . .	{Multiangle measurement}			
2021/4714	. . . . .	{Continuous plural angles}			

21/534	. . . . . {by measuring transmission alone, i.e. determining opacity}	21/63	. . . optically excited
2021/536	. . . . . {Measurement device mounted at stack}	21/631	. . . {using photolysis and investigating photolysed fragments}
21/538	. . . . . {for determining atmospheric attenuation and visibility}	2021/632	. . . . {Predissociation, e.g. for fluorescence of transient excited radicals}
21/55	. . . Specular reflectivity	2021/633	. . . . {Photoinduced grating used for analysis}
2021/551	. . . . {Retroreflectance}	2021/634	. . . . {Photochromic material analysis}
21/552	. . . . Attenuated total reflection	2021/635	. . . . {Photosynthetic material analysis, e.g. chlorophyll}
21/553	. . . . . {and using surface plasmons (fluorescence excitation G01N 21/648 ; enhanced Raman G01N 21/658)}	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)}
21/554	. . . . . {detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}	2021/637	. . . . . {Lasing effect used for analysis}
2021/555	. . . . {Measuring total reflection power, i.e. scattering and specular}	2021/638	. . . . . {Brillouin effect, e.g. stimulated Brillouin effect}
2021/556	. . . . {Measuring separately scattering and specular}	21/64	. . . . Fluorescence; Phosphorescence
2021/557	. . . . {Detecting specular reflective parts on sample}	21/6402	. . . . . {Atomic fluorescence; Laser induced fluorescence}
2021/558	. . . . {Measuring reflectivity and transmission}	21/6404	. . . . . {Atomic fluorescence}
2021/559	. . . . {Determining variation of specular reflection within diffusively reflecting sample}	2021/6406	. . . . . {multi-element}
21/57	. . . . Measuring gloss	21/6408	. . . . . {with measurement of decay time, time resolved fluorescence}
2021/575	. . . . . {Photogoniometering}	2021/641	. . . . . {Phosphorimetry, gated}
21/59	. . . Transmissivity (G01N 21/25 takes precedence)	2021/6413	. . . . . {Distinction short and delayed fluorescence or phosphorescence}
2021/5903	. . . . {using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}	2021/6415	. . . . . {with two excitations, e.g. strong pump/probe flash}
21/5907	. . . . {Densitometers}	2021/6417	. . . . . {Spectrofluorimetric devices}
21/5911	. . . . . {of the scanning type (scanning per se G02B)}	2021/6419	. . . . . {Excitation at two or more wavelengths}
2021/5915	. . . . . {Processing scan data in densitometry}	2021/6421	. . . . . {Measuring at two or more wavelengths}
2021/5919	. . . . . {Determining total density of a zone}	2021/6423	. . . . . {Spectral mapping, video display}
2021/5923	. . . . . {Determining zones of density; quantitating spots}	2021/6426	. . . . . {Determining Fraunhofer lines}
2021/5926	. . . . . {Isodensitometers}	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)}
2021/593	. . . . . {Correcting from the background density}	21/643	. . . . . {non-biological material}
2021/5934	. . . . . {Averaging on a zone}	2021/6432	. . . . . {Quenching}
2021/5938	. . . . . {Features of monitor, display}	2021/6434	. . . . . {Optrodes}
2021/5942	. . . . . {for dot area ratio in printing applications}	2021/6436	. . . . . {for analysing tapes}
2021/5946	. . . . . {for binary signal}	2021/6439	. . . . . {with indicators, stains, dyes, tags, labels, marks}
2021/5949	. . . . . {Correcting nonlinearity of signal, e.g. in measurement of photomedium}	2021/6441	. . . . . {with two or more labels}
2021/5953	. . . . . {for detecting a spatial spectrum}	2021/6443	. . . . . {Fluorimetric titration}
2021/5957	. . . . . {using an image detector type detector, e.g. CCD}	21/6445	. . . . . {Measuring fluorescence polarisation}
2021/5961	. . . . . {using arrays of sources and detectors}	21/6447	. . . . . {by visual observation}
2021/5965	. . . . . {using selected detectors in an array}	21/645	. . . . . {Specially adapted constructive features of fluorimeters}
2021/5969	. . . . . {Scanning of a tube, a cuvette, a volume of sample}	21/6452	. . . . . {Individual samples arranged in a regular 2D-array, e.g. multiwell plates}
2021/5973	. . . . . {where the cuvette or tube is moved}	21/6454	. . . . . {using an integrated detector array}
2021/5976	. . . . . {Image projected and scanning projected image}	21/6456	. . . . . {Spatial resolved fluorescence measurements; Imaging}
2021/598	. . . . . {Features of mounting, adjusting}	21/6458	. . . . . {Fluorescence microscopy (fluorescence microscopes per se G02B 21/0076 and G02B 21/16)}
2021/5984	. . . . . {height adjustable}	2021/646	. . . . . {Detecting fluorescent inhomogeneities at a position, e.g. for detecting defects}
2021/5988	. . . . . {Fluid mounting or the like, e.g. vortex}	2021/6463	. . . . . {Optics}
2021/5992	. . . . . {Double pass}	2021/6465	. . . . . {Angular discrimination}
2021/5996	. . . . . {Positioning the head}		
21/61	. . . . Non-dispersive gas analysers (G01N 21/3504 takes precedence)		
21/62	. . . Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light		
2021/625	. . . {Excitation by energised particles such as metastable molecules}		

2021/6467	. . . . .	{ Axial flow and illumination }	2021/757	. .	{ using immobilised reagents }
2021/6469	. . . . .	{ Cavity, e.g. ellipsoid }	2021/758	. .	{ using reversible reaction }
2021/6471	. . . . .	{ Special filters, filter wheel }	21/76	. .	Chemiluminescence; Bioluminescence
2021/6473	. . . . .	{ In-line geometry }	21/763	. . .	{ Bioluminescence }
2021/6476	. . . . .	{ Front end, i.e. backscatter, geometry }	21/766	. . .	{ of gases }
2021/6478	. . . . .	{ Special lenses }	21/77	. .	by observing the effect on a chemical indicator
21/648	. . . . .	{ using evanescent coupling or surface plasmon coupling for the excitation of fluorescence }	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) }
2021/6482	. . . . .	{ Sample cells, cuvettes }	2021/7706	. . . .	{ Reagent provision }
2021/6484	. . . . .	{ Optical fibres }	2021/7709	. . . . .	{ Distributed reagent, e.g. over length of guide }
21/6486	. . . .	{ Measuring fluorescence of biological material, e.g. DNA, RNA, cells (G01N 21/6428 takes precedence) }	2021/7713	. . . . .	{ in core }
21/6489	. . . .	{ Photoluminescence of semiconductors }	2021/7716	. . . . .	{ in cladding }
2021/6491	. . . .	{ Measuring fluorescence and transmission; Correcting inner filter effect }	2021/772	. . . . .	{ Tip coated light guide }
2021/6493	. . . . .	{ by alternating fluorescence/transmission or fluorescence/reflection }	2021/7723	. . . . .	{ Swelling part, also for adsorption sensor, i.e. without chemical reaction }
2021/6495	. . . . .	{ Miscellaneous methods }	2021/7726	. . . . .	{ Porous glass }
2021/6497	. . . . .	{ Miscellaneous applications }	2021/773	. . . . .	{ Porous polymer jacket; Polymer matrix with indicator }
21/65	. . .	Raman scattering	2021/7733	. . . . .	{ Reservoir, liquid reagent }
2021/651	. . . . .	{ Cuvettes therefore }	2021/7736	. . . . .	{ exposed, cladding free }
2021/653	. . . . .	{ Coherent methods [CARS] }	21/774	. . . .	{ the reagent being on a grating or periodic structure }
2021/655	. . . . .	{ Stimulated Raman }	21/7743	. . . . .	{ the reagent-coated grating coupling light in or out of the waveguide }
2021/656	. . . . .	{ Raman microprobe }	21/7746	. . . . .	{ the waveguide coupled to a cavity resonator }
21/658	. . . . .	{ enhancement Raman, e.g. surface plasmons }	2021/775	. . .	{ Indicator and selective membrane }
21/66	. .	electrically excited, e.g. electroluminescence	2021/7753	. . .	{ Reagent layer on photoelectrical transducer }
21/67	. . .	using electric arcs or discharges	2021/7756	. . .	{ Sensor type }
21/68	. . .	using high frequency electric fields	2021/7759	. . . . .	{ Dipstick; Test strip }
21/69	. . .	specially adapted for fluids {, e.g. molten metal }	2021/7763	. . . . .	{ Sample through flow }
2021/695	. . . . .	{ Molten metals }	2021/7766	. . . . .	{ Capillary fill }
21/70	. .	mechanically excited, e.g. triboluminescence	2021/7769	. . .	{ Measurement method of reaction-produced change in sensor }
21/71	. .	thermally excited	2021/7773	. . . . .	{ Reflection }
2021/712	. . .	{ using formation of volatile hydride }	2021/7776	. . . . .	{ Index }
21/714	. . .	{ Sample nebulisers for flame burners or plasma burners (nebulizers per se B05B) }	2021/7779	. . . . .	{ interferometric }
21/716	. . .	{ by measuring the radiation emitted by a test object treated by combustion gases for investigating the composition of gas mixtures }	2021/7783	. . . . .	{ Transmission, loss }
21/718	. . .	{ Laser microanalysis, i.e. with formation of sample plasma }	2021/7786	. . . . .	{ Fluorescence }
21/72	. . .	using flame burners	2021/7789	. . . . .	{ Cavity or resonator }
2021/725	. . . . .	{ for determining of metalloids, using Beilstein type reaction }	2021/7793	. . .	{ Sensor comprising plural indicators }
21/73	. . .	using plasma burners or torches	2021/7796	. . .	{ Special mountings, packaging of indicators }
21/74	. . .	using flameless atomising, e.g. graphite furnaces	21/78	. . .	producing a change of colour
2021/745	. . . . .	{ Control of temperature, heating, ashing }	21/783	. . . . .	{ for analysing gases }
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)	2021/786	. . . . .	{ with auxiliary heating for reaction }
2021/751	. .	{ Comparing reactive/non reactive substances }	21/79	. . . . .	Photometric titration
2021/752	. .	{ Devices comprising reaction zones }	21/80	. . . . .	Indicating pH value
2021/754	. .	{ Reagent flow and intermittent injection of sample or <i>vice versa</i> }	21/81	. . . . .	Indicating humidity
2021/755	. .	{ Comparing readings with/without reagents, or before/after reaction }	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}	2021/8809	. . . .	{Adjustment for highlighting flaws}
2021/8427	. . .	{Coatings}	2021/8812	. . . .	{Diffuse illumination, e.g. "sky"}
2021/8433	. . . .	{Comparing coated/uncoated parts}	2021/8816	. . . . .	{by using multiple sources, e.g. LEDs}
2021/8438	. . .	{Multilayers}	2021/8819	. . . . .	{by using retroreflecting screen}
2021/8444	. . .	{Fibrous material}	2021/8822	. . . . .	{Dark field detection}
2021/845	. . .	{Objects on a conveyor}	2021/8825	. . . . .	{Separate detection of dark field and bright field}
2021/8455	. . .	{and using position detectors}	2021/8829	. . . . .	{Shadow projection or structured background, e.g. for deflectometry}
2021/8461	. . .	{Investigating impurities in semiconductor, e.g. Silicon}	2021/8832	. . . . .	{Structured background, e.g. for transparent objects}
2021/8466	. . .	{Investigation of vegetal material, e.g. leaves, plants, fruits}	2021/8835	. . . . .	{Adjustable illumination, e.g. software adjustable screen}
2021/8472	. . .	{Investigation of composite materials}	2021/8838	. . . . .	{Stroboscopic illumination; synchronised illumination}
2021/8477	. . .	{Investigating crystals, e.g. liquid crystals}	2021/8841	. . . . .	{Illumination and detection on two sides of object}
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)}	2021/8845	. . . . .	{Multiple wavelengths of illumination or detection}
2021/8488	. . .	{the band presenting reference patches}	2021/8848	. . . . .	{Polarisation of light}
2021/8494	. . .	{Measuring or storing parameters of the band}	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)}
21/85	. . .	Investigating moving fluids or granular solids	2021/8854	. . . . .	{Grading and classifying of flaws}
21/8507	. . .	{Probe photometers, i.e. with optical measuring part dipped into fluid sample}	2021/8858	. . . . .	{Flaw counting}
2021/8514	. . . . .	{with immersed mirror}	2021/8861	. . . . .	{Determining coordinates of flaws}
2021/8521	. . . . .	{with a combination mirror cell-cuvette}	2021/8864	. . . . .	{Mapping zones of defects}
2021/8528	. . . . .	{Immersed light conductor}	2021/8867	. . . . .	{using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing}
2021/8535	. . . . .	{presenting a cut}	2021/887	. . . . .	{the measurements made in two or more directions, angles, positions}
2021/8542	. . . . .	{presenting an exposed part of the core}	2021/8874	. . . . .	{Taking dimensions of defect into account}
2021/855	. . . . .	{Underground probe, e.g. with provision of a penetration tool}	2021/8877	. . . . .	{Proximity analysis, local statistics}
2021/8557	. . .	{Special shaping of flow, e.g. using a by-pass line, jet flow, curtain flow}	2021/888	. . . . .	{Marking defects}
2021/8564	. . . . .	{Sample as drops}	2021/8883	. . . . .	{involving the calculation of gauges, generating models}
2021/8571	. . .	{using filtering of sample fluid}	2021/8887	. . . . .	{based on image processing techniques}
2021/8578	. . .	{Gaseous flow}	2021/889	. . . . .	{providing a bare video image, i.e. without visual measurement aids}
2021/8585	. . . . .	{using porous sheets, e.g. for separating aerosols}	2021/8893	. . . . .	{providing a video image and a processed signal for helping visual decision}
2021/8592	. . .	{Grain or other flowing solid samples}	2021/8896	. . . . .	{Circuits specially adapted for system specific signal conditioning}
21/86	. . .	Investigating moving sheets (G01N 21/89 takes precedence)	21/89	. . .	in moving material, e.g. running paper or textiles (G01N 21/90 , G01N 21/91 , G01N 21/94 take precedence)
2021/8609	. . .	{Optical head specially adapted}	21/8901	. . . . .	{Optical details; Scanning details (per se G02B)}
2021/8618	. . . . .	{with an optically integrating part, e.g. hemisphere}	2021/8902	. . . . .	{Anamorphic spot}
2021/8627	. . . . .	{with an illuminator over the whole width}	21/8903	. . . . .	{using a multiple detector array}
2021/8636	. . . . .	{Detecting arrangement therefore, e.g. collimators, screens}	2021/8904	. . . . .	{Sheetwide light conductor on detecting side, e.g. fluorescing light rod}
2021/8645	. . .	{using multidetectors, detector array}			
2021/8654	. . .	{Mechanical support; Mounting of sheet}			
2021/8663	. . .	{Paper, e.g. gloss, moisture content}			
2021/8672	. . . . .	{Paper formation parameter}			
2021/8681	. . . . .	{Paper fibre orientation}			
2021/869	. . .	{Plastics or polymeric material, e.g. polymers orientation in plastic, adhesive imprinted band}			
21/87	. . .	Investigating jewels (G01N 21/88 takes precedence)			
21/88	. . .	Investigating the presence of flaws or contamination			
21/8803	. . .	{Visual inspection (measuring projectors G01B 9/08)}			
21/8806	. . .	{Specially adapted optical and illumination features}			

2021/8905	. . . . .	{Directional selective optics, e.g. slits, spatial filters}	2021/933	. . . . .	{Adjusting baseline or gain (also for web inspection)}
2021/8907	. . . . .	{Cylindrical optics}	2021/936	. . . . .	{Adjusting threshold, e.g. by way of moving average}
2021/8908	. . . . .	{Strip illuminator, e.g. light tube}	21/94	. . . . .	Investigating contamination, e.g. dust (G01N 21/85 takes precedence)
2021/8909	. . . . .	{Scan signal processing specially adapted for inspection of running sheets}	2021/945	. . . . .	{Liquid or solid deposits of macroscopic size on surfaces, e.g. drops, films, or clustered contaminants}
2021/891	. . . . .	{Edge discrimination, e.g. by signal filtering}	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)
2021/8911	. . . . .	{Setting scan-width signals}	21/9501	. . . . .	{Semiconductor wafers (manufacturing processes per se of semiconductor devices implementing a measuring step H10P 74/20)}
2021/8912	. . . . .	{Processing using lane subdivision}	21/9503	. . . . .	{Wafer edge inspection}
21/8914	. . . . .	{characterised by the material examined}	21/9505	. . . . .	{Wafer internal defects, e.g. microcracks}
21/8915	. . . . .	{non-woven textile material}	21/9506	. . . . .	{Optical discs}
21/8916	. . . . .	{for testing photographic material}	21/9508	. . . . .	{Capsules; Tablets}
2021/8917	. . . . .	{Paper, also ondulated}	21/951	. . . . .	{Balls}
2021/8918	. . . . .	{Metal}	2021/9511	. . . . .	{Optical elements other than lenses, e.g. mirrors}
21/892	. . . . .	characterised by the flaw, defect or object feature examined	2021/9513	. . . . .	{Liquid crystal panels}
21/8921	. . . . .	{Streaks}	21/9515	. . . . .	{Objects of complex shape, e.g. examined with use of a surface follower device (measuring contours and curvatures G01B 11/24)}
21/8922	. . . . .	{Periodic flaws}	2021/9516	. . . . .	{whereby geometrical features are being masked}
2021/8924	. . . . .	{Dents; Relief flaws}	2021/9518	. . . . .	{using a surface follower, e.g. robot}
2021/8925	. . . . .	{Inclusions}	21/952	. . . . .	Inspecting the exterior surface of cylindrical bodies or wires (G01N 21/956 takes precedence)
2021/8927	. . . . .	{Defects in a structured web}	21/954	. . . . .	Inspecting the inner surface of hollow bodies, e.g. bores
2021/8928	. . . . .	{Haze defects, i.e. with a part of diffracted light}	2021/9542	. . . . .	{using a probe}
21/894	. . . . .	Pinholes	2021/9544	. . . . .	{with emitter and receiver on the probe}
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)}	2021/9546	. . . . .	{with remote light transmitting, e.g. optical fibres}
2021/8962	. . . . .	{for detecting separately opaque flaws and refracting flaws}	2021/9548	. . . . .	{Scanning the interior of a cylinder}
2021/8965	. . . . .	{using slant illumination, using internally reflected light}	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 H10P 74/20)}
2021/8967	. . . . .	{Discriminating defects on opposite sides or at different depths of sheet or rod}	21/95607	. . . . .	{using a comparative method}
21/898	. . . . .	Irregularities in textured or patterned surfaces, e.g. textiles, wood	2021/95615	. . . . .	{with stored comparison signal}
21/8983	. . . . .	{for testing textile webs, i.e. woven material}	21/95623	. . . . .	{using a spatial filtering method (per se G02B)}
21/8986	. . . . .	{Wood}	2021/9563	. . . . .	{and suppressing pattern images}
21/90	. . . . .	in a container or its contents (G01N 21/91 takes precedence)	2021/95638	. . . . .	{for PCB's}
21/9009	. . . . .	{Non-optical constructional details affecting optical inspection, e.g. cleaning mechanisms for optical parts, vibration reduction}	2021/95646	. . . . .	{Soldering}
21/9018	. . . . .	{Dirt detection in containers}	2021/95653	. . . . .	{Through-holes}
21/9027	. . . . .	{in containers after filling}	2021/95661	. . . . .	{for leads, e.g. position, curvature}
21/9036	. . . . .	{using arrays of emitters or receivers}	2021/95669	. . . . .	{for solder coating, coverage}
21/9045	. . . . .	{Inspection of ornamented or stippled container walls}	2021/95676	. . . . .	{Masks, reticles, shadow masks}
21/9054	. . . . .	{Inspection of sealing surface and container finish}	21/95684	. . . . .	{Patterns showing highly reflecting parts, e.g. metallic elements}
2021/9063	. . . . .	{Hot-end container inspection}	21/95692	. . . . .	{Patterns showing hole parts, e.g. honeycomb filtering structures}
21/9072	. . . . .	{with illumination or detection from inside the container}			
21/9081	. . . . .	{Inspection especially designed for plastic containers, e.g. preforms}			
21/909	. . . . .	{in opaque containers or opaque container parts, e.g. cans, tins, caps, labels}			
21/91	. . . . .	using penetration of dyes, e.g. fluorescent ink			
21/93	. . . . .	Detection standards; Calibrating {baseline adjustment, drift correction}			

- 21/958 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 or radio waves, i.e. electromagnetic waves with a wavelength of one millimetre or more ([G01N 3/00](#) - [G01N 17/00](#), [G01N 24/00](#) take precedence)**
- 22/005 . {and using Stark effect modulation}
- 22/02 . Investigating the presence of flaws
- 22/04 . Investigating moisture content
- 23/00 Investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays or neutrons, not covered by groups [G01N 3/00](#) – [G01N 17/00](#), [G01N 21/00](#) or [G01N 22/00](#)**
- 23/005 . {by using neutrons ([G01N 23/02](#) - [G01N 23/27](#) take precedence)}
- 23/02 . by transmitting the radiation through the material
- 23/025 . . {using neutrons}
- 23/04 . . and forming images of the material
- 23/041 . . . Phase-contrast imaging, e.g. using grating interferometers
- 23/043 . . . {using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images}
- 23/044 . . . using laminography or tomosynthesis
- 23/046 . . . using tomography, e.g. computed tomography [CT]
- 23/05 . . . using neutrons
- 23/06 . . and measuring the absorption
- 23/083 . . . the radiation being X-rays
- 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
- 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
- 23/12 . . . the material being a flowing fluid or a flowing granular solid
- 23/125 {with immersed detecting head}
- 23/16 . . . the material being a moving sheet or film
- 23/18 . . . Investigating the presence of flaws defects or foreign matter
- 23/185 {in tyres}
- 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 . . . Gonimeters
- 23/20025 . . . Sample holders or supports therefor
- 23/20033 provided with temperature control or heating means
- 23/20041 for high pressure testing, e.g. anvil cells
- 23/2005 . . . Preparation of powder samples therefor
- 23/20058 . . Measuring diffraction of electrons, e.g. low energy electron diffraction [LEED] method or reflection high energy electron diffraction [RHEED] method
- 23/20066 . . Measuring inelastic scatter of gamma rays, e.g. Compton effect
- 23/20075 . . {by measuring interferences of X-rays, e.g. Borrmann effect}
- 23/20083 . . {by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement}
- 23/20091 . . Measuring the energy-dispersion spectrum [EDS] of diffracted radiation
- 23/201 . . by measuring small-angle scattering
- 23/202 . . . using neutrons
- 23/203 . . Measuring back scattering
- 23/204 . . . using neutrons
- 23/205 . . using diffraction cameras
- 23/2055 . . Analysing diffraction patterns
- 23/207 . . Diffractometry using detectors, e.g. using a probe in a central position and one or more displaceable detectors in circumferential positions
- 23/2073 . . . {using neutron detectors ([neutron spectrometry G01T 3/00](#))}
- 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}
- 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](#)}
- 23/2202 . . Preparing specimens therefor
- 23/2204 . . Specimen supports therefor; Sample conveying means therefore
- 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]
- 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
- 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](#))

- 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**
- 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 [H10N 10/00](#), [H10N 15/00](#))}
- 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	27/123	. . . . . {for controlling the temperature (temperature control per se G05D 23/00)}
25/52	. . by determining flash-point of liquids	27/124	. . . . . {varying the temperature, e.g. in a cyclic manner}
25/54	. . by determining explosibility	27/125	. . . . . {Composition of the body, e.g. the composition of its sensitive layer}
25/56	. by investigating moisture content	27/126	. . . . . {comprising organic polymers}
25/58	. . by measuring changes of properties of the material due to heat, cold or expansion	27/127	. . . . . {comprising nanoparticles}
25/60	. . . for determining the wetness of steam	27/128	. . . . . {Microapparatus}
25/62	. . by psychrometric means, e.g. wet-and-dry bulb thermometers	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)}
25/64	. . . using electric temperature-responsive elements	27/14	. . . of an electrically-heated body in dependence upon change of temperature
25/66	. . by investigating dew-point	27/16	. . . . . caused by burning or catalytic oxidation of surrounding material to be tested, e.g. of gas
25/68	. . . by varying the temperature of a condensing surface	27/18	. . . . . caused by changes in the thermal conductivity of a surrounding material to be tested (G01N 27/20 takes precedence)
25/70	. . . by varying the temperature of the material, e.g. by compression, by expansion	27/185	. . . . . {using a catharometer}
25/72	. Investigating presence of flaws	27/20	. . . Investigating the presence of flaws
27/00	Investigating or analysing materials by the use of electric, electrochemical, or magnetic means (G01N 3/00 – G01N 25/00 take precedence; measurement or testing of electric or magnetic variables or of electric or magnetic properties of materials G01R)	27/205	. . . . . {in insulating materials}
27/002	. {by investigating the work function voltage}	27/22	. . by investigating capacitance
27/005	. . {by determining the work function in vacuum}	27/221	. . . {by investigating the dielectric properties (using microwaves G01N 22/00 ; measuring loss factors or dielectric constants per se G01R 27/26)}
27/007	. {by investigating the electric dipolar moment (measuring piezoelectric properties G01R 29/22)}	2027/222	. . . . . {for analysing gases}
27/02	. by investigating impedance	27/223	. . . {for determining moisture content, e.g. humidity (rain detectors on vehicle windows B60S 1/0825)}
27/021	. . {before and after chemical transformation of the material}	27/225	. . . . . {by using hygroscopic materials}
27/023	. . {where the material is placed in the field of a coil}	27/226	. . . {Construction of measuring vessels; Electrodes therefor}
27/025	. . . {a current being generated within the material by induction}	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)}
27/026	. . {Dielectric impedance spectroscopy (electrochemical impedance spectroscopy for measuring corrosion G01N 17/02)}	27/228	. . . {Circuits therefor (measuring capacitance per se G01R 27/26)}
27/028	. . {Circuits therefor (measuring impedance per se G01R 27/02)}	27/24	. . . Investigating the presence of flaws
27/04	. . by investigating resistance	27/26	. by investigating electrochemical variables; by using electrolysis or electrophoresis
27/041	. . . {of a solid body}	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
27/043	. . . {of a granular material}	27/28	. . Electrolytic cell components
27/045	. . . {Circuits (measuring resistance per se G01R 27/00 , e.g. G01R 27/22)}	27/283	. . . {Means for supporting or introducing electrochemical probes}
27/046	. . . . . {provided with temperature compensation}	27/286	. . . . . {Power or signal connectors associated therewith}
27/048	. . . {for determining moisture content of the material}	27/30	. . . Electrodes, e.g. test electrodes; Half-cells (G01N 27/414 takes precedence)
27/06	. . . of a liquid (involving electrolysis G01N 27/26)	27/301	. . . . . {Reference electrodes}
27/07	. . . . . Construction of measuring vessels; Electrodes therefor	27/302	. . . . . {pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes (ion selective electrodes G01N 27/333 , glass electrodes G01N 27/36)}
27/08	. . . . . which is flowing continuously	27/304	. . . . . {Gas permeable electrodes}
27/10	. . . . . Investigation or analysis specially adapted for controlling or monitoring operations or for signalling		
27/12	. . . of a solid body in dependence upon absorption of a fluid; of a solid body in dependence upon reaction with a fluid {, for detecting components in the fluid}		
27/121	. . . . . {for determining moisture content, e.g. humidity, of the fluid (moisture content of the tested material G01N 27/048)}		
27/122	. . . . . {Circuits particularly adapted therefor, e.g. linearising circuits}		

- 27/305 {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 {, e.g. electrical or mechanical details for in vitro measurements}
- 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 or analysing of 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}
- 27/416 . . Systems ([G01N 27/27](#) takes precedence)
- 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 with a combination 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 generate a reagent, e.g. for titration
- 27/447 . . . using electrophoresis
- 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 . . . using polarography, i.e. measuring changes in current under a slowly-varying voltage
- 27/49 . . . Systems involving the determination of the current at a single specific value, or small range of values, of applied voltage for producing selective measurement of one or more particular ionic species
- 27/60 . . by investigating electrostatic variables {, e.g. electrographic flaw testing ([G01N 27/007](#) takes precedence)}
- 27/605 . . {for determining moisture content, e.g. humidity}
- 27/61 . . Investigating the presence of flaws
- 27/62 . . by investigating the ionisation of gases, e.g. aerosols; by investigating electric discharges, e.g. emission of cathode
- 27/622 . . Ion mobility spectrometry
- 27/623 . . . combined with mass spectrometry
- 27/624 . . . Differential mobility spectrometry [DMS]; 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
- 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
- 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
- 27/9006 {Details, e.g. in the structure or functioning of sensors}
- 27/9013 Arrangements for scanning
- 27/902 {by moving the sensors}
- 27/9026 {by moving the material}
- 27/904 with two or more sensors
- 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}
- 27/908 {synchronously with scanning}
- 27/9086 {Calibrating of recording device}

- 27/9093 Arrangements for supporting the sensor; Combinations of eddy-current sensors and auxiliary arrangements for marking or for rejecting
- 27/92 . . by investigating breakdown voltage ([G01N 27/60](#), [G01N 27/62](#) take precedence)
- 29/00 Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object** ([G01N 3/00](#) - [G01N 27/00](#) take precedence)
- 29/02 . . Analysing fluids (using acoustic emission techniques [G01N 29/14](#) ; constructional or flow details for analysing fluids [G01N 29/222](#); optoacoustic fluid cells [G01N 29/2425](#))
- 29/022 . . {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 {or field flow fractionation} ([G01N 3/00, G01N 5/00, G01N 7/00, G01N 9/00, G01N 11/00, G01N 13/00, G01N 15/00, G01N 17/00, G01N 19/00, G01N 21/00, G01N 22/00, G01N 23/00, G01N 24/00, G01N 25/00, G01N 27/00, G01N 29/00](#) take precedence)**
- 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)}	2030/3015	. . . . . {temperature gradients along column}
2030/0075	. {Separation due to differential desorption}	2030/3023	. . . . . {using cryogenic fluids}
2030/008	. . {Thermal desorption}	2030/303	. . . . . {using peltier elements}
2030/0085	. . {the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds}	2030/3038	. . . . . {temperature control of column exit, e.g. of restrictors}
2030/009	. {Extraction}	2030/3046	. . . . . {temperature control of column inlet}
2030/0095	. {Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments}	2030/3053	. . . . . {using resistive heating}
30/02	. Column chromatography	2030/3061	. . . . . {column or associated structural member used as heater}
2030/022	. . {characterised by the kind of separation mechanism}	2030/3069	. . . . . {electrical resistance used to determine control temperature}
2030/025	. . . {Gas chromatography}	2030/3076	. . . . . {using specially adapted T(t) profile}
2030/027	. . . {Liquid chromatography}	2030/3084	. . . . . {ovens}
30/04	. . Preparation or injection of sample to be analysed	2030/3092	. . . . . {Heat exchange between incoming and outgoing mobile phase}
2030/042	. . . {Standards}	30/32	. . . . of pressure or speed (G01N 30/36 takes precedence)
2030/045	. . . . {internal}	2030/322	. . . . . {pulse dampers}
2030/047	. . . . {external}	2030/324	. . . . . {speed, flow rate}
30/06	. . . Preparation	2030/326	. . . . . {pumps}
2030/062	. . . . {extracting sample from raw material}	2030/328	. . . . . {valves, e.g. check valves of pumps}
2030/065	. . . . {using different phases to separate parts of sample}	30/34	. . . . of fluid composition, e.g. gradient (G01N 30/36 takes precedence)
2030/067	. . . . {by reaction, e.g. derivatising the sample}	2030/342	. . . . . {fluid composition fixed during analysis}
30/08	. . . . using an enricher	2030/345	. . . . . {fluid electrical conductivity fixed during analysis}
2030/085	. . . . . {using absorbing precolumn}	2030/347	. . . . . {mixers}
30/10	. . . . using a splitter	30/36	. . . . in high pressure liquid systems
30/12	. . . . by evaporation	30/38	. . . Flow patterns
2030/121	. . . . . {cooling; cold traps}	2030/381	. . . . {centrifugal chromatography}
2030/122	. . . . . {cryogenic focusing}	2030/382	. . . . {flow switching in a single column}
2030/123	. . . . . {using more than one trap}	2030/383	. . . . . {by using auxiliary fluid}
2030/125	. . . . . {pyrolysing}	2030/385	. . . . . {by switching valves}
2030/126	. . . . . {evaporating sample}	2030/386	. . . . {Radial chromatography, i.e. with mobile phase traversing radially the stationary phase}
2030/127	. . . . . {PTV evaporation}	2030/387	. . . . . {Turbulent flow of mobile phase}
2030/128	. . . . . {Thermal desorption analysis}	2030/388	. . . . {Elution in two different directions on one stationary phase}
30/14	. . . . by elimination of some components	30/40	. . . . using back flushing
2030/143	. . . . . {selective absorption}	2030/402	. . . . . {purging a device}
2030/146	. . . . . {using membranes}	2030/405	. . . . . {re-concentrating or inverting previous separation}
30/16	. . . Injection (G01N 30/24 takes precedence)	2030/407	. . . . . {carrying out another separation}
2030/162	. . . . {electromigration}	30/42	. . . . using counter-current
2030/165	. . . . {retention gaps}	30/44	. . . . using recycling of the fraction to be distributed
2030/167	. . . . {on-column injection}	2030/445	. . . . . {heart cut}
30/18	. . . . using a septum or microsyringe	30/46	. . . . using more than one column (G01N 30/44 takes precedence)}
2030/185	. . . . . {specially adapted to seal the inlet}	30/461	. . . . . {with serial coupling of separation columns}
30/20	. . . . using a sampling valve	30/462	. . . . . {with different eluents or with eluents in different states (G01N 30/463 takes precedence)}
2030/201	. . . . . {multiport valves, i.e. having more than two ports}	30/463	. . . . . {for multidimensional chromatography}
2030/202	. . . . . {rotary valves}	30/465	. . . . . {with specially adapted interfaces between the columns}
2030/204	. . . . . {Linearly moving valves, e.g. sliding valves}	30/466	. . . . . {with separation columns in parallel}
2030/205	. . . . . {Diaphragm valves, e.g. deformed member closing the passage}	30/467	. . . . . {all columns being identical}
2030/207	. . . . . {with metering cavity, e.g. sample loop}	30/468	. . . . . {involving switching between different column configurations}
2030/208	. . . . . {with more than one cavity}		
30/22	. . . . in high pressure liquid systems		
30/24	. . . Automatic injection systems		
30/26	. . Conditioning of the fluid carrier; Flow patterns		
30/28	. . . Control of physical parameters of the fluid carrier		
2030/285	. . . . {electrically driven carrier}		
30/30	. . . . of temperature		
2030/3007	. . . . . {same temperature for whole column}		

30/50	. . . Conditioning of the sorbent material or stationary liquid	2030/647	. . . . {surface ionisation}
30/52	. . . Physical parameters	30/66	. . . . Thermal conductivity detectors
2030/521	. . . . {form}	30/68	. . . . Flame ionisation detectors
2030/522	. . . . {pressure}	2030/685	. . . . {flame photometry}
2030/524	. . . . {structural properties}	30/70	. . . . Electron capture detectors
2030/525	. . . . . {surface properties, e.g. porosity}	30/72	. . . Mass spectrometers {(mass spectrometers per se H01J 49/00)}
2030/527	. . . . . {sorbent material in form of a membrane}	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)}
2030/528	. . . . . {Monolithic sorbent material}	30/7213	. . . . . {splitting of the gaseous effluent}
30/54	. . . . Temperature	30/722	. . . . . {through a gas permeable barrier (membranes, porous layers)}
30/56	. . . . Packing methods or coating methods	2030/7226	. . . . . {OWTC, short capillaries or transfer line used as column}
2030/562	. . . . . {packing}	30/7233	. . . . . {interfaced to liquid or supercritical fluid chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see H01J 49/04)}
2030/565	. . . . . {slurry packing}	30/724	. . . . . {Nebulising, aerosol formation or ionisation (spraying or atomising in general B05B)}
2030/567	. . . . . {coating}	30/7246	. . . . . . {by pneumatic means}
30/58	. . . the sorbent moving as a whole	30/7253	. . . . . . {by thermal means, e.g. thermospray}
2030/582	. . . . {micellar electrokinetic capillary chromatography [MECC]}	30/726	. . . . . . {by electrical or glow discharge}
2030/585	. . . . {Parallel current chromatography}	30/7266	. . . . . . {by electric field, e.g. electrospray}
2030/587	. . . . {Continuous annular chromatography}	30/7273	. . . . . . {Desolvation chambers}
30/60	. . Construction of the column	30/728	. . . . . {Intermediate storage of effluent, including condensation on surface}
30/6004	. . . {end pieces}	30/7286	. . . . . {the store moving as a whole, e.g. moving wire}
2030/6008	. . . . {capillary restrictors}	30/7293	. . . . . {Velocity or momentum separators}
2030/6013	. . . . {interfaces to detectors}	30/74	. . . Optical detectors {(measurement of intensity, velocity, spectral content, polarisation, or phase of infrared, visible or ultraviolet light G01J)}
30/6017	. . . . {Fluid distributors}	2030/743	. . . . . {FTIR}
30/6021	. . . . {Adjustable pistons}	2030/746	. . . . . {detecting along the line of flow, e.g. axial}
30/6026	. . . . {Fluid seals}	30/76	. . . Acoustical detectors {(measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves G01H)}
30/603	. . . . {retaining the stationary phase, e.g. Frits}	2030/765	. . . . . {for measuring mechanical vibrations}
30/6034	. . . {joining multiple columns}	2030/77	. . . . {detecting radioactive properties}
30/6039	. . . . {in series}	30/78	. . . . using more than one detector
30/6043	. . . . {in parallel}	30/80	. . . Fraction collectors
30/6047	. . . {with supporting means; Holders}	30/82	. . . Automatic means therefor
30/6052	. . . {body}	30/84	. . . Preparation of the fraction to be distributed
30/606	. . . . {with fluid access or exit ports}	2030/8405	. . . . {using pyrolysis}
30/6065	. . . . {with varying cross section}	2030/8411	. . . . {Intermediate storage of effluent, including condensation on surface}
30/6069	. . . . {with compartments or bed substructure}	2030/8417	. . . . . {the store moving as a whole, e.g. moving wire}
30/6073	. . . . {in open tubular form}	2030/8423	. . . . {using permeable separator tubes}
30/6078	. . . . . {Capillaries}	2030/8429	. . . . {adding modifying material}
30/6082	. . . . {transparent to radiation}	2030/8435	. . . . . {for chemical reaction}
30/6086	. . . . {form designed to optimise dispersion}	2030/8441	. . . . . {to modify physical properties}
30/6091	. . . {Cartridges}	2030/8447	. . . . . {Nebulising, aerosol formation or ionisation}
30/6095	. . . {Micromachined or nanomachined, e.g. micro- or nanosize}	2030/8452	. . . . . {Generation of electrically charged aerosols or ions}
NOTE		2030/8458	. . . . . . {of ions or clusters of individual ions}
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" .		2030/8464	. . . . . {Uncharged atoms or aerosols}
30/62	. . Detectors specially adapted therefor	2030/847	. . . . . {by pneumatic means}
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}		

2030/8476	. . . . {by thermal means}	2030/8854	. . . . . {involving hydrocarbons}
2030/8482	. . . . {by electrical or glow discharge}	2030/8859	. . . . {inorganic compounds}
2030/8488	. . . . {by electric field}	2030/8863	. . . . . {Fullerenes}
2030/8494	. . . . {Desolvation chambers}	2030/8868	. . . . {elemental analysis, e.g. isotope dilution analysis}
30/86	. . Signal analysis	2030/8872	. . . . {impurities}
30/8603	. . . {with integration or differentiation}	2030/8877	. . . . {optical isomers}
30/8606	. . . . {Integration}	2030/8881	. . . {Modular construction, specially adapted therefor}
30/861	. . . . {Differentiation}	2030/8886	. . . {Analysis of industrial production processes}
30/8613	. . . . {Dividing or multiplying by a constant}	2030/889	. . . {monitoring the quality of the stationary phase; column performance}
30/8617	. . . . {Filtering, e.g. Fourier filtering}	2030/8895	. . . {Independent juxtaposition of embodiments; Reviews}
2030/862	. . . . {Other mathematical operations for data preprocessing}	30/89	. Inverse chromatography
30/8624	. . . {Detection of slopes or peaks; baseline correction}	30/90	. Plate chromatography, e.g. thin layer or paper chromatography
30/8627	. . . . {Slopes}	2030/903	. . {centrifugal chromatography}
30/8631	. . . . {Peaks}	2030/906	. . {pressurised fluid phase}
30/8634	. . . . . {Peak quality criteria}	30/91	. . Application of the sample
30/8637	. . . . . {Peak shape}	30/92	. . Construction of the plate
30/8641	. . . . {Baseline}	30/93	. . . Application of the sorbent layer
30/8644	. . . . {Data segmentation, e.g. time windows}	30/94	. . Development
2030/8648	. . . . {Feature extraction not otherwise provided for}	2030/945	. . . {Application of reagents to undeveloped plate}
30/8651	. . . {Recording, data acquisition, archiving and storage}	30/95	. . Detectors specially adapted therefor; Signal analysis
30/8655	. . . . {Details of data formats}	30/96	. using ion-exchange (G01N 30/02 , G01N 30/90 take precedence)
30/8658	. . . {Optimising operation parameters}	2030/965	. . {suppressor columns}
30/8662	. . . . {Expert systems; optimising a large number of parameters}	31/00	Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup; Apparatus specially adapted for such methods
30/8665	. . . {for calibrating the measuring apparatus}	31/002	. {Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method}
30/8668	. . . . {using retention times}	31/005	. {investigating the presence of an element by oxidation (G01N 31/12 takes precedence)}
30/8672	. . . . {not depending on an individual instrument, e.g. retention time indexes or calibration transfer}	31/007	. . {by measuring the quantity of water resulting therefrom (G01N 31/12 takes precedence)}
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)}	31/02	. using precipitation {(measuring deposition or liberation of materials from an electrolyte G01N 27/42)}
30/8679	. . . . {Target compound analysis, i.e. whereby a limited number of peaks is analysed}	31/10	. using catalysis
30/8682	. . . . {Group type analysis, e.g. of components having structural properties in common}	31/12	. using combustion (G01N 25/20 takes precedence)
30/8686	. . . . {Fingerprinting, e.g. without prior knowledge of the sample components}	31/16	. using titration
30/8689	. . . . {Peak purity of co-eluting compounds}	31/162	. . {Determining the equivalent point by means of a discontinuity}
30/8693	. . . {Models, e.g. prediction of retention times, method development and validation}	31/164	. . . {by electrical or electrochemical means}
30/8696	. . . {Details of Software}	31/166	. . {Continuous titration of flowing liquids}
30/88	. . Integrated analysis systems specially adapted therefor, not covered by a single one of the groups G01N 30/04 - G01N 30/86	31/168	. . {Determining water content by using Karl Fischer reagent}
2030/8804	. . . {automated systems}	31/18	. . Burettes specially adapted for titration
2030/8809	. . . {analysis specially adapted for the sample}	31/20	. using microanalysis, e.g. drop reaction
2030/8813	. . . . {biological materials}	31/22	. using chemical indicators (G01N 31/02 takes precedence)
2030/8818	. . . . . {involving amino acids}	31/221	. . {for investigating pH value}
2030/8822	. . . . . {involving blood}	31/222	. . {for investigating moisture content}
2030/8827	. . . . . {involving nucleic acids}	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)}
2030/8831	. . . . . {involving peptides or proteins}	31/224	. . . {for investigating presence of dangerous gases}
2030/8836	. . . . . {involving saccharides}	31/225	. . . {for oxygen, e.g. including dissolved oxygen}
2030/884	. . . . {organic compounds}		
2030/8845	. . . . . {involving halogenated organic compounds}		
2030/885	. . . . . {involving polymers}		

- 31/226 . . {for investigating the degree of sterilisation}
- 31/227 . . {for nitrates or nitrites}
- 31/228 . . {for peroxides}
- 31/229 . . {for investigating time/temperature history}

33/00 Investigating or analysing materials by specific methods not covered by groups
[G01N 1/00](#) - [G01N 31/00](#)

NOTE

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.

This Note corresponds to IPC Note (1) relating to [G01N 33/52](#) - [G01N 33/98](#).

- 33/0001 . {by organoleptic means}
- 33/0003 . {Composite materials}
- 33/0004 . {Gaseous mixtures, e.g. polluted air}
- 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 (devices for withdrawing samples in the gaseous state [G01N 1/22](#))}
- 33/0011 . . . {Sample conditioning (preparing specimens for investigation [G01N 1/28](#))}
- 33/0013 {by a chemical reaction (a chemical reaction taking place or a gas being eliminated in one or more analysing channels [G01N 33/0024](#))}
- 33/0014 {by eliminating a gas (by a chemical reaction [G01N 33/0013](#); a chemical reaction taking place or a gas being eliminated in one or more analysing channels [G01N 33/0024](#))}
- 33/0016 {by regulating a physical variable, e.g. pressure or temperature}
- 33/0018 {by diluting a gas}
- 33/0019 {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 . . . {using an alternating circulation of another gas}
- 33/0027 . . . {concerning the detector}
- 33/0029 {Cleaning of the detector}
- 33/0031 {comprising two or more sensors, e.g. a sensor array}
- 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 (physical analysis of gaseous biological material [G01N 33/497](#))}
- 33/0037 {NO_x}
- 33/0039 {O₃}
- 33/004 {CO or CO₂}
- 33/0042 {SO₂ or SO₃}
- 33/0044 {Sulphides, e.g. H₂S}
- 33/0045 {Hg}
- 33/0047 {Organic compounds}
- 33/0049 {Halogenated organic compounds}
- 33/005 {H₂}
- 33/0052 {Gaseous halogens}
- 33/0054 {Ammonia}
- 33/0055 {Radionuclides}
- 33/0057 {Warfare agents or explosives}
- 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 or the display, e.g. intermittent measurement or digital display}
- 33/0063 {using a threshold to release an alarm or displaying means}
- 33/0065 {using more than one threshold}
- 33/0067 {by measuring the rate of variation of the concentration}
- 33/0068 {using a computer specifically programmed}
- 33/007 . . . {Arrangements to check the analyser ([calibrating gas analysers G01N 33/0006](#))}
- 33/0072 {by generating a test gas}
- 33/0073 . . . {Control unit therefor}
- 33/0075 {for multiple spatially distributed sensors, e.g. for environmental monitoring}
- 33/0077 . {Testing material properties on individual granules or tablets}
- 33/0078 . {Testing material properties on manufactured objects}
- 33/008 . . {Sport articles, e.g. balls, skis or rackets}
- 33/0081 . . {Containers; Packages; Bottles}
- 33/0083 . . {Vehicle parts}
- 33/0085 . . . {Wheels}
- 33/0086 . . {Clothes; Hosiery}
- 33/009 . . {Seals}
- 33/0091 . {Powders}
- 33/0093 . {Radioactive materials}
- 33/0095 . {Semiconductive materials}
- 33/0096 . {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
- 33/105 . . . {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)
- 33/18 . Water
- 33/1806 . . {Biological oxygen demand [BOD] or chemical oxygen demand [COD]}
- 33/1813 . . {Specific cations in water, e.g. heavy metals}
- 33/182 . . {Specific anions in water}

- 33/1826 . . {Organic contamination in water}
- 33/1833 . . . {Oil in water}
- 33/184 . . . {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}
- 33/1873 . . {Ice or snow}
- 33/188 . . {Determining the state of nitrification}
- 33/1886 . . {using probes, e.g. submersible probes, buoys}
- 33/1893 . . {using flow cells}
- 33/20 . Metals
- 33/202 . . Constituents thereof
- 33/2022 . . . Non-metallic constituents
- 33/2025 Gaseous constituents
- 33/2028 . . . Metallic constituents
- 33/204 . . Structure thereof, e.g. crystal structure
- 33/2045 . . . Defects
- 33/205 . . in liquid state, e.g. molten metals
- 33/207 . . Welded or soldered joints; Solderability
- 33/208 . . Coatings, e.g. platings
- 33/22 . Fuels; Explosives
- 33/222 . . {Solid fuels, e.g. coal}
- 33/225 . . {Gaseous fuels, e.g. natural gas}
- 33/227 . . {Explosives, e.g. combustive properties thereof}
- 33/24 . Earth materials ([G01N 33/42 takes precedence](#))
- 33/241 . . {for hydrocarbon content}
- 33/243 . . {for determining biological parameters concerning composting, biodegradability or bioavailability}
- 33/245 . . {for agricultural purposes}
- 33/246 . . {for water content}
- 33/248 . . {related to manure as a biological product}
- 33/26 . Oils; Viscous liquids; Paints; Inks ([G01N 33/22 takes precedence](#))
- 33/28 . . Oils {, i.e. hydrocarbon liquids} ([edible oils or edible fats G01N 33/03](#))
- 33/2805 . . . {investigating the resistance to heat or oxidation}
- 33/2811 . . . {by measuring cloud point or pour point of oils}
- 33/2817 . . . {using a test engine}
- 33/2823 . . . {Raw oil, drilling fluid or polyphasic mixtures}
- 33/2829 . . . {Mixtures of fuels}
- 33/2835 . . . {Specific substances contained in the oils or fuels}
- 33/2841 {Gas in oils, e.g. hydrogen in insulating oils}
- 33/2847 {Water in oils}
- 33/2852 {Alcohol in fuels}
- 33/2858 {Metal particles}
- 33/2864 {Lead content}
- 33/287 {Sulfur content}
- 33/2876 {Total acid number}
- 33/2882 {Markers}
- 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
- 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}
- 33/367 . . {Fabric or woven textiles}
- 33/38 . Concrete; Lime; Mortar; Gypsum; Bricks; Ceramics; Glass
- 33/383 . . {Concrete or cement}
- 33/386 . . {Glass}
- 33/388 . . {Ceramics}
- 33/389 . {Precious stones; Pearls}
- 33/39 . {Crystals}
- 33/40 . Grinding-materials
- 33/42 . Road-making materials ([G01N 33/38 takes precedence](#))
- 33/44 . Resins; Plastics; Rubber; Leather
- 33/442 . . {Resins; Plastics}
- 33/445 . . {Rubber}
- 33/447 . . {Leather}
- 33/46 . Wood
- 33/48 . Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46 take precedence](#)); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- 33/483 . . Physical analysis of biological material
- 33/4833 . . . {of solid biological material, e.g. tissue samples, cell cultures ([tissue in vivo A61B 5/00](#); [cell suspensions G01N 33/48735](#))}
- 33/4836 {using multielectrode arrays}
- 33/487 . . . of liquid biological material
- 33/48707 {by electrical means ([G01N 33/49](#), [G01N 33/493 take precedence](#))}
- 33/48714 {for determining substances foreign to the organism, e.g. drugs or heavy metals ([drugs by chemical analysis G01N 33/94](#))}
- 33/48721 {Investigating individual macromolecules, e.g. by translocation through nanopores ([Coulter counters in general G01N 15/12](#); [fabrication methods for nanoscale apertures B81B 1/00](#); [sequencing of nucleic acids C12Q 1/68](#))}
- 33/48728 {Investigating individual cells, e.g. by patch clamp, voltage clamp ([investigating individual particles in general G01N 15/10](#))}
- 33/48735 {Investigating suspensions of cells, e.g. measuring microbe concentration ([by chemical means C12Q 1/04](#); [colony counters C12M 1/34](#); [concentration of particle suspensions in general G01N 15/06](#))}
- 33/48742 {Determining urea by measuring the volume of a gas ([in general G01N 7/14 - G01N 7/18](#))}
- 33/4875 {Details of handling test elements, e.g. dispensing or storage, not specific to a particular test method ([test-elements per se B01L](#), [automatic analysers G01N 35/00](#), [in-vivo analysis on the human body for medical diagnosis A61B](#))}
- 33/48757 {Test elements dispensed from a stack}

33/48764	{Test tape taken off a spool}	if the investigating or analysing aspects are of interest, the documents are classified in this group. }
33/48771	{Coding of information, e.g. calibration data, lot number}	
33/48778	{Containers specially adapted therefor, e.g. for dry storage}	
33/48785	{Electrical and electronic details of measuring devices for physical analysis of liquid biological material not specific to a particular test method, e.g. user interface or power supply}	
33/48792	{Data management, e.g. communication with processing unit (for in vivo diagnostics A61B 5/0002 ; transmission systems for measured values G08C)}	
33/49	Blood {(chemical methods for determining blood cell populations G01N 33/5094 ; chemical analysis of blood groups or blood types G01N 33/80)}	
33/4905	{Determining clotting time of blood (by chemical methods G01N 33/86 , C12Q 1/56)}	
33/491	{by separating the blood components (G01N 15/05 takes precedence)}	
33/4915	{using flow cells (flow cytometry G01N 15/14)}	
33/492	{Determining multiple analytes}	
33/4925	{measuring blood gas content, e.g. O ₂ , CO ₂ , HCO ₃ }	
33/493	urine	
33/497	of gaseous biological material, e.g. breath	
33/4972	{Determining alcohol content (for vehicle safety devices B60K 28/06)}	
33/4975	{other than oxygen, carbon dioxide or alcohol, e.g. organic vapours}	
33/4977	{Metabolic gas from microbes, cell cultures or plant tissues}	
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,	
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)}	
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 physiochemical end-point determination, e.g. wave-guides, FETS, gratings}
- 33/5438 {Electrodes}
- 33/54386 {Analytical elements}
- 33/54387 {Immunochromatographic test strips}
- 33/54388 {based on lateral flow}
- 33/54389 {with bidirectional or multidirectional lateral flow, e.g. wherein the sample flows from a single, common sample application point into multiple strips, lanes or zones}
- 33/54391 {based on vertical flow}
- 33/54393 {Improving reaction conditions or stability, e.g. by coating or irradiation of surface, by reduction of non-specific binding, by promotion of specific binding}
- 33/544 the carrier being organic
- 33/545 Synthetic resin
- 33/546 as water suspendable particles
- 33/547 with antigen or antibody attached to the carrier via a bridging agent
- 33/548 Carbohydrates, e.g. dextran
- 33/549 with antigen or antibody entrapped within the carrier
- 33/551 the carrier being inorganic
- 33/552 Glass or silica
- 33/553 Metal or metal coated
- 33/554 the carrier being a biological cell or cell fragment, e.g. bacteria, yeast cells
- 33/555 Red blood cell
- 33/556 Fixed or stabilised red blood cell
- 33/557 using kinetic measurement, i.e. time rate of progress of an antigen-antibody interaction
- 33/558 using diffusion or migration of antigen or antibody {(immunochromatographic test strips [G01N 33/54387](#))}
- 33/559 through a gel, e.g. Ouchterlony technique
- 33/561 Immunoelectrophoresis
- 33/563 involving antibody fragments
- 33/564 for pre-existing immune complex or autoimmune disease {, i.e. systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, rheumatoid factors or complement components C1-C9}
- 33/566 using specific carrier or receptor proteins as ligand binding reagents {where possible specific carrier or receptor proteins are classified with their target compounds}
- 33/567 utilising isolate of tissue or organ as binding agent
- 33/569 for microorganisms, e.g. protozoa, bacteria, viruses
- 33/56905 {Protozoa}
- 33/56911 {Bacteria}
- 33/56916 {Enterobacteria, e.g. shigella, salmonella, klebsiella, serratia}
- 33/56922 {Campylobacter}
- 33/56927 {Chlamydia}
- 33/56933 {Mycoplasma}
- 33/56938 {Staphylococcus}
- 33/56944 {Streptococcus}

- 33/5695 {Mycobacteria}
 33/56955 {involved in periodontal diseases}
 33/56961 {Plant cells or fungi}
 33/56966 {Animal cells}
 33/56972 {White blood cells}
 33/56977 {HLA or MHC typing}
 33/56983 {Viruses}
 33/56988 {HIV 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 or
 ATP}
 33/575 for cancer

NOTE

{In this group:

- relevant features relating to specifically defined cancers are only classified in groups [G01N 33/57505](#) - [G01N 33/57557](#);
- relevant features describing cancer markers related to multiple forms of cancer are classified in groups [G01N 33/5756](#) - [G01N 33/57595](#).)

- 33/57505 of the blood, e.g. leukaemia

WARNING

{Group [G01N 33/57505](#) is incomplete pending reclassification of documents from group [G01N 33/57557](#).
 Groups [G01N 33/57557](#) and [G01N 33/57505](#) should be considered in order to perform a complete search.}

- 33/5751 of the skin, e.g. melanoma
 33/57515 of the breast
 33/5752 of the lungs
 33/57525 of the liver or pancreas

WARNING

{Group [G01N 33/57525](#) is impacted by reclassification into group [G01N 33/5754](#).
 Groups [G01N 33/57525](#) and [G01N 33/5754](#) should be considered in order to perform a complete search.}

- 33/5753 of the stomach or small intestine

WARNING

{Group [G01N 33/5753](#) is impacted by reclassification into group [G01N 33/57535](#).
 Groups [G01N 33/5753](#) and [G01N 33/57535](#) should be considered in order to perform a complete search.}

- 33/57535 of the large intestine, e.g. colon, rectum or anus

WARNING

{Group [G01N 33/57535](#) is incomplete pending reclassification of documents from group [G01N 33/5753](#).

Groups [G01N 33/5753](#) and [G01N 33/57535](#) should be considered in order to perform a complete search.}

- 33/5754 of the renal system, e.g. kidneys or ureters

WARNING

{Group [G01N 33/5754](#) is incomplete pending reclassification of documents from groups [G01N 33/57525](#) and [G01N 33/57557](#).

Groups [G01N 33/57525](#), [G01N 33/57557](#) and [G01N 33/5754](#) should be considered in order to perform a complete search.}

- 33/57545 of the ovaries

- 33/5755 of the uterine cervix, uterine corpus or endometrium

- 33/57555 of the prostate

- 33/57557 {of other specific parts of the body, e.g. brain}

WARNING

{Group [G01N 33/57557](#) is impacted by reclassification into groups [G01N 33/57505](#) and [G01N 33/5754](#).

Groups [G01N 33/57557](#), [G01N 33/57505](#) and [G01N 33/5754](#) should be considered in order to perform a complete search.}

- 33/5756 {involving tumour-associated glycolinkage [TAG]}

- 33/57565 {involving carcinoembryonic antigen [CEA]}

- 33/5757 {involving oncofoetal proteins}

- 33/57575 {involving oncogenic proteins}

- 33/5758 {involving compounds serving as markers for tumours, cancers or neoplasias, e.g. cellular determinants, receptors, heat shock/stress proteins, A-protein, oligosaccharides or metabolites}

- 33/57585 {involving compounds identifiable in body fluids}

- 33/5759 {involving compounds localised on the membrane of tumour or cancer cells}

- 33/57595 {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 ([G01N 33/5302](#) - [G01N 33/576](#) take precedence)}
- 33/579 . . . involving limulus lysate
- 33/58 . . . involving labelled substances ([G01N 33/53](#) takes precedence)
- 33/581 {with enzyme label (including co-enzymes, co-factors, enzyme inhibitors or substrates)}
- 33/582 {with fluorescent label}
- 33/583 {with non-fluorescent dye label}
- 33/585 {with a particulate label, e.g. coloured latex}
- 33/586 {Liposomes, microcapsules or cells}
- 33/587 {Nanoparticles}
- 33/588 {with semiconductor nanocrystal label, e.g. quantum dots}
- 33/60 involving radioactive labelled substances
- 33/62 . . . involving urea
- 33/64 . . . involving ketones
- 33/66 . . . involving blood sugars, e.g. galactose
- 33/68 . . . involving proteins, peptides or amino acids {([involving lipoproteins G01N 33/92](#))}
- 33/6803 {General methods of protein analysis not limited to specific proteins or families of proteins}
- 33/6806 {Determination of free amino acids}
- 33/6809 {involving fluorescent derivatizing reagents reacting non-specifically with all amino acids}
- 33/6812 {Assays for specific amino acids}
- 33/6815 {containing sulfur, e.g. cysteine, cystine, methionine, homocysteine}
- 33/6818 {Sequencing of polypeptides}
- 33/6821 {involving C-terminal degradation}
- 33/6824 {involving N-terminal degradation, e.g. Edman degradation}
- 33/6827 {Total protein determination, e.g. albumin in urine}
- 33/683 {involving metal ions}
- 33/6833 {Copper, e.g. Folin-, Lowry-, biuret methods}
- 33/6836 {Silver staining}
- 33/6839 {involving dyes, e.g. Coomassie blue, bromocresol green}
- 33/6842 {Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins}
- 33/6845 {Methods of identifying protein-protein interactions in protein mixtures}
- 33/6848 {Methods of protein analysis involving mass spectrometry}
- 33/6851 {Methods of protein analysis involving laser desorption ionisation mass spectrometry}
- 33/6854 {Immunoglobulins}
- 33/6857 {Antibody fragments}
- 33/686 {Anti-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}	2035/00386	. . . . {using fluid heat transfer medium}
33/948	. . . . {Sedatives, e.g. cannabinoids, barbiturates (opiates G01N 33/9486)}	2035/00396	. . . . {where the fluid is a liquid}
33/9486	. . . . {Analgesics, e.g. opiates, aspirine}	2035/00405	. . . . {Microwaves}
33/9493	. . . . {Immunosuppressants}	2035/00415	. . . . {Other radiation}
33/96	. . . . involving blood or serum control standard	2035/00425	. . . {Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature}
33/98	. . . . involving alcohol, e.g. ethanol in breath	2035/00435	. . . {Refrigerated reagent storage}
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	2035/00445	. . . {Other cooling arrangements}
35/00009	. {provided with a sample supporting tape, e.g. with absorbent zones}	2035/00455	. . {Controlling humidity in analyser}
2035/00019	. . {cassette structures}	2035/00465	. {Separating and mixing arrangements}
35/00029	. {provided with flat sample substrates, e.g. slides (G01N 35/028 takes precedence)}	2035/00475	. . {Filters}
2035/00039	. . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}	2035/00485	. . . {combined with sample carriers}
2035/00049	. . . {for loading/unloading a carousel}	2035/00495	. . {Centrifuges}
2035/00059	. . . {vacuum chucks}	2035/00504	. . . {combined with carousels}
35/00069	. . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}	2035/00514	. . {Stationary mixing elements}
2035/00079	. . {Evaporation covers for slides}	2035/00524	. . {Mixing by agitating sample carrier}
2035/00089	. . {Magazines}	2035/00534	. . {Mixing by a special element, e.g. stirrer}
2035/00099	. . {Characterised by type of test elements}	2035/00544	. . . {using fluid flow}
2035/00108	. . . {Test strips, e.g. paper}	2035/00554	. . . {using ultrasound}
2035/00118	. . . . {for multiple tests}	2035/00564	. . {Handling or washing solid phase elements, e.g. beads}
2035/00128	. . . . {with pressing or squeezing devices}	2035/00574	. . . {Means for distributing beads}
2035/00138	. . . {Slides}	35/00584	. {Control arrangements for automatic analysers}
2035/00148	. . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}	35/00594	. . {Quality control, including calibration or testing of components of the analyser}
2035/00158	. . . {Elements containing microarrays, i.e. "biochip"}	35/00603	. . . {Reinspection of samples}
2035/00168	. . {Manufacturing or preparing test elements}	35/00613	. . . {Quality control}
2035/00178	. {Special arrangements of analysers}	35/00623	. . . . {of instruments}
2035/00188	. . {the analyte being in the solid state}	2035/00633	. . . . . {logging process history of individual samples}
2035/00198	. . . {Dissolution analysers}	2035/00643	. . . . . {detecting malfunctions in conveying systems}
2035/00207	. . {Handling bulk quantities of analyte}	2035/00653	. . . . . {statistical methods comparing labs or apparatuses}
2035/00217	. . . {involving measurement of weight}	35/00663	. . . . . {of consumables}
2035/00227	. . . {Monitoring a process (online)}	2035/00673	. . . . . {of reagents}
2035/00237	. . {Handling microquantities of analyte, e.g. microvalves, capillary networks}	2035/00683	. . . . . {of detectors}
2035/00247	. . . {Microvalves}	35/00693	. . . {Calibration}
2035/00257	. . . . {Capillary stop flow circuits}	2035/00702	. . . . {Curve-fitting; Parameter matching; Calibration constants}
2035/00267	. . . . {Melttable plugs}	35/00712	. . . {Automatic status testing, e.g. at start-up or periodic}
2035/00277	. . {Special precautions to avoid contamination (e.g. enclosures, glove-boxes, sealed sample carriers, disposal of contaminated material)}	35/00722	. . {Communications; Identification}
2035/00287	. . . {movable lid/cover for sample or reaction tubes}	35/00732	. . . {Identification of carriers, materials or components in automatic analysers}
2035/00297	. . . {Antistatic arrangements}	2035/00742	. . . . {Type of codes}
2035/00306	. . {Housings, cabinets, control panels (details)}	2035/00752	. . . . . {bar codes}
2035/00316	. . . {Detecting door closure}	2035/00762	. . . . . {magnetic code}
2035/00326	. . {Analysers with modular structure}	2035/00772	. . . . . {mechanical or optical code other than bar code}
2035/00336	. . . {Analysers adapted for operation in microgravity, i.e. spaceflight}	2035/00782	. . . . . {reprogrammable code}
2035/00346	. {Heating or cooling arrangements}	2035/00792	. . . . . {Type of components bearing the codes, other than sample carriers}
2035/00356	. . {Holding samples at elevated temperature (incubation)}	2035/00801	. . . . . {Holders for sample carriers, e.g. trays, carousel, racks}
2035/00366	. . . {Several different temperatures used}	2035/00811	. . . . . {consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells}
2035/00376	. . . {Conductive heating, e.g. heated plates}	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}	2035/0429	. . . . .	{Sample carriers adapted for special purposes}
2035/00861	. . . . .	{printing and sticking of identifiers}	2035/0431	. . . . .	{characterised by material of construction}
35/00871	. . .	{Communications between instruments or with remote terminals}	2035/0432	. . . . .	{integrated with measuring devices}
2035/00881	. . . . .	{network configurations}	2035/0434	. . . . .	{in the form of a syringe or pipette tip}
2035/00891	. . .	{Displaying information to the operator}	2035/0436	. . . . .	{with pre-packaged reagents, i.e. test-packs}
2035/009	. . . . .	{alarms, e.g. audible}	2035/0437	. . . . .	{Cleaning cuvettes or reaction vessels}
2035/0091	. . . . .	{GUI [graphical user interfaces]}	2035/0439	. . .	{Rotary sample carriers, i.e. carousels}
35/0092	. .	{Scheduling}	2035/0441	. . . . .	{for samples}
2035/0093	. . .	{random access not determined by physical position}	2035/0443	. . . . .	{for reagents}
2035/0094	. . .	{optimisation; experiment design}	2035/0444	. . . . .	{for cuvettes or reaction vessels}
35/0095	. . .	{introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS]}	2035/0446	. . . . .	{Combinations of the above}
2035/0096	. . .	{post analysis management of samples, e.g. marking, removing, storing}	2035/0448	. . . . .	{composed of interchangeable ring elements}
2035/0097	. .	{monitoring reactions as a function of time}	2035/0449	. . . . .	{using centrifugal transport of liquid}
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)}	2035/0451	. . . . .	{composed of interchangeable sectors}
35/0099	. .	{comprising robots or similar manipulators (robots per se B25J)}	2035/0453	. . . . .	{Multiple carousels working in parallel}
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)	2035/0455	. . . . .	{Coaxial carousels}
35/021	. .	{having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes}	2035/0456	. . . . .	{Spiral tracks}
2035/023	. . .	{forming cuvettes <u>in situ</u> , e.g. from plastic strip}	2035/0458	. . . . .	{Multiple concentric rows of wells}
35/025	. .	{having a carousel or turntable for reaction cells or cuvettes}	2035/046	. . .	{General conveyor features}
35/026	. .	{having blocks or racks of reaction cells or cuvettes}	2035/0462	. . . . .	{Buffers [FIFO] or stacks [LIFO] for holding carriers between operations}
35/028	. .	{having reaction cells in the form of microtitration plates}	2035/0463	. . . . .	{in incubators}
35/04	. .	Details of the conveyor system (G01N 35/021 - G01N 35/028 take precedence)	2035/0465	. . . . .	{Loading or unloading the conveyor}
2035/0401	. . .	{Sample carriers, cuvettes or reaction vessels}	2035/0467	. . . . .	{Switching points ("aiguillages")}
2035/0403	. . . . .	{Sample carriers with closing or sealing means}	2035/0468	. . . . .	{converging, e.g. selecting carriers from multiple incoming streams}
2035/0405	. . . . .	{manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers}	2035/047	. . . . .	{diverging, e.g. sending carriers to different analysers}
2035/0406	. . . . .	{Individual bottles or tubes}	2035/0472	. . . . .	{for selective recirculation of carriers}
2035/0408	. . . . .	{connected in a flexible chain}	2035/0474	. . .	{Details of actuating means for conveyors or pipettes}
2035/041	. . . . .	{lifting items out of a rack for access}	2035/0475	. . . . .	{electric, e.g. stepper motor, solenoid}
2035/0412	. . . . .	{Block or rack elements with a single row of samples}	2035/0477	. . . . .	{Magnetic}
2035/0413	. . . . .	{moving in one dimension}	2035/0479	. . . . .	{hydraulic or pneumatic}
2035/0415	. . . . .	{moving in two dimensions in a horizontal plane}	2035/0481	. . . . .	{Pneumatic tube conveyors; Tube mails; "Rohrpost"}
2035/0417	. . . . .	{forming an endless chain in a vertical plane}	2035/0482	. . . . .	{Transmission}
2035/0418	. . . . .	{Plate elements with several rows of samples}	2035/0484	. . . . .	{Belt or chain}
2035/042	. . . . .	{moved independently, e.g. by fork manipulator}	2035/0486	. . . . .	{Gearing, cams}
2035/0422	. . . . .	{carried on a linear conveyor}	2035/0487	. . . . .	{Helix or lead screw}
2035/0424	. . . . .	{Two or more linear conveyors}	2035/0489	. . . . .	{Self-propelled units}
2035/0425	. . . . .	{Stacks, magazines or elevators for plates}	2035/0491	. . . . .	{Position sensing, encoding; closed-loop control}
2035/0427	. . . . .	{nestable or stockable}	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}	2201/00	Features of devices classified in G01N 21/00
35/1011	. . . {Control of the position or alignment of the transfer device}	2201/02	. Mechanical
2035/1013	. . . . {Confirming presence of tip}	2201/021	. . Special mounting in general
35/1016	. . . {Control of the volume dispensed or introduced}	2201/0212	. . . Liquid borne; swimming apparatus
2035/1018	. . . . {Detecting inhomogeneities, e.g. foam, bubbles, clots}	2201/0214	. . . Airborne
2035/102	. . . . {Preventing or detecting loss of fluid by dripping}	2201/0216	. . . Vehicle borne
2035/1023	. . . . . {using a valve in the tip or nozzle}	2201/0218	. . . Submersible, submarine
2035/1025	. . . {Fluid level sensing}	2201/022	. . Casings
2035/1027	. . {General features of the devices}	2201/0221	. . . Portable; cableless; compact; hand-held
2035/103	. . . {using disposable tips}	2201/0222	. . . Pocket size
2035/1032	. . . {Dilution or aliquotting}	2201/0224	. . . Pivoting casing
2035/1034	. . . {Transferring microquantities of liquid}	2201/0225	. . . Part of casing being slidable, telescopic
2035/1037	. . . . {Using surface tension, e.g. pins or wires}	2201/0227	. . . Sealable enclosure
2035/1039	. . . . {Micropipettes, e.g. microcapillary tubes}	2201/0228	. . . Moulded parts
2035/1041	. . . . {Ink-jet like dispensers}	2201/023	. . Controlling conditions in casing
2035/1044	. . . . {Using pneumatic means}	2201/0231	. . . Thermostating
2035/1046	. . . . {Levitated, suspended drops}	2201/0233	. . . Gas purge
2035/1048	. . . {using the transfer device for another function}	2201/0235	. . . . with gas filters in casing
2035/1051	. . . . {for transporting containers, e.g. retained by friction}	2201/0236	. . . Explosion proof
2035/1053	. . . . {for separating part of the liquid, e.g. filters, extraction phase}	2201/0238	. . . Moisture monitoring or controlling
2035/1055	. . . . {for immobilising reagents, e.g. dried reagents}	2201/024	. . Modular construction
2035/1058	. . . . {for mixing}	2201/0245	. . . with insertable-removable part
2035/106	. . . . . {by sucking and blowing}	2201/025	. . Mechanical control of operations
2035/1062	. . . . {for testing the liquid while it is in the transfer device}	2201/0253	. . . Switches mounted at the casing
35/1065	. . {Multiple transfer devices}	2201/0256	. . . Sensor for insertion of sample, cuvette, test strip
35/1067	. . . {for transfer to or from containers having different spacing}	2201/04	. Batch operation; multisample devices
2035/1069	. . . . {by adjusting the spacing between multiple probes of a single transferring head}	2201/0407	. . with multiple optical units, e.g. one per sample
35/1072	. . . {with provision for selective pipetting of individual channels}	2201/0415	. . Carrusel, sequential
35/1074	. . . {arranged in a two-dimensional array}	2201/0423	. . . with rotating optics
2035/1076	. . . {plurality or independently movable heads}	2201/043	. . . . optics constituted by optical fibre multiplex selector
35/1079	. . {with means for piercing stoppers or septums}	2201/0438	. . Linear motion, sequential
35/1081	. . {characterised by the means for relatively moving the transfer device and the containers in an horizontal plane (G01N 35/1011 takes precedence)}	2201/0446	. . Multicell plate, sequential
35/1083	. . . {with one horizontal degree of freedom}	2201/0453	. . Multicell sequential and multitest, e.g. multiwavelength
2035/1086	. . . . {Cylindrical, e.g. variable angle}	2201/0461	. . Simultaneous, e.g. video imaging
2035/1088	. . . . . {Coaxial with a carousel}	2201/0469	. . One cell, sequential, e.g. successive samples
35/109	. . . {with two horizontal degrees of freedom}	2201/0476	. . Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding
2035/1093	. . . . {Cylindrical, e.g. variable radius and angle}	2201/0484	. . Computer controlled
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)}	2201/0492	. . Automatised microscope
35/1097	. . . {characterised by the valves (valves in general F16K)}	2201/06	. Illumination; Optics
37/00	Details not covered by any other group of this subclass	2201/061	. . Sources
37/005	. {Measurement methods not based on established scientific theories}	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 <i>in situ</i> sources, e.g. fluorescent particles
		2201/062	. . LED's

2201/0621	. . . Supply	2201/086	. . Modular construction, e.g. disconnectable fibre parts
2201/0622	. . . Use of a compensation LED	2201/0866	. . Use of GRIN elements
2201/0623	. . . Use of a reference LED	2201/0873	. . Using optically integrated constructions
2201/0624	. . . Compensating variation in output of LED source	2201/088	. . Using a sensor fibre
2201/0625	. . . Modulated LED	2201/0886	. . . and using OTDR
2201/0626	. . . Use of several LED's for spatial resolution	2201/0893	. . Using fibres for resolution in time
2201/0627	. . . Use of several LED's for spectral resolution	2201/10	. Scanning
2201/0628	. . . Organic LED [OLED]	2201/101	. . Scanning measuring head
2201/063	. . Illuminating optical parts	2201/102	. . Video camera
2201/0631	. . . Homogeneising elements	2201/103	. . Scanning by mechanical motion of stage
2201/0632	. . . . homogeneising by integrating sphere	2201/1035	. . . 3D motion
2201/0633	. . . Directed, collimated illumination	2201/104	. . Mechano-optical scan, i.e. object and beam moving
2201/0634	. . . Diffuse illumination	2201/1042	. . . X, Y scan, i.e. object moving in X, beam in Y
2201/0635	. . . Structured illumination, e.g. with grating	2201/1045	. . . Spiral scan
2201/0636	. . . Reflectors	2201/1047	. . . with rotating optics and moving stage
2201/0637	. . . . Elliptic	2201/105	. . Purely optical scan
2201/0638	. . . Refractive parts	2201/1053	. . . System of scan mirrors for composite motion of beam
2201/0639	. . . . Sphere lens	2201/1056	. . . Prism scan, diasporameter
2201/064	. . Stray light conditioning	2201/106	. . Acousto-optical scan
2201/0642	. . . Light traps; baffles	2201/107	. . CRT flying spot scan
2201/0644	. . . . Simple baffled tube construction	2201/108	. . Miscellaneous
2201/0646	. . . Light seals	2201/1082	. . . Descanning
2201/0648	. . . Shutters	2201/1085	. . . Using optical fibre array and scanner
2201/065	. . Integrating spheres	2201/1087	. . . Focussed scan beam, e.g. laser
2201/0655	. . . Hemispheres	2201/11	. . Monitoring and controlling the scan
2201/066	. . Modifiable path; multiple paths in one sample	2201/112	. . . Grating pulse time encoder
2201/0662	. . . Comparing measurements on two or more paths in one sample	2201/115	. . . Optical equalisation of scan intensity
2201/0664	. . . Using two ways, i.e. two devices in same path in one sample	2201/117	. . . Indexed, memorised or programmed scan
2201/0666	. . . Selectable paths; insertable multiple sources	2201/12	. Circuits of general importance; Signal processing
2201/0668	. . . Multiple paths; optimisable path length	2201/121	. . Correction signals
2201/067	. . Electro-optic, magneto-optic, acousto-optic elements	2201/1211	. . . for temperature
2201/0675	. . . SLM	2201/1212	. . . . and switch-off from upwarming
2201/068	. . Optics, miscellaneous	2201/1214	. . . for humidity
2201/0683	. . . Brewster plate; polarisation controlling elements	2201/1215	. . . for interfering gases
2201/0686	. . . Cold filter; IR filter	2201/1217	. . . for index of solution, carrying fluids
2201/069	. . Supply of sources	2201/1218	. . . for pressure variations
2201/0691	. . . Modulated (not pulsed supply)	2201/122	. . Kinetic analysis; determining reaction rate
2201/0692	. . . Regulated sources; stabilised supply	2201/1222	. . . Endpoint determination; reaction time determination
2201/0693	. . . Battery powered circuitry	2201/1224	. . . Polymerisation
2201/0694	. . . Microprocessor controlled supply	2201/1226	. . . Relaxation methods, e.g. temperature jump, field jump
2201/0695	. . . Supply to maintain constant beam intensity	2201/1228	. . . Reading time being controlled, e.g. by microprocessor
2201/0696	. . . Pulsed	2201/123	. . Conversion circuit
2201/0697	. . . . Pulsed lasers	2201/1232	. . . Log representation, e.g. for low transmittance
2201/0698	. . . . Using reference pulsed source	2201/1235	. . . Measuring or displaying selectably absorbance or density
2201/0699	. . . . Randomly pulsed source	2201/1237	. . . Measuring extrema
2201/08	. Optical fibres; light guides	2201/124	. . Sensitivity
2201/0806	. . Light rod	2201/1241	. . . Multirange
2201/0813	. . Arrangement of collimator tubes, glass or empty	2201/1242	. . . Validating, e.g. range invalidation, suspending operation
2201/082	. . Fibres for a reference path	2201/1244	. . . Ambient light detector, e.g. for invalidating
2201/0826	. . Fibre array at source, distributing	2201/1245	. . . Averaging several measurements
2201/0833	. . Fibre array at detector, resolving	2201/1247	. . . Thresholding
2201/084	. . Fibres for remote transmission	2201/1248	. . . Validating from signal shape, slope, peak
2201/0846	. . Fibre interface with sample, e.g. for spatial resolution	2201/125	. . Digital circuitry
2201/0853	. . Movable fibre optical member, e.g. for scanning or selecting	2201/126	. . Microprocessor processing

2201/1263	. . .	Microprocessor is used as variant to separate part circuits	2203/0048	. . .	Hydraulic means
2201/1266	. . .	Interface card	2203/005	. .	Electromagnetic means
2201/127	. .	Calibration; base line adjustment; drift compensation	2203/0051	. . .	Piezoelectric means
2201/12707	. . .	Pre-test of apparatus, e.g. dark test, sensor test	2203/0053	. .	Cutting or drilling tools
2201/12715	. . .	Zero adjustment, i.e. to verify calibration	2203/0055	. .	using mechanical waves, e.g. acoustic
2201/12723	. . .	Self check capacity; automatic, periodic step of checking	2203/0057	. .	using stresses due to heating, e.g. conductive heating, radiative heating
2201/1273	. . .	Check triggered by sensing conditions, e.g. ambient changes	2203/0058	. .	Kind of property studied
2201/12738	. . .	Selectively initiating check	2203/006	. .	Crack, flaws, fracture or rupture
2201/12746	. . .	Calibration values determination	2203/0062	. . .	Crack or flaws
2201/12753	. . . .	and storage	2203/0064	. . . .	Initiation of crack
2201/12761	. . . .	Precalibration, e.g. for a given series of reagents	2203/0066	. . . .	Propagation of crack
2201/12769	. . . .	and adjusting controls, e.g. zero and 100 %	2203/0067	. . .	Fracture or rupture
2201/12776	. . . .	Automatic scaling up	2203/0069	. .	Fatigue, creep, strain-stress relations or elastic constants
2201/12784	. . . .	Base line obtained from computation, histogram	2203/0071	. . .	Creep
2201/12792	. . .	Compensating own radiation in apparatus	2203/0073	. . .	Fatigue
2201/128	. .	Alternating sample and standard or reference part in one path	2203/0075	. . .	Strain-stress relations or elastic constants
2201/1281	. . .	Reflecting part, i.e. for autocollimation	2203/0076	. .	Hardness, compressibility or resistance to crushing
2201/1283	. . .	Opaque part	2203/0078	. . .	using indentation
2201/1285	. . .	Standard cuvette	2203/008	. . . .	Residual indentation measurement
2201/1286	. . . .	More than one cuvette	2203/0082	. . . .	Indentation characteristics measured during load
2201/1288	. . .	Calibration medium periodically inserted in one cell	2203/0083	. . .	Rebound strike or reflected energy
2201/129	. .	Using chemometrical methods	2203/0085	. . .	Compressibility
2201/1293	. . .	resolving multicomponent spectra	2203/0087	. . .	Resistance to crushing
2201/1296	. . .	using neural networks	2203/0089	. .	Biorheological properties
2201/13	. .	Standards, constitution	2203/0091	. .	Peeling or tearing
2203/00	Investigating strength properties of solid materials by application of mechanical stress				
2203/0001	. .	Type of application of the stress	2203/0092	. .	Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
2203/0003	. .	Steady	2203/0094	. . .	Visco-elasticity
2203/0005	. .	Repeated or cyclic	2203/0096	. .	Fibre-matrix interaction in composites
2203/0007	. . .	Low frequencies up to 100 Hz	2203/0098	. .	Tests specified by its name, e.g. Charpy, Brinell, Mullen
2203/0008	. . .	High frequencies from 10 000 Hz	2203/02	. .	Details not specific for a particular testing method
2203/001	. .	Impulsive	2203/0202	. .	Control of the test
2203/0012	. .	Constant speed test	2203/0204	. . .	Safety arrangements, e.g. remote control, emergency stop
2203/0014	. .	Type of force applied	2203/0206	. . .	Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
2203/0016	. .	Tensile or compressive	2203/0208	. . .	Specific programs of loading, e.g. incremental loading or pre-loading
2203/0017	. . .	Tensile	2203/021	. . .	Treatment of the signal; Calibration
2203/0019	. . .	Compressive	2203/0212	. . .	Theories, calculations
2203/0021	. .	Torsional	2203/0214	. . . .	Calculations a priori without experimental data
2203/0023	. .	Bending	2203/0216	. . . .	Finite elements
2203/0025	. .	Shearing	2203/0218	. . . .	Calculations based on experimental data
2203/0026	. .	Combination of several types of applied forces	2203/022	. .	Environment of the test
2203/0028	. . .	Rotation and bending	2203/0222	. . .	Temperature
2203/003	. .	Generation of the force	2203/0224	. . . .	Thermal cycling
2203/0032	. .	using mechanical means	2203/0226	. . . .	High temperature; Heating means
2203/0033	. . .	Weight	2203/0228	. . . .	Low temperature; Cooling means
2203/0035	. . .	Spring	2203/023	. . .	Pressure
2203/0037	. . .	involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects	2203/0232	. . . .	High pressure
2203/0039	. . .	Hammer or pendulum	2203/0234	. . . .	Low pressure; Vacuum
2203/0041	. . .	Human or animal power	2203/0236	. . .	Other environments
2203/0042	. .	Pneumatic or hydraulic means	2203/0238	. . . .	Inert
2203/0044	. . .	Pneumatic means	2203/024	. . . .	Corrosive
2203/0046	. . . .	Vacuum			

2203/0242	. . . .	With circulation of a fluid	2203/0611	. . . .	Hydraulic or pneumatic indicating, recording or sensing means
2203/0244	. . . .	Tests performed " <u>in situ</u> " or after " <u>in situ</u> " use	2203/0617	. . . .	Electrical or magnetic indicating, recording or sensing means
2203/0246	. . . .	Special simulation of " <u>in situ</u> " conditions, scale models or dummies	2203/0623	. . . .	using piezoelectric gauges
2203/0248	. . . .	Tests "on-line" during fabrication	2203/0629	. . . .	using thin films, paintings
2203/025	. . . .	Geometry of the test	2203/0635	. . . .	using magnetic properties
2203/0252	. . . .	Monoaxial, i.e. the forces being applied along a single axis of the specimen	2203/0641	. . . .	using optical, X-ray, ultraviolet, infrared or similar detectors
2203/0254	. . . .	Biaxial, the forces being applied along two normal axes of the specimen	2203/0647	. . . .	Image analysis
2203/0256	. . . .	Triaxial, i.e. the forces being applied along three normal axes of the specimen	2203/0652	. . . .	using contrasting ink, painting, staining
2203/0258	. . . .	Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen	2203/0658	. . . .	using acoustic or ultrasonic detectors
2203/026	. . . .	Specifications of the specimen	2203/0664	. . . .	using witness specimens
2203/0262	. . . .	Shape of the specimen	2203/067	. . . .	Parameter measured for estimating the property
2203/0264	. . . .	Beam	2203/0676	. . . .	Force, weight, load, energy, speed or acceleration
2203/0266	. . . .	Cylindrical specimens	2203/0682	. . . .	Spatial dimension, e.g. length, area, angle
2203/0268	. . . .	Dumb-bell specimens	2203/0688	. . . .	Time or frequency
2203/027	. . . .	Specimens with holes or notches	2203/0694	. . . .	Temperature
2203/0272	. . . .	Cruciform specimens	2223/00		Investigating materials by wave or particle radiation
2203/0274	. . . .	Tubular or ring-shaped specimens	2223/01	. . . .	by radioactivity, nuclear decay
2203/0276	. . . .	Spherical specimens	2223/03	. . . .	by transmission
2203/0278	. . . .	Thin specimens	2223/04	. . . .	and measuring absorption
2203/028	. . . . .	One dimensional, e.g. filaments, wires, ropes or cables	2223/041	. . . .	X-ray absorption fine structure [EXAFS]
2203/0282	. . . . .	Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes	2223/043	. . . .	gamma ray resonance absorption (Mossbauer effect)
2203/0284	. . . .	Bulk material, e.g. powders	2223/045	. . . .	combination of at least 2 measurements (transmission and scatter)
2203/0286	. . . .	Miniature specimen; Testing on microregions of a specimen	2223/05	. . . .	by diffraction, scatter or reflection
2203/0288	. . . .	Springs	2223/051	. . . .	correcting for scatter
2203/029	. . . .	Leaf spring	2223/052	. . . .	reflection
2203/0292	. . . .	Coil spring	2223/053	. . . .	back scatter
2203/0294	. . . .	Airs-spring, air bag spring or bellows	2223/054	. . . .	small angle scatter
2203/0296	. . . .	Welds	2223/055	. . . .	scatter raster collimator
2203/0298	. . . .	Manufacturing or preparing specimens	2223/056	. . . .	diffraction
2203/04	. . . .	Chucks, fixtures, jaws, holders or anvils	2223/0561	. . . .	diffraction cameras
2203/0405	. . . .	Features allowing alignment between specimen and chucks	2223/0563	. . . .	measure of energy-dispersion spectrum of diffracted radiation
2203/0411	. . . .	using pneumatic or hydraulic pressure	2223/0565	. . . .	diffraction of electrons, e.g. LEED
2203/0417	. . . .	using vacuum	2223/0566	. . . .	analysing diffraction pattern
2203/0423	. . . .	using screws	2223/0568	. . . .	spectro-diffractometry
2203/0429	. . . .	using adhesive bond; Gluing	2223/063	. . . .	inelastic scatter, e.g. Compton effect
2203/0435	. . . .	modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test	2223/064	. . . .	interference of radiation, e.g. Borrmann effect
2203/0441	. . . .	with dampers or shock absorbing means	2223/07	. . . .	secondary emission
2203/0447	. . . .	Holders for quick insertion/removal of test pieces	2223/071	. . . .	combination of measurements, at least 1 secondary emission
2203/0452	. . . .	Cushioning layer between test piece and grip	2223/072	. . . .	combination of measurements, 2 kinds of secondary emission
2203/0458	. . . .	characterised by their material	2223/073	. . . .	use of a laser
2203/0464	. . . .	with provisions for testing more than one specimen at the time	2223/074	. . . .	activation analysis
2203/047	. . . . .	in series	2223/0745	. . . .	neutron-gamma activation analysis
2203/0476	. . . . .	in parallel	2223/076	. . . .	X-ray fluorescence
2203/0482	. . . .	comprising sensing means	2223/0763	. . . .	Compton background correcting
2203/0488	. . . .	Diamond anvil cells	2223/0766	. . . .	X-ray fluorescence with indicator, tags
2203/0494	. . . .	Clamping ring, "whole periphery" clamping	2223/079	. . . .	incident electron beam and measuring excited X-rays
2203/06	. . . .	Indicating or recording means; Sensing means	2223/08	. . . .	incident electron beam and measuring cathode luminescence (U.V.)
2203/0605	. . . .	Mechanical indicating, recording or sensing means	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]	2223/33	. . scanning, i.e. relative motion for measurement of successive object-parts
2223/084	. . photo-electric effect	2223/3301	. . . beam is modified for scan, e.g. moving collimator
2223/085	. . photo-electron spectrum [ESCA, XPS]	2223/3302	. . . object and detector fixed
2223/086	. . Auger electrons	2223/3303	. . . object fixed; source and detector move
2223/09	. . exo-electron emission	2223/3304	. . . helicoidal scan
2223/095	. . tribo-emission	2223/3305	. . . detector fixed; source and body moving
2223/10	. Different kinds of radiation or particles	2223/3306	. . . object rotates
2223/1003	. . monochromatic	2223/3307	. . . source and detector fixed; object moves
2223/1006	. . different radiations, e.g. X and alpha	2223/3308	. . . object translates
2223/101	. . electromagnetic radiation	2223/331	. . rocking curve analysis
2223/1013	. . . gamma	2223/335	. . electronic scanning
2223/1016	. . . X-ray	2223/34	. . sensing means for gap between source and detector
2223/102	. . beta or electrons	2223/345	. . mathematical transformations on beams or signals, e.g. Fourier
2223/104	. . ions	2223/348	. . ellipsoidal collector
2223/1045	. . . alpha	2223/351	. . prohibiting charge accumulation on sample substrate
2223/105	. . molecular or atomic beams	2223/40	. Imaging
2223/106	. . neutrons	2223/401	. . image processing
2223/1063	. . . fast	2223/402	. . mapping distribution of elements
2223/1066	. . . thermal	2223/403	. . mapping with false colours
2223/107	. . protons	2223/404	. . contrast medium
2223/108	. . positrons; electron-positron annihilation	2223/405	. . mapping of a material property
2223/11	. . neutrino	2223/406	. . fluoroscopic image
2223/20	. Sources of radiation	2223/407	. . stimulable phosphor sheet
2223/201	. . betatron	2223/408	. . display on monitor
2223/202	. . isotopes	2223/409	. . embedding or impregnating the object
2223/203	. . synchrotron	2223/41	. . imaging specifically internal structure
2223/204	. . source created from radiated target	2223/411	. . tv imaging from fluorescent screen
2223/205	. . natural source	2223/412	. . use of image converter tube [PMT]
2223/206	. . sources operating at different energy levels	2223/413	. . sensor array [CCD]
2223/30	. Accessories, mechanical or electrical features	2223/414	. . stereoscopic system
2223/301	. . portable apparatus	2223/415	. . radiographic film
2223/302	. . comparative arrangements	2223/416	. . wrap around
2223/303	. . calibrating, standardising	2223/417	. . recording with co-ordinate markings
2223/3032	. . . periodic calibration, e.g. with filter wheel	2223/418	. . electron microscope
2223/3035	. . . phantom	2223/419	. . computed tomograph
2223/3037	. . . standards (constitution)	2223/42	. . image digitised, -enhanced in an image processor
2223/304	. . electric circuits, signal processing	2223/421	. . digitised image, analysed in real time (recognition algorithms)
2223/305	. . computer simulations	2223/422	. . windows within the image
2223/306	. . computer control	2223/423	. . multispectral imaging-multiple energy imaging
2223/307	. . cuvettes-sample holders	2223/424	. . energy subtraction image processing (dual energy processing)
2223/3075	. . . correcting for the properties of the container, e.g. empty	2223/425	. . temporal (time difference) subtraction processing
2223/308	. . support of radiation source	2223/426	. . image comparing, unknown with known substance
2223/309	. . support of sample holder	2223/427	. . stepped imaging (selected area of sample is changed)
2223/31	. . temperature control	2223/50	. Detectors
2223/3103	. . . cooling, cryostats	2223/501	. . array
2223/3106	. . . heating, furnaces	2223/5015	. . . linear array
2223/311	. . high pressure testing, anvil cells	2223/502	. . ionisation chamber
2223/312	. . powder preparation	2223/503	. . auxiliary reference detector
2223/313	. . filters, rotating filter disc	2223/504	. . pin-diode
2223/314	. . chopper	2223/505	. . scintillation
2223/315	. . monochromators	2223/5055	. . . scintillation crystal coupled to PMT
2223/316	. . collimators	2223/506	. . time-of-flight
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		

2223/507	. . secondary-emission detector	2223/649	. . porosity
2223/508	. . photo-acoustic	2223/65	. . cavitation pits
2223/509	. . infrared	2223/651	. . dust
2223/60	. Specific applications or type of materials	2223/652	. . impurities, foreign matter, trace amounts
2223/601	. . density profile	2223/66	. . multiple steps inspection, e.g. coarse/fine
2223/602	. . crystal growth		
2223/603	. . superlattices	2291/00	Indexing codes associated with group G01N 29/00
2223/604	. . monocrystal	2291/01	. Indexing codes associated with the measuring variable
2223/605	. . phases	2291/011	. . Velocity or travel time
2223/606	. . texture	2291/012	. . Phase angle
2223/607	. . strain	2291/014	. . Resonance or resonant frequency
2223/608	. . superconductors	2291/015	. . Attenuation, scattering
2223/61	. . thin films, coatings	2291/017	. . Doppler techniques
2223/611	. . patterned objects; electronic devices	2291/018	. . Impedance
2223/6113	. . . printed circuit board [PCB]	2291/02	. Indexing codes associated with the analysed material
2223/6116	. . . semiconductor wafer	2291/021	. . Gases
2223/612	. . biological material	2291/0212	. . . Binary gases
2223/6123	. . . bone mineral	2291/0215	. . . Mixtures of three or more gases, e.g. air
2223/6126	. . . tissue	2291/0217	. . . Smoke, combustion gases
2223/613	. . moisture	2291/022	. . Liquids
2223/614	. . road surface	2291/0222	. . . Binary liquids
2223/615	. . composite materials, multilayer laminates	2291/0224	. . . Mixtures of three or more liquids
2223/616	. . earth materials	2291/0226	. . . Oils, e.g. engine oils
2223/617	. . ash in coal	2291/0228	. . . Aqueous liquids
2223/618	. . food	2291/023	. . Solids
2223/619	. . wood	2291/0231	. . . Composite or layered materials
2223/62	. . powders	2291/0232	. . . Glass, ceramics, concrete or stone
2223/621	. . tobacco	2291/0234	. . . Metals, e.g. steel
2223/622	. . paper	2291/0235	. . . Plastics; polymers; soft materials, e.g. rubber
2223/623	. . plastics	2291/0237	. . . Thin materials, e.g. paper, membranes, thin films
2223/624	. . steel, castings	2291/0238	. . . Wood
2223/625	. . nuclear fuels, laser imploded targets	2291/024	. . Mixtures
2223/626	. . radioactive material	2291/02408	. . . Solids in gases, e.g. particle suspensions
2223/6265	. . . sample with radioactive tracer, tag, label	2291/02416	. . . Solids in liquids
2223/627	. . tyres	2291/02425	. . . Liquids in gases, e.g. sprays
2223/628	. . tubes, pipes	2291/02433	. . . Gases in liquids, e.g. bubbles, foams
2223/629	. . welds, bonds, sealing compounds	2291/02441	. . . Liquids in porous solids
2223/63	. . turbine blades	2291/0245	. . . Gases in porous solids
2223/631	. . large structures, walls	2291/02458	. . . Solids in solids, e.g. granules
2223/632	. . residual life, life expectancy	2291/02466	. . . Biological material, e.g. blood
2223/633	. . thickness, density, surface weight (unit area)	2291/02475	. . . Tissue characterisation
2223/634	. . wear behaviour, roughness	2291/02483	. . . Other human or animal parts, e.g. bones
2223/635	. . fluids, granulates	2291/02491	. . . Materials with nonlinear acoustic properties
2223/636	. . fluid sample with radioactive sources	2291/025	. . Change of phase or condition
2223/637	. . liquid	2291/0251	. . . Solidification, icing, curing composites, polymerisation
2223/638	. . gas	2291/0252	. . . Melting, molten solids
2223/639	. . material in a container	2291/0253	. . . Condensation
2223/64	. . multiple-sample chamber, multiplicity of materials	2291/0254	. . . Evaporation
2223/641	. . particle sizing	2291/0255	. . . (Bio)chemical reactions, e.g. on biosensors
2223/642	. . moving sheet, web	2291/0256	. . . Adsorption, desorption, surface mass change, e.g. on biosensors
2223/6425	. . . correcting for web flutter	2291/0257	. . . . with a layer containing at least one organic compound
2223/643	. . object on conveyor	2291/0258	. . . Structural degradation, e.g. fatigue of composites, ageing of oils
2223/645	. . quality control	2291/028	. . Material parameters
2223/646	. . flaws, defects	2291/02809	. . . Concentration of a compound, e.g. measured by a surface mass change
2223/6462	. . . microdefects		
2223/6464	. . . radioactive substance into defect site		
2223/6466	. . . flaws comparing to predetermined standards		
2223/6468	. . . at different temperatures		
2223/647	. . leak detection		
2223/648	. . voids		

2291/02818	. . .	Density, viscosity	2291/2696	. . .	Wheels, Gears, Bearings
2291/02827	. . .	Elastic parameters, strength or force	2291/2697	. . .	Wafer or (micro)electronic parts
2291/02836	. . .	Flow rate, liquid level	2291/2698	. . .	Other discrete objects, e.g. bricks
2291/02845	. . .	Humidity, wetness	2333/00		Assays involving biological materials from specific organisms or of a specific nature
2291/02854	. . .	Length, thickness	NOTE		
2291/02863	. . .	Electric or magnetic parameters			{ 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. }
2291/02872	. . .	Pressure			
2291/02881	. . .	Temperature			
2291/0289	. . .	Internal structure, e.g. defects, grain size, texture			
2291/04	. .	Wave modes and trajectories	2333/001	. .	by chemical synthesis
2291/042	. .	Wave modes	2333/003	. .	of Peptide-nucleic acids (PNAs)
2291/0421	. . .	Longitudinal waves	2333/005	. .	from viruses
2291/0422	. . .	Shear waves, transverse waves, horizontally polarised waves	2333/01	. .	DNA viruses
2291/0423	. . .	Surface waves, e.g. Rayleigh waves, Love waves	2333/015	. . .	Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus
2291/0425	. . .	Parallel to the surface, e.g. creep waves	2333/02	. . .	Hepadnaviridae, e.g. hepatitis B virus
2291/0426	. . .	Bulk waves, e.g. quartz crystal microbalance, torsional waves	2333/025	. . .	Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
2291/0427	. . .	Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever	2333/03	. . .	Herpetoviridae, e.g. pseudorabies virus
2291/0428	. . .	Mode conversion	2333/032	. . . .	Pseudorabies virus, i.e. Aujeszky virus
2291/043	. .	Complex trajectories	2333/035	. . . .	Herpes simplex virus I or II
2291/044	. .	Internal reflections (echoes), e.g. on walls or defects	2333/04	. . . .	Varicella-zoster virus
2291/045	. .	External reflections, e.g. on reflectors	2333/045	. . . . .	Cytomegalovirus
2291/048	. .	Transmission, i.e. analysed material between transmitter and receiver	2333/05	. . . .	Epstein-Barr virus
2291/051	. .	Perpendicular incidence, perpendicular propagation	2333/055	. . . .	Marek's disease virus
2291/052	. .	Perpendicular incidence, angular propagation	2333/06	. . . .	Infectious bovine rhinotracheitis virus
2291/055	. .	Angular incidence, perpendicular propagation	2333/065	. . . .	Poxviridae, e.g. avipoxvirus
2291/056	. .	Angular incidence, angular propagation	2333/07	. . . .	Vaccinia virus; Variola virus
2291/057	. .	Angular incidence, parallel to surface propagation	2333/075	. . . .	Adenoviridae
2291/10	. .	Number of transducers	2333/08	. .	RNA viruses
2291/101	. .	one transducer	2333/085	. . .	Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
2291/102	. .	one emitter, one receiver	2333/09	. . . .	Foot-and-mouth disease virus
2291/103	. .	one emitter, two or more receivers	2333/095	. . . .	Rhinovirus
2291/104	. .	two or more emitters, one receiver	2333/10	. . . .	Hepatitis A virus
2291/105	. .	two or more emitters, two or more receivers	2333/105	. . . .	Poliovirus
2291/106	. .	one or more transducer arrays	2333/11	. . .	Orthomyxoviridae, e.g. influenza virus
2291/26	. .	Scanned objects	2333/115	. . .	Paramyxoviridae, e.g. parainfluenza virus
2291/262	. .	Linear objects	2333/12	. . . .	Mumps virus; Measles virus
2291/2623	. . .	Rails; Railroads	2333/125	. . . .	Newcastle disease virus
2291/2626	. . .	Wires, bars, rods	2333/13	. . . .	Canine distemper virus
2291/263	. .	Surfaces	2333/135	. . . .	Respiratory syncytial virus
2291/2632	. . .	flat	2333/14	. . .	Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
2291/2634	. . .	cylindrical from outside	2333/145	. . .	Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokola virus or vesicular stomatitis virus
2291/2636	. . .	cylindrical from inside	2333/15	. . .	Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus
2291/2638	. . .	Complex surfaces	2333/155	. . . .	Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
2291/265	. .	Spherical objects	2333/16	. . . . .	HIV-1, HIV-2
2291/267	. .	Welds	2333/161	. . . . .	gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p66/68, p51/52, p31/34, p32, p40
2291/2672	. . .	Spot welding	2333/162	. . . . .	env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site
2291/2675	. . .	Seam, butt welding	2333/163	. . . . .	Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx
2291/2677	. . .	Lapp welding	2333/165	. . .	Coronaviridae, e.g. avian infectious bronchitis virus
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			

2333/17	. . . . Porcine transmissible gastroenteritis virus	2333/335	. . from Lactobacillus (G)
2333/175	. . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus	2333/34	. . from Corynebacterium (G)
2333/18	. . . Togaviridae; Flaviviridae	2333/345	. . from Brevibacterium (G)
2333/181	. . . . Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus	2333/35	. . from Mycobacteriaceae (F)
2333/183	. . . . Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus) or border disease virus	2333/355	. . from Nocardia (G)
2333/185	. . . . Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue	2333/36	. . from Actinomyces; from Streptomyces (G)
2333/186	. . . . . Hepatitis C; Hepatitis NANB	2333/365	. . from Actinoplanes (G)
2333/188	. . . . . Hepatitis G; Hepatitis NANBNCNDNE	2333/37	. from fungi
2333/19	. . . . Rubella virus	2333/375	. . from Basidiomycetes
2333/195	. from bacteria	2333/38	. . from Aspergillus
NOTE		2333/385	. . from Penicillium
{ 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. }		2333/39	. . from yeasts
2333/20	. . from Spirochaetales (O), e.g. Treponema, Leptospira	2333/395	. . . from Saccharomyces
2333/205	. . from Campylobacter (G)	2333/40	. . . from Candida
2333/21	. . from Pseudomonadaceae (F)	2333/405	. from algae
2333/212	. . . Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter	2333/41	. from lichens
2333/215	. . from Halobacteriaceae (F)	2333/415	. from plants
2333/22	. . from Neisseriaceae (F), e.g. Acinetobacter	2333/42	. . Lectins, e.g. concanavalin, phytohaemagglutinin
2333/225	. . from Alcaligenes (G)	2333/425	. . Zeins
2333/23	. . from Brucella (G)	2333/43	. . Sweetening agents, e.g. thaumatin, monellin
2333/235	. . from Bordetella (G)	2333/435	. from animals; from humans
2333/24	. . from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia	2333/43504	. . from invertebrates
2333/245	. . . Escherichia (G)	2333/43508	. . . from crustaceans
2333/25	. . . Shigella (G)	2333/43513	. . . from arachnidae
2333/255	. . . Salmonella (G)	2333/43517	. . . . from spiders
2333/26	. . . Klebsiella (G)	2333/43521	. . . . from scorpions
2333/265	. . . Enterobacter (G)	2333/43526	. . . from worms
2333/27	. . . Erwinia (G)	2333/4353	. . . . from nematodes
2333/275	. . . Hafnia (G)	2333/43534	. . . . . from Caenorhabditis
2333/28	. . from Vibrionaceae (F)	2333/43539	. . . . from cestodes
2333/285	. . from Pasteurellaceae (F), e.g. Haemophilus influenza	2333/43543	. . . . . from Taenia
2333/29	. . from Richettsiales (o)	2333/43547	. . . . from trematodes
2333/295	. . from Chlamydiales (o)	2333/43552	. . . from insects
2333/30	. . from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]	2333/43556	. . . . from ticks
2333/305	. . from Micrococcaceae (F)	2333/4356	. . . . from wasps
2333/31	. . . from Staphylococcus (G)	2333/43565	. . . . from bees
2333/315	. . from Streptococcus (G), e.g. Enterococci	2333/43569	. . . . from flies
2333/3153	. . . Streptokinase	2333/43573	. . . . . from Drosophila
2333/3156	. . . from Streptococcus pneumoniae [Pneumococcus]	2333/43578	. . . . from silkworm
2333/32	. . from Bacillus (G)	2333/43582	. . . . from mites
2333/325	. . . Bacillus thuringiensis crystal protein (delta-endotoxin)	2333/43586	. . . . from fleas
2333/33	. . from Clostridium (G)	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 Croatalus adamanteus (Eastern Diamondback rattlesnake); Crotolase
		2333/4633	. . . . . from Echis carinatus; Ecarin

2333/4636	. . . . .	from Bothrops sp.	2333/505	. . .	Erythropoietin [EPO]
2333/464	. . . . .	from Bothrops atrox; Reptilase; Atroxin	2333/51	. . .	Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor
2333/4643	. . . . .	from Bothrops jararaca; Botrocin	2333/515	. . .	Angiogenesis factors; Angiogenin
2333/4646	. . . . .	from Oxyuran(eo)us scutellatus (Taipan snake of Elapidae family)	2333/52	. .	Assays involving cytokines
2333/465	. . .	from birds	2333/521	. . .	Chemokines
2333/47	. . .	Assays involving proteins of known structure or function as defined in the subgroups	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
2333/4701	. . . . .	Details	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-1 or LDCF-2
2333/4703	. . . . .	Regulators; Modulating activity	2333/524	. . .	Thrombopoietin, i.e. C-MPL ligand
2333/4704	. . . . .	Inhibitors; Suppressors	2333/525	. . .	Tumor necrosis factor [TNF]
2333/4706	. . . . .	stimulating, promoting or activating activity	2333/5255	. . . .	Lymphotoxin [LT]
2333/4707	. . . . .	Guanosine triphosphatase activating protein, GAP	2333/53	. . .	Colony-stimulating factor [CSF]
2333/4709	. . . . .	Amyloid plaque core protein	2333/535	. . . .	Granulocyte CSF; Granulocyte-macrophage CSF
2333/471	. . . . .	Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein	2333/54	. . .	Interleukins [IL]
2333/4712	. . . . .	Muscle proteins, e.g. myosin, actin, protein	2333/5403	. . . .	IL-3
2333/4713	. . . . .	Plasma globulins, lactoglobulin	2333/5406	. . . .	IL-4
2333/4715	. . . . .	Cytokine-induced proteins	2333/5409	. . . .	IL-5
2333/4716	. . . . .	Complement proteins, e.g. anaphylatoxin, C3a, C5a	2333/5412	. . . .	IL-6
2333/4718	. . . . .	Lipocortins	2333/5415	. . . .	Leukaemia inhibitory factor [LIF]
2333/4719	. . . . .	G-proteins	2333/5418	. . . .	IL-7
2333/4721	. . . . .	Cationic antimicrobial peptides, e.g. defensins	2333/5421	. . . .	IL-8
2333/4722	. . . . .	Proteoglycans, e.g. aggrecan	2333/5425	. . . .	IL-9
2333/4724	. . . . .	Lectins	2333/5428	. . . .	IL-10
2333/4725	. . . . .	Mucins, e.g. human intestinal mucin	2333/5431	. . . .	IL-11
2333/4727	. . . . .	Calcium binding proteins, e.g. calmodulin	2333/5434	. . . .	IL-12
2333/4728	. . . . .	alpha-Glycoproteins	2333/5437	. . . .	IL-13
2333/473	. . . . .	Recognins, e.g. malignin	2333/544	. . . .	IL-14
2333/4731	. . . . .	Casein	2333/5443	. . . .	IL-15
2333/4733	. . . . .	Acute pancreatitis-associated protein	2333/5446	. . . .	IL-16
2333/4734	. . . . .	Villin	2333/545	. . . .	IL-1
2333/4736	. . . . .	Retinoblastoma protein	2333/55	. . . .	IL-2
2333/4737	. . . . .	C-reactive protein	2333/555	. . .	Interferons [IFN]
2333/4739	. . . . .	Cyclin; Prad 1	2333/56	. . . .	IFN-alpha
2333/474	. . . . .	Pancreatic thread protein; Reg protein	2333/565	. . . .	IFN-beta
2333/4742	. . . . .	Keratin; Cytokeratin	2333/57	. . . .	IFN-gamma
2333/4743	. . . . .	Bactericidal/Permeability-increasing protein BPI	2333/575	. .	Hormones
2333/4745	. . . . .	Insulin-like growth factor binding protein	2333/5751	. . .	Corticotropin releasing factor [CRF] (Urotensin)
2333/4746	. . . . .	Cancer-associated SCM-recognition factor, CRISPP	2333/5752	. . .	Placental lactogen; Chorionic Somatomammotropin
2333/4748	. . . . .	p53	2333/5753	. . .	Calcitonin gene related peptide
2333/475	. .	Assays involving growth factors	2333/5754	. . .	Endothelin, vasoactive intestinal contractor [VIC]
2333/4753	. . .	Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II	2333/5755	. . .	Neuropeptide Y
2333/4756	. . .	Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor	2333/5756	. . .	Prolactin
2333/48	. . .	Nerve growth factor [NGF]	2333/5757	. . .	Vasoactive intestinal peptide [VIP] or related peptides
2333/485	. . .	Epidermal growth factor [EGF] (urogastrone)	2333/5758	. . .	Gastrin releasing peptide
2333/49	. . .	Platelet-derived growth factor [PDGF]	2333/5759	. . .	Thymosin or related peptides
2333/495	. . .	Transforming growth factor [TGF]	2333/58	. . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatin; Cardiodilatin
2333/50	. . .	Fibroblast growth factors [FGF]	2333/585	. . .	Calcitonins
2333/501	. . . .	acidic FGF [aFGF]			
2333/503	. . . .	basic FGF [bFGF]			

2333/59	. . .	Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]	2333/70582	. . .	CD71
2333/595	. . .	Gastrins; Cholecystokinins [CCK]	2333/70585	. . .	CD44
2333/60	. . .	Growth-hormone releasing factors (GH-RF) (Somatoliberin)	2333/70589	. . .	CD45
2333/605	. . .	Glucagons	2333/70592	. . .	CD52
2333/61	. . .	Growth hormones [GH] (Somatotropin)	2333/70596	. . .	Molecules with a "CD"-designation not provided for elsewhere in G01N 2333/705
2333/62	. . .	Insulins	2333/71	. . .	for growth factors; for growth regulators
2333/63	. . .	Motilins	2333/715	. . .	for cytokines; for lymphokines; for interferons
2333/635	. . .	Parathyroid hormone (parathormone); Parathyroid hormone-related peptides	2333/7151	. . .	for tumor necrosis factor [TNF]; for lymphotoxin [LT]
2333/64	. . .	Relaxins	2333/7153	. . .	or colony-stimulating factors [CSF]
2333/645	. . .	Secretins	2333/7155	. . .	for interleukins [IL]
2333/65	. . .	Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2	2333/7156	. . .	for interferons [IFN]
2333/655	. . .	Somatostatins	2333/7158	. . .	for chemokines
2333/66	. . .	Thymopoietins	2333/72	. . .	for hormones
2333/665	. .	Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin	2333/723	. . .	Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor
2333/67	. . .	Lipotropins, e.g. beta, gamma lipotropin	2333/726	. . .	G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH
2333/675	. . .	beta-Endorphins	2333/745	. .	Assays involving non-enzymic blood coagulation factors
2333/68	. . .	Melanocyte-stimulating hormone [MSH]	2333/7452	. . .	Thrombomodulin
2333/685	. . .	alpha-Melanotropin	2333/7454	. . .	Tissue factor (tissue thromboplastin, Factor III)
2333/69	. . .	beta-Melanotropin	2333/7456	. . .	Factor V
2333/695	. . .	Corticotropin [ACTH]	2333/7458	. . .	Protein S
2333/70	. . .	Enkephalins	2333/75	. . .	Fibrin; Fibrinogen
2333/705	. .	Assays involving receptors, cell surface antigens or cell surface determinants	2333/755	. . .	Factors VIII, e.g. factor VIII C [AHF], factor VIII Ag [VWF]
2333/70503	. . .	Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3	2333/76	. .	Assays involving albumins other than in routine use for blocking surfaces or for anchoring haptens during immunisation
2333/70507	. . .	C2D	2333/765	. . .	Serum albumin, e.g. HSA
2333/7051	. . .	T-cell receptor (TcR)-CD3 complex	2333/77	. . .	Ovalbumin
2333/70514	. . .	CD4	2333/775	. .	Apolipoproteins
2333/70517	. . .	CD8	2333/78	. .	Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin [CIG]
2333/70521	. . .	CD28, CD152	2333/785	. .	Alveolar surfactant peptides; Pulmonary surfactant peptides
2333/70525	. . .	ICAM molecules, e.g. CD50, CD54, CD102	2333/79	. .	Transferrins, e.g. lactoferrins, ovotransferrins
2333/70528	. . .	CD58	2333/795	. .	Prophyrin- or corrin-ring-containing peptides
2333/70532	. . .	B7 molecules, e.g. CD80, CD86	2333/80	. .	Cytochromes
2333/70535	. . .	Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)	2333/805	. .	Haemoglobins; Myoglobins
2333/70539	. . .	MHC-molecules, e.g. HLA-molecules	2333/81	. .	Protease inhibitors
2333/70542	. . .	CD106	2333/8103	. .	Exopeptidase (E.C. 3.4.11-19) inhibitors
2333/70546	. . .	Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM	2333/8107	. .	Endopeptidase (E.C. 3.4.21-99) inhibitors
2333/7055	. . .	Integrin beta1-subunit-containing molecules, e.g. CD29, CD49	2333/811	. . .	Serine protease (E.C. 3.4.21) inhibitors
2333/70553	. . .	Integrin beta2-subunit-containing molecules, e.g. CD11, CD18	2333/8114	. . .	Kunitz type inhibitors
2333/70557	. . .	Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61	2333/8117	. . .	Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)
2333/7056	. . .	Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM	2333/8121	. . .	Serpins
2333/70564	. . .	Selectins, e.g. CD62	2333/8125	. . .	Alpha-1-antitrypsin
2333/70567	. . .	Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors	2333/8128	. . .	Antithrombin III
2333/70571	. . .	for neuromediators, e.g. serotonin receptor, dopamine receptor	2333/8132	. . .	Plasminogen activator inhibitors
2333/70575	. . .	NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154	2333/8135	. . .	Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid
2333/70578	. . .	NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95	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
NOTE	
{Enzymes are generally categorised below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.}	
2333/9005	. . Enzymes with nucleic acid structure; e.g. ribozymes
2333/901	. . Antibodies with enzymatic activity; e.g. abzymes
2333/9015	. . Ligases (6)
2333/902	. . Oxidoreductases (1.)
2333/90203	. . . acting on the aldehyde or oxo group of donors (1.2)
2333/90206	. . . acting on the CH-CH group of donors (1.3)
2333/90209	. . . acting on NADH or NADPH (1.6), e.g. those with a heme protein as acceptor (1.6.2) (general), Cytochrome-b5 reductase (1.6.2.2) or NADPH-cytochrome P450 reductase (1.6.2.4)
2333/90212	. . . acting on a sulfur group of donors (1.8)
2333/90216	. . . acting on a heme group of donors (1.9)
2333/90219	. . . acting on diphenols and related substances as donors (1.10)
2333/90222	. . . . with oxygen as acceptor (1.10.3) in general
2333/90225	. . . . with a definite EC number (1.10.3.-)
2333/90229	. . . . . Catechol oxidase, i.e. Tyrosinase (1.10.3.1)
2333/90232	. . . . . Laccase (1.10.3.2)
2333/90235	. . . . . Ascorbate oxidase (1.10.3.3)
2333/90238	. . . acting on hydrogen as donor (1.12)
2333/90241	. . . acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)
2333/90245	. . . acting on paired donors with incorporation of molecular oxygen (1.14)
2333/90248	. . . . with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13
2333/90251	. . . . . with a definite EC number (1.14.13.-)
2333/90254	. . . . . Nitric-oxide synthase (NOS; 1.14.13.39)
2333/90258	. . . . with a reduced iron-sulfur protein as one donor (1.14.15) in general
2333/90261	. . . . . with a definite EC number (1.14.15.-)
2333/90264	. . . . . Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)
2333/90267	. . . . . Cholesterol monooxygenase (cytochrome P 450sc)(1.14.15.6)
2333/9027	. . . . . Miscellaneous (1.14.99)
2333/90274	. . . . . with a definite EC number (1.14.99.-)
2333/90277	. . . . . Steroid 17 alpha-monooxygenase (1.14.99.9)
2333/9028	. . . . . Steroid 21-monooxygenase (1.14.99.10)
2333/90283	. . . acting on superoxide radicals as acceptor (1.15)
2333/90287	. . . oxidising metal ions (1.16)
2333/9029	. . . acting on -CH ₂ - groups (1.17)
2333/90293	. . . acting on reduced ferredoxin as donor (1.18)
2333/90296	. . . acting on reduced flavodoxin as donor (1.19)
2333/904	. . . acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)

2333/906	. . . acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)
2333/90605	. . . . acting on the CH-NH ₂ group of donors (1.4)
2333/90611	. . . . . with NAD or NADP as acceptor (1.4.1) in general
2333/90616	. . . . . with a definite EC number (1.4.1.-)
2333/90622	. . . . . Phenylalanine dehydrogenase (1.4.1.20)
2333/90627	. . . . . with a cytochrome as acceptor (1.4.2)
2333/90633	. . . . . with oxygen as acceptor (1.4.3) in general
2333/90638	. . . . . with a definite EC number (1.4.3.-)
2333/90644	. . . . . D-Amino acid oxidase (1.4.3.3)
2333/9065	. . . . acting on CH-NH groups of donors (1.5)
2333/90655	. . . . . with NAD or NADP as acceptor (1.5.1) in general
2333/90661	. . . . . with a definite EC number (1.5.1.-)
2333/90666	. . . . . Dihydrofolate reductase [DHFR] (1.5.1.3)
2333/90672	. . . . . with oxygen as acceptor (1.5.3) in general
2333/90677	. . . . . with a definite EC number (1.5.3.-)
2333/90683	. . . . . Sarcosine oxidase (1.5.3.1)
2333/90688	. . . . acting on other nitrogen compounds as donors (1.7)
2333/90694	. . . . . with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
2333/908	. . . acting on hydrogen peroxide as acceptor (1.11)
2333/91	. . Transferases (2.)
2333/91005	. . . transferring one-carbon groups (2.1)
2333/91011	. . . . Methyltransferases (general) (2.1.1.)
2333/91017	. . . . . with definite EC number (2.1.1.-)
2333/91022	. . . . . Catechilmethyltransferases (2.1.1.6)
2333/91028	. . . . Hydroxymethyl-, formyl-transferases (2.1.2)
2333/91034	. . . . Carboxyl- and carbamoyl transferases (2.1.3)
2333/9104	. . . Aldehyde and ketone transferases (2.2)
2333/91045	. . . Acyltransferases (2.3)
2333/91051	. . . . Acyltransferases other than aminoacyltransferases (general) (2.3.1)
2333/91057	. . . . . with definite EC number (2.3.1.-)
2333/91062	. . . . . Chloramphenicol-acetyltransferases (2.3.1.28)
2333/91068	. . . . . Chalcone synthases (2.3.1.74)
2333/91074	. . . . Aminoacyltransferases (general) (2.3.2)
2333/9108	. . . . . with definite EC number (2.3.2.-)
2333/91085	. . . . . Transglutaminases; Factor XIIIq (2.3.2.13)
2333/91091	. . . Glycosyltransferases (2.4)
2333/91097	. . . . Hexosyltransferases (general) (2.4.1)
2333/91102	. . . . . with definite EC number (2.4.1.-)
2333/91108	. . . . . Levansucrases (2.4.1.10)
2333/91114	. . . . . Cellulose synthases (2.4.1.12)
2333/9112	. . . . . 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.-)	2333/942	. . . . .	acting on beta-1, 4-glucosidic bonds, e.g. cellulase
2333/91177	. . . . .	Glutathione transferases (2.5.1.18)	2333/944	. . . . .	acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
2333/91182	. . . . .	Enolpyruvylshikimate-phosphate synthases (2.5.1.19)	2333/946	. . . . .	Dextranase
2333/91188	. . . . .	transferring nitrogenous groups (2.6)	2333/948	. . . . .	acting on peptide bonds (3.4)
2333/91194	. . . . .	transferring sulfur containing groups (2.8)	2333/95	. . . . .	Proteinases, i.e. endopeptidases (3.4.21-3.4.99)
2333/912	. . . . .	transferring phosphorus containing groups, e.g. kinases (2.7)	2333/9506	. . . . .	derived from viruses
2333/91205	. . . . .	Phosphotransferases in general	2333/9513	. . . . .	derived from RNA viruses
2333/9121	. . . . .	with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases	2333/952	. . . . .	derived from bacteria
2333/91215	. . . . .	with a definite EC number (2.7.1.-)	2333/954	. . . . .	bacteria being <i>Bacillus</i>
2333/9122	. . . . .	Thymidine kinase (2.7.1.21)	2333/956	. . . . .	<i>Bacillus subtilis</i> or <i>Bacillus licheniformis</i>
2333/91225	. . . . .	with a carboxyl group as acceptor (2.7.2)	2333/958	. . . . .	derived from fungi
2333/9123	. . . . .	with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases	2333/96	. . . . .	from yeast
2333/91235	. . . . .	with a phosphate group as acceptor (2.7.4)	2333/962	. . . . .	from <i>Aspergillus</i>
2333/9124	. . . . .	Diphosphotransferases (2.7.6)	2333/964	. . . . .	derived from animal tissue
2333/91245	. . . . .	Nucleotidyltransferases (2.7.7)	2333/96402	. . . . .	from non-mammals
2333/9125	. . . . .	with a definite EC number (2.7.7.-)	2333/96405	. . . . .	in general
2333/91255	. . . . .	DNA-directed RNA polymerase (2.7.7.6)	2333/96408	. . . . .	with EC number
2333/9126	. . . . .	DNA-directed DNA polymerase (2.7.7.7)	2333/96411	. . . . .	Serine endopeptidases (3.4.21)
2333/91265	. . . . .	Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)	2333/96413	. . . . .	Cysteine endopeptidases (3.4.22)
2333/9127	. . . . .	DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)	2333/96416	. . . . .	Aspartic endopeptidases (3.4.23)
2333/91275	. . . . .	RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)	2333/96419	. . . . .	Metalloendopeptidases (3.4.24)
2333/9128	. . . . .	RNA-directed DNA polymerases, e.g. RT (2.7.7.49)	2333/96422	. . . . .	from snakes
2333/91285	. . . . .	RNA uridyltransferases (2.7.7.52)	2333/96425	. . . . .	from mammals
2333/9129	. . . . .	Transferases for other substituted phosphate groups (2.7.8)	2333/96427	. . . . .	in general
2333/91295	. . . . .	with paired acceptors (2.7.9)	2333/9643	. . . . .	with EC number
2333/914	. . . . .	Hydrolases (3)	2333/96433	. . . . .	Serine endopeptidases (3.4.21)
2333/916	. . . . .	acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)	2333/96436	. . . . .	Granzymes
2333/918	. . . . .	Carboxylic ester hydrolases (3.1.1)	2333/96438	. . . . .	Dibasic site splicing serine proteases, e.g. furin
2333/92	. . . . .	Triglyceride splitting, e.g. by means of lipase	2333/96441	. . . . .	with definite EC number
2333/922	. . . . .	Ribonucleases (RNAses); Deoxyribonucleases (DNAses)	2333/96444	. . . . .	Factor X (3.4.21.6)
2333/924	. . . . .	acting on glycosyl compounds (3.2)	2333/96447	. . . . .	Factor VII (3.4.21.21)
2333/926	. . . . .	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/9645	. . . . .	Factor IX (3.4.21.22)
2333/928	. . . . .	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/96452	. . . . .	Factor XI (3.4.21.27)
2333/93	. . . . .	Fungal source	2333/96455	. . . . .	Kallikrein (3.4.21.34; 3.4.21.35)
2333/932	. . . . .	alpha-amylase from plant source	2333/96458	. . . . .	Factor XII (3.4.21.38)
2333/934	. . . . .	Glucoamylase	2333/96461	. . . . .	Protein C (3.4.21.69)
2333/936	. . . . .	acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme	2333/96463	. . . . .	Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
2333/938	. . . . .	acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase	2333/96466	. . . . .	Cysteine endopeptidases (3.4.22)
2333/94	. . . . .	acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase	2333/96469	. . . . .	Interleukin 1-beta convertase-like enzymes
			2333/96472	. . . . .	Aspartic endopeptidases (3.4.23)
			2333/96475	. . . . .	with definite EC number
			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
			2333/96494	. . . . .	Matrix metalloproteases, e. g. 3.4.24.7

2333/96497	. . . . . Enkephalinase (3.4.24.11)	2405/00	Assays, e.g. immunoassays or enzyme assays, involving lipids
2333/966	. . . . Elastase	2405/02	. Triacylglycerols
2333/968	. . . . Plasmin, i.e. fibrinolysin	2405/04	. Phospholipids, i.e. phosphoglycerides
2333/972	. . . . Plasminogen activators	2405/06	. . Glycophospholipids, e.g. phosphatidyl inositol
2333/9723	. . . . . Urokinase	2405/08	. Sphingolipids
2333/9726	. . . . . Tissue plasminogen activator	2405/10	. . Glycosphingolipids, e.g. cerebrosides, gangliosides
2333/974	. . . . Thrombin	2407/00	Assays, e.g. immunoassays or enzyme assays, involving terpenes
2333/976	. . . . Trypsin; Chymotrypsin	2407/02	. Taxol; Taxanes
2333/978	. . . acting on carbon to nitrogen bonds other than peptide bonds (3.5)	2410/00	Assays, e.g. immunoassays or enzyme assays, involving peptides of less than 20 amino acids
2333/98	. . . . acting on amide bonds in linear amides (3.5.1)	2410/02	. Angiotensins; Related peptides
2333/982	. . . . . Asparaginase	2410/04	. Oxytocins; Vasopressins; Related peptides
2333/984	. . . . . Penicillin amidase	2410/06	. Kallidins; Bradykinins; Related peptides
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)	2410/08	. Cyclosporins and related peptides
2333/988	. . Lyases (4.), e.g. aldolases, heparinase, enolases, fumarase	2410/10	. Valinomycins and derivatives thereof
2333/99	. . Isomerases (5.)	2415/00	Assays, e.g. immunoassays or enzyme assays, involving penicillins or cephalosporins
2333/992	. . . Glucose isomerase; Xylose isomerase; Glucose-6-phosphate isomerase	2430/00	Assays, e.g. immunoassays or enzyme assays, involving synthetic organic compounds as analytes
2333/994	. . Pancreatin	2430/10	. Insecticides
2400/00	Assays, e.g. immunoassays or enzyme assays, involving carbohydrates	2430/12	. . Pyrethroids
2400/02	. involving antibodies to sugar part of glycoproteins	2430/20	. Herbicides, e.g. DDT
2400/10	. Polysaccharides, i.e. having more than five saccharide radicals attached to each other by glycosidic linkages; Derivatives thereof, e.g. ethers, esters	2430/30	. Polychlorinated biphenyls (PCBs)
2400/12	. . Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar	2430/40	. Dioxins
2400/14	. . . alpha-D-Glucans, i.e. having alpha 1,n (n=3,4,6) linkages between saccharide units, e.g. pullulan	2430/50	. Polyaromatic hydrocarbons (PAHs)
2400/16	. . . . Starch, amylose, amylopectin	2430/60	. Synthetic polymers other than synthetic polypeptides as analytes
2400/18	. . . . Cyclodextrin	2440/00	Post-translational modifications [PTMs] in chemical analysis of biological material
2400/22	. . . . Dextran	2440/10	. acylation, e.g. acetylation, formylation, lipoylation, myristoylation, palmitoylation
2400/24	. . . beta-D-Glucans, i.e. having beta 1,n (n=3,4,6) linkages between saccharide units, e.g. xanthan	2440/12	. alkylation, e.g. methylation, (iso-)prenylation, farnesylation
2400/26	. . . . Cellulose	2440/14	. phosphorylation
2400/28	. . . . Chitin, chitosan	2440/16	. (de-)amidation
2400/32	. . . Galactans, e.g. agar, agarose, agaropectin, carrageenan	2440/18	. citrullination
2400/34	. . . alpha-D-Galacturonans, e.g. pectin	2440/20	. formation of disulphide bridges
2400/36	. . . beta-D-Fructofuranans, e.g. levan, insulin	2440/22	. iodination
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, Konjac gum, Locust bean gum or Guar gum	2440/24	. hydroxylation
2400/40	. . . Glycosaminoglycans, i.e. GAG or mucopolysaccharides, e.g. chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparin, heparan sulfate, and related sulfated polysaccharides	2440/26	. nitrosylation
2400/44	. . . Guluromannuronans, e.g. alginic acid	2440/28	. PEGylation
2400/46	. . Pectin	2440/30	. sulphation
2400/48	. . Reserve carbohydrates, e.g. glycogen	2440/32	. biotinylation
2400/50	. . Lipopolysaccharides; LPS	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

 - 2470/00 Immunochemical assays or immunoassays characterised by the reaction format or reaction type**
 - 2470/04 . Sandwich assay format
 - 2470/06 . . Second binding partner specifically binding complex of analyte with first binding partner
 - 2470/10 . Competitive assay format
 - 2470/12 . . Displacement or release-type competition

 - 2474/00 Immunochemical assays or immunoassays characterised by detection mode or means of detection**
 - 2474/10 . Immunoblots, e.g. Western blot or Dot blot
 - 2474/20 . Immunohistochemistry assay

 - 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 or polyvinyl alcohol
 - 2496/30 . . Polyethylene glycol, e.g. PEG
 - 2496/35 . . Polyvinylpyrrolidone, e.g. PVP
 - 2496/45 . containing protease inhibitors, e.g. sulfonylfluorides, chloromethylketones or organophosphates

 - 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. {The present indexing scheme is not used for cancers classified in group [G01N 33/575](#). }
 4. {When indexing in the following scheme, the organ takes precedence, e.g. inflammation of the

G01N

G01N 2800/00

(continued)

skin is indexed with dermatological disorders and not with immunology or allergic disorders, asthma with pulmonary disorders and not with immunology or allergic disorders. Exception is made for thrombosis which is indexed with haematological disorders. }

- 2800/02 . Nutritional disorders
- 2800/04 . Endocrine or metabolic disorders
- 2800/042 . . Disorders of carbohydrate metabolism, e.g. diabetes, glucose metabolism
- 2800/044 . . Hyperlipemia or hypolipemia, e.g. dyslipidaemia, obesity
- 2800/046 . . Thyroid disorders
- 2800/048 . . Pituitary or hypothalamic - pituitary relationships, e.g. vasopressin or ADH related
- 2800/06 . Gastro-intestinal diseases
- 2800/062 . . Gastritis or peptic ulcer disease
- 2800/065 . . Bowel diseases, e.g. Crohn, ulcerative colitis, IBS
- 2800/067 . . Pancreatitis or colitis
- 2800/08 . Hepato-biliary disorders other than hepatitis
- 2800/085 . . Liver diseases, e.g. portal hypertension, fibrosis, cirrhosis, bilirubin
- 2800/10 . Musculoskeletal or connective tissue disorders
- 2800/101 . . Diffuse connective tissue disease, e.g. Sjögren, Wegener's granulomatosis
- 2800/102 . . . Arthritis; Rheumatoid arthritis, i.e. inflammation of peripheral joints
- 2800/104 . . . Lupus erythematosus [SLE]
- 2800/105 . . Osteoarthritis, e.g. cartilage alteration, hypertrophy of bone
- 2800/107 . . Crystal induced conditions; Gout
- 2800/108 . . Osteoporosis
- 2800/12 . Pulmonary diseases
- 2800/122 . . Chronic or obstructive airway disorders, e.g. asthma COPD
- 2800/125 . . Adult respiratory distress syndrome
- 2800/127 . . Bronchitis
- 2800/14 . Disorders of ear, nose or throat
- 2800/16 . Ophthalmology
- 2800/162 . . Conjunctival disorders, e.g. conjunctivitis
- 2800/164 . . Retinal disorders, e.g. retinopathy
- 2800/166 . . Cataract
- 2800/168 . . Glaucoma
- 2800/18 . Dental and oral disorders
- 2800/20 . Dermatological disorders
- 2800/202 . . Dermatitis
- 2800/205 . . Scaling palmar diseases, e.g. psoriasis, pityriasis
- 2800/207 . . Pigmentation disorders
- 2800/22 . Haematology
- 2800/222 . . Platelet disorders
- 2800/224 . . Haemostasis or coagulation
- 2800/226 . . Thrombotic disorders, i.e. thrombo-embolism irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis
- 2800/228 . . Disorders of the spleen, e.g. splenic rupture, splenomegaly
- 2800/24 . Immunology or allergic disorders
- 2800/245 . . Transplantation related diseases, e.g. graft versus host disease

- 2800/26 . Infectious diseases, e.g. generalised sepsis

NOTE

{ Indexing code [G01N 2800/26](#) is not used for documents already classified in one or more of groups [G01N 33/569](#) and subgroups, [G01N 33/571](#) or [G01N 33/576](#) and subgroups }

- 2800/28 . Neurological disorders
- 2800/2807 . . Headache; Migraine
- 2800/2814 . . Dementia; Cognitive disorders
- 2800/2821 . . . Alzheimer
- 2800/2828 . . . Prion diseases
- 2800/2835 . . Movement disorders, e.g. Parkinson, Huntington, Tourette
- 2800/2842 . . Pain, e.g. neuropathic pain, psychogenic pain
- 2800/285 . . Demyelinating diseases; Multiple sclerosis
- 2800/2857 . . Seizure disorders; Epilepsy
- 2800/2864 . . Sleep disorders
- 2800/2871 . . Cerebrovascular disorders, e.g. stroke, cerebral infarct, cerebral haemorrhage, transient ischemic event
- 2800/2878 . . Muscular dystrophy
- 2800/2885 . . . Duchenne dystrophy
- 2800/2892 . . . Myotonic dystrophy
- 2800/30 . Psychoses; Psychiatry
- 2800/301 . . Anxiety or phobic disorders
- 2800/302 . . Schizophrenia
- 2800/303 . . Eating disorders, e.g. anorexia, bulimia
- 2800/304 . . Mood disorders, e.g. bipolar, depression
- 2800/305 . . Attention deficit disorder; Hyperactivity
- 2800/306 . . Chronic fatigue syndrome
- 2800/307 . . Drug dependency, e.g. alcoholism
- 2800/308 . . Psychosexual disorders, e.g. sexual arousal disorder
- 2800/32 . Cardiovascular disorders
- 2800/321 . . Arterial hypertension
- 2800/322 . . Orthostatic hypertension or syncope
- 2800/323 . . Arteriosclerosis, Stenosis
- 2800/324 . . Coronary artery diseases, e.g. angina pectoris, myocardial infarction
- 2800/325 . . Heart failure or cardiac arrest, e.g. cardiomyopathy, congestive heart failure
- 2800/326 . . Arrhythmias, e.g. ventricular fibrillation, tachycardia, atrioventricular block, torsade de pointes
- 2800/327 . . Endocarditis
- 2800/328 . . Vasculitis, i.e. inflammation of blood vessels
- 2800/329 . . Diseases of the aorta or its branches, e.g. aneurysms, aortic dissection
- 2800/34 . Genitourinary disorders
- 2800/341 . . Urinary incontinence
- 2800/342 . . Prostate diseases, e.g. BPH, prostatitis
- 2800/344 . . Disorders of the penis and the scrotum and erectile dysfunction
- 2800/345 . . Urinary calculi
- 2800/347 . . Renal failures; Glomerular diseases; Tubulointerstitial diseases, e.g. nephritic syndrome, glomerulonephritis; Renovascular diseases, e.g. renal artery occlusion, nephropathy
- 2800/348 . . Urinary tract infections
- 2800/36 . Gynecology or obstetrics

- 2800/361 . . Menstrual abnormalities or abnormal uterine bleeding, e.g. dysmenorrhea
- 2800/362 . . Menopause
- 2800/364 . . Endometriosis, i.e. non-malignant disorder in which functioning endometrial tissue is present outside the uterine cavity
- 2800/365 . . Breast disorders, e.g. mastalgia, mastitis, Paget's disease
- 2800/367 . . Infertility, e.g. sperm disorder, ovulatory dysfunction
- 2800/368 . . Pregnancy complicated by disease or abnormalities of pregnancy, e.g. preeclampsia, preterm labour
- 2800/38 . . Pediatrics
- 2800/382 . . Cystic fibrosis
- 2800/385 . . Congenital anomalies
- 2800/387 . . . Down syndrome; Trisomy 18; Trisomy 13
- 2800/40 . . Disorders due to exposure to physical agents, e.g. heat disorders, motion sickness, radiation injuries, altitude sickness, decompression illness
- 2800/42 . . Poisoning, e.g. from bites or stings
- 2800/44 . . Multiple drug resistance
- 2800/50 . . Determining the risk of developing a disease
- 2800/52 . . Predicting or monitoring the response to treatment, e.g. for selection of therapy based on assay results in personalised medicine; 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