

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 processes other than immunoassay, involving enzymes or microorganisms [C12M](#), [C12Q](#))

NOTES

1. In this subclass, the following terms are used with the meanings indicated :
 - "investigating" means testing or determining;
 - "materials" includes solid, liquid or gaseous media, e.g. the atmosphere.
2. Attention is drawn to the Notes following the title of class [G01](#).
3. 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 (identification of microorganisms C12Q)**
- 2015/0003 . {Determining electric mobility, velocity profile, average speed or velocity of a plurality of particles}
- 2015/0007 . {Investigating dispersion of gas}
- 2015/0011 . . {in liquids, e.g. bubbles}
- 2015/0015 . . {in solids}
- 2015/0019 . {Means for transferring or separating particles prior to analysis, e.g. hoppers or particle conveyors}
- 2015/0023 . {Investigating dispersion of liquids}
- 2015/0026 . . {in gas, e.g. fog}
- 2015/003 . . {in liquids, e.g. emulsion}
- 2015/0034 . . {in solids}
- 2015/0038 . {Investigating nanoparticles}
- 2015/0042 . {Investigating dispersion of solids}
- 2015/0046 . . {in gas, e.g. smoke}
- 2015/0049 . . . {of filaments in gas}
- 2015/0053 . . {in liquids, e.g. trouble}
- 2015/0057 . . . {of filaments in liquids}
- 2015/0061 . . {in solids, e.g. petrography}
- 2015/0065 . {biological, e.g. blood}
- 2015/0069 . . {with lysing, e.g. of erythrocyts}
- 2015/0073 . . {Red blood cells}
- 2015/0076 . . . {Reticulocytes}
- 2015/008 . . {White cells}
- 2015/0084 . . {Platelets}
- 2015/0088 . . {Biological contaminants; Fouling}
- 2015/0092 . {Monitoring flocculation or agglomeration}
- 2015/0096 . {Investigating consistence of powders, dustability, dustiness}
- 15/02 . Investigating particle size or size distribution ([G01N 15/04](#), [G01N 15/10](#) take precedence; by measuring osmotic pressure [G01N 7/10](#))
- 15/0205 . . {by optical means, e.g. by light scattering, diffraction, holography or imaging}
- 15/0211 . . . {Investigating a scatter or diffraction pattern}
- 2015/0216 {from fluctuations of diffraction pattern}
- 2015/0222 {from dynamic light scattering, e.g. photon correlation spectroscopy}
- 15/0227 . . . {using imaging, e.g. a projected image of suspension; using holography}
- 2015/0233 . . . {using holography}
- 2015/0238 . . . {Single particle scatter}
- 2015/0244 . . . {with cutting-out molecular scatter}
- 2015/025 . . . {Methods for single or grouped particles}
- 15/0255 . . {with mechanical, e.g. inertial, classification, and investigation of sorted collections ([with centrifuges G01N 15/042](#))}
- 2015/0261 . . . {using impactors}
- 15/0266 . . {with electrical classification}
- 15/0272 . . {with screening; with classification by filtering ([B01D](#) takes precedence)}
- 2015/0277 . . {Average size only}
- 2015/0283 . . {using control of suspension concentration}
- 2015/0288 . . {Sorting the particles}
- 2015/0294 . . {Particle shape}
- 2015/03 . {Electro-optical investigation of a plurality of particles, the analyser being characterised by the optical arrangement}
- 2015/035 . . {the optical arrangement forming an integrated apparatus with the sample container}
- 15/04 . Investigating sedimentation of particle suspensions
- 15/042 . . {by centrifuging and investigating centrifugates ([centrifuges per se B04B](#))}
- 2015/045 . . . {by optical analysis}
- 2015/047 {by static multidetectors}
- 15/05 . . in blood
- 2015/055 . . . {for hematocrite determination}
- 15/06 . Investigating concentration of particle suspensions ([G01N 15/04](#), [G01N 15/10](#) take precedence; by weighing [G01N 5/00](#))
- NOTE**
- References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group and its subgroups:
- Investigating or analysing materials;
 - by the use of optical means: [G01N 21/00](#), e.g. [G01N 21/47](#), [G01N 21/90](#);
 - by other radiations or by particles: [G01N 23/00](#), e.g. [G01N 23/02](#), [G01N 23/201](#);
 - by measuring impedance: [G01N 27/02](#), e.g. [G01N 27/06](#), [G01N 27/22](#);
 - by electrochemical means: [G01N 27/00](#), e.g. [G01N 27/26](#);
 - by measuring absorption of sonic or ultrasonic vibrations: [G01N 29/00](#), e.g. [G01N 29/02](#)
- 15/0606 . . {by collecting particles on a support}
- 15/0612 . . . {Optical scan of the deposits ([G01N 15/0625](#) takes precedence)}

- 15/0618 . . . {of the filter type ([G01N 15/0643](#) takes precedence)}
- 15/0625 {Optical scan of the deposits}
- 15/0631 {Separation of liquids, e.g. by absorption, wicking}
- 15/0637 {Moving support}
- 15/0643 {of the filter type}
- 15/065 . . . {using condensation nuclei counters}
- 15/0656 . . . {using electric, e.g. electrostatic methods or magnetic methods ([by investigating individual particles G01N 15/1031, G01N 15/12](#))}
- 2015/0662 . . . {Comparing before/after passage through filter}
- 2015/0668 . . . {Comparing properties of sample and carrier fluid, e.g. oil in water}
- 2015/0675 . . . {Comparing suspension before/after dilution}
- 2015/0681 . . . {Purposely modifying particles, e.g. humidifying for growing}
- 2015/0687 . . . {in solutions, e.g. non volatile residue}
- 2015/0693 . . . {by optical means, e.g. by integrated nephelometry}
- 15/08 . . . Investigating permeability, pore-volume, or surface area of porous materials
- 15/0806 . . . {Details, e.g. sample holders, mounting samples for testing}
- 2015/0813 . . . {Measuring intrusion, e.g. of mercury}
- 15/082 . . . {Investigating permeability by forcing a fluid through a sample}
- 15/0826 {and measuring fluid flow rate, i.e. permeation rate or pressure change}
- 2015/0833 . . . {Pore surface area}
- 2015/084 . . . {Testing filters}
- 2015/0846 . . . {by use of radiation, e.g. transmitted or reflected light}
- 2015/0853 . . . {by electrical capacitance measurement}
- 2015/086 . . . {of films, membranes or pellicules}
- 2015/0866 . . . {Sorption}
- 2015/0873 {Dynamic sorption, e.g. with flow control means}
- 15/088 . . . {Investigating volume, surface area, size or distribution of pores; Porosimetry}
- 15/0886 {Mercury porosimetry}
- 15/0893 {by measuring weight or volume of sorbed fluid, e.g. B.E.T. method}
- 15/10 . . . Investigating individual particles
- 2015/1006 . . . {for cytology}
- 15/1012 . . . {Calibrating particle analysers; References therefor}
- 2015/1018 {Constitution of reference particles}
- 2015/1025 {Particle flow simulating, e.g. liquid crystal cell}
- 15/1031 . . . {by measuring electrical or magnetic effects thereof, e.g. conductivity or capacity ([involving the use of Coulter counters G01N 15/12; using nanoscale size effects, other than for sizing or counting, by translocation through nanopores G01N 33/48721](#))}
- 2015/1037 . . . {Associating coulter-counter and optical flow cytometer [OFC]}
- 2015/1043 . . . {Measuring mass of individual particles}
- 2015/105 . . . {Other than optical measurement of deformation of individual particles ([optical measurement G01N 2015/1495](#))}
- 15/1056 . . . {Microstructural devices for other than electro-optical measurement ([for electro-optical measurement G01N 15/1484](#))}
- 2015/1062 . . . {counting the particles by other than electro-optical means ([by electro-optical means G01N 2015/1486](#))}
- 2015/1068 . . . {Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers}
- 2015/1075 . . . {Determining speed or velocity of a particle}
- 2015/1081 . . . {Sorting the particles}
- 2015/1087 . . . {Particle size}
- 2015/1093 . . . {Particle shape}
- 15/12 . . . Coulter-counters
- 15/1209 {Details}
- 15/1218 {concerning the aperture}
- 15/1227 {Circuits}
- 2015/1236 {Flow forming}
- 15/1245 {Devices using more than one aperture}
- 2015/1254 {Electrodes}
- 2015/1263 {Scanning electrodes}
- 2015/1272 {Cleaning}
- 2015/1281 {Detecting blocking debris}
- 2015/129 {measuring the ratio of AC/DC impedances}
- 15/14 . . . Electro-optical investigation, e.g. flow cytometers
- 2015/1402 {Data analysis by thresholding or gating operations performed on the acquired signals or stored data}
- 15/1404 {Fluid conditioning in flow cytometers, e.g. flow cells; Supply; Control of flow}
- 2015/1406 {Control of droplet point}
- 2015/1409 {Control of supply of sheaths fluid, e.g. sample injection control}
- 2015/1411 {Features of sheath fluids}
- 2015/1413 {Hydrodynamic focussing}
- 2015/1415 {Control of particle position}
- 2015/1418 {Eliminating clogging of debris}
- 2015/142 {Acoustic or ultrasonic focussing}
- 2015/1422 {Electrical focussing}
- 15/1425 {using an analyser being characterised by its control arrangement}
- 15/1427 {with the synchronisation of components, a time gate for operation of components, or suppression of particle coincidences}
- 15/1429 {using an analyser being characterised by its signal processing}
- 15/1431 {the electronics being integrated with the analyser, e.g. hand-held devices for on-site investigation}
- 15/1434 {using an analyser being characterised by its optical arrangement}
- 15/1436 {the optical arrangement forming an integrated apparatus with the sample container, e.g. a flow cell}
- 2015/1438 {Using two lasers in succession}
- 2015/144 {Imaging characterised by its optical setup}
- 2015/1443 {Auxiliary imaging}
- 2015/1445 {Three-dimensional imaging, imaging in different image planes, e.g. under different angles or at different depths, e.g. by a relative motion of sample and detector, for instance by tomography}
- 2015/1447 {Spatial selection}
- 2015/145 {by pattern of light, e.g. fringe pattern}

- 2015/1452 {Adjustment of focus; Alignment}
 2015/1454 {using phase shift or interference, e.g. for improving contrast}
 15/1456 . . . {without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals}
 15/1459 {the analysis being performed on a sample stream}
 2015/1461 {Coincidence detecting; Circuits therefor}
 15/1463 {using image analysis for extracting features of the particle}

NOTE

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

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06V 10/40](#)
- specific image analysis method for the recognition of microscopic objects [G06V 20/69](#)
- image enhancement in general [G06T 5/00](#)
- image analysis in general [G06T 7/00](#) }

- 2015/1465 {image analysis on colour image}
 15/1468 . . . {with spatial resolution of the texture or inner structure of the particle}

NOTE

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- 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}
 15/1475 {using image analysis for extracting features of the particle}
 2015/1477 . . . {Multiparameters}
 2015/1479 {Using diffuse illumination or excitation}
 2015/1481 . . . {Optical analysis of particle in droplet}
 15/1484 . . . {microstructural devices}
 2015/1486 . . . {Counting the particles}
 2015/1488 . . . {Methods for deciding}
 2015/149 . . . {Sorting the particles}
 2015/1493 . . . {Particle size}
 2015/1495 {Deformation of particles}

- 2015/1497 . . . {Particle shape}

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

- 17/002 . {Test chambers}
 17/004 . {to light}
 17/006 . {of metals}
 17/008 . {Monitoring fouling}
 17/02 . Electrochemical measuring systems for weathering, corrosion or corrosion-protection measurement
 17/04 . Corrosion probes
 17/043 . . {Coupons}
 17/046 . . . {Means for supporting or introducing coupons}

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

- 19/02 . Measuring coefficient of friction between materials
{(testing of tyres [G01M 17/02](#); determinations of friction coefficient used in vehicle braking or traction control systems [B60T 8/172](#))}
 19/04 . Measuring adhesive force between materials, e.g. of sealing tape, of coating
 19/06 . Investigating by removing material, e.g. spark-testing
 19/08 . Detecting presence of flaws or irregularities
 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}	21/15	. . Preventing contamination of the components of the optical system or obstruction of the light path
2021/0187	. . {Mechanical sequence of operations}	2021/151	. . . {Gas blown}
2021/0193	. . {the sample being taken from a stream or flow to the measurement cell}	2021/152	. . . {Scraping; Brushing; Moving band}
21/03	. . Cuvette constructions	2021/154	. . . {Ultrasonic cleaning}
21/0303	. . . {Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment (G01N 21/031 - G01N 21/15 take precedence)}	2021/155	. . . {Monitoring cleanness of window, lens, or other parts}
2021/0307	. . . . {Insert part in cell}	2021/157	. . . . {Monitoring by optical means}
21/031	. . . {Multipass arrangements}	2021/158	. . . {Eliminating condensation}
2021/0314	. . . . {Double pass, autocollimated path}	21/17	. Systems in which incident light is modified in accordance with the properties of the material investigated (where the material investigated is optically excited causing a change in wavelength of the incident light G01N 21/63)
21/0317	. . . {High pressure cuvettes; (G01N 21/0332 - G01N 21/15 take precedence)}	21/1702	. . {with opto-acoustic detection, e.g. for gases or analysing solids}
2021/0321	. . . {One time use cells, e.g. integrally moulded}	2021/1704	. . . {in gases}
2021/0325	. . . {Cells for testing reactions, e.g. containing reagents}	2021/1706	. . . {in solids}
2021/0328	. . . . {Arrangement of two or more cells having different functions for the measurement of reactions}	2021/1708	. . . {with piezotransducers (probes for investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves G01N 29/24)}
21/0332	. . . {with temperature control (control of temperature G05D 23/00; cryostats F17C 3/08)}	21/171	. . {with calorimetric detection, e.g. with thermal lens detection}
2021/0335	. . . . {Refrigeration of cells; Cold stages}	2021/1712	. . . {Thermal lens, mirage effect}
2021/0339	. . . {Holders for solids, powders}	2021/1714	. . . {Photothermal radiometry with measurement of emission}
2021/0342	. . . {Solid sample being immersed, e.g. equiindex fluid}	21/1717	. . {with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance}
2021/0346	. . . {Capillary cells; Microcells}	2021/1719	. . . {Carrier modulation in semiconductors}
2021/035	. . . . {Supports for sample drops}	2021/1721	. . . {Electromodulation}
2021/0353	. . . . . {Conveyor of successive sample drops}	2021/1723	. . . {Fluid modulation}
2021/0357	. . . {Sets of cuvettes}	2021/1725	. . . {Modulation of properties by light, e.g. photorefectance}
2021/036	. . . {transformable, modifiable}	2021/1727	. . . {Magnetomodulation}
2021/0364	. . . {flexible, compressible}	2021/1729	. . . {Piezomodulation}
2021/0367	. . . {Supports of cells, e.g. pivotable}	2021/1731	. . . {Temperature modulation}
2021/0371	. . . . {Supports combined with sample intake}	2021/1734	. . {Sequential different kinds of measurements; Combining two or more methods}
2021/0375	. . . . {Slidable cells}	2021/1736	. . . {with two or more light sources}
2021/0378	. . . {Shapes}	2021/1738	. . {Optionally different kinds of measurements; Method being valid for different kinds of measurement}
2021/0382	. . . . {Frustoconical, tapered cell}	2021/174	. . . {either absorption-reflection or emission-fluorescence}
2021/0385	. . . {Diffusing membrane; Semipermeable membrane}	2021/1742	. . . {either absorption or reflection}
2021/0389	. . . {Windows}	2021/1744	. . . {either absorption or scatter}
2021/0392	. . . . {Nonplanar windows}	2021/1746	. . {Method using tracers}
2021/0396	. . . . {Oblique incidence}	2021/1748	. . {Comparative step being essential in the method}
21/05	. . . Flow-through cuvettes (G01N 21/09 takes precedence; handling fluid samples G01N 1/10)	2021/1751	. . . {Constructive features therefore, e.g. using two measurement cells}
2021/052	. . . . {Tubular type; cavity type; multireflective}	2021/1753	. . . . {and using two light sources}
2021/054	. . . . {Bubble trap; Debubbling}	2021/1755	. . . . {and using two apparatus or two probes}
2021/056	. . . . {Laminated construction}	2021/1757	. . {Time modulation of light being essential to the method of light modification, e.g. using single detector (circuits for photometry with modulation, using one detector G01J 1/44)}
2021/058	. . . . {Flat flow cell}	2021/1759	. . . {Jittering, dithering, optical path modulation}
21/07	. . . Centrifugal type cuvettes (G01N 21/09 takes precedence)	2021/1761	. . {A physical transformation being implied in the method, e.g. a phase change}
21/09	. . . adapted to resist hostile environments or corrosive or abrasive materials	2021/1763	. . . {Gas to liquid phase change}
21/11	. . Filling or emptying of cuvettes		
2021/115	. . . {Washing; Purging}		
21/13	. . Moving of cuvettes or solid samples to or from the investigating station (handling materials for automatic analysis G01N 35/00)		
2021/135	. . . {Sample holder displaceable (in automatised apparatus G01N 35/02)}		

2021/1765	. . . {Method using an image detector and processing of image signal}	2021/296	. . . . {Visually measuring scintillation effect}
2021/1768	. . . {using photographic film}	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)}
2021/177	. . . {Detector of the video camera type}	21/3103	. . . . {Atomic absorption analysis}
2021/1772	. . . . {Array detector}	2021/3107	. . . . . {Cold vapor, e.g. determination of Hg}
2021/1774	. . . . . {Line array detector}	2021/3111	. . . . . {using Zeeman split}
2021/1776	. . . . {Colour camera}	2021/3114	. . . . . {Multi-element AAS arrangements}
2021/1778	. . . . {IIT [intensified image tube]}	2021/3118	. . . . . {Commutating sources, e.g. line source/broad source, chopping for comparison of broad/narrow regimes}
2021/178	. . . {Methods for obtaining spatial resolution of the property being measured}	2021/3122	. . . . . {using a broad source with a monochromator}
2021/1782	. . . {In-depth resolution}	2021/3125	. . . . . {Measuring the absorption by excited molecules}
2021/1785	. . . {Three dimensional}	2021/3129	. . . . . {Determining multicomponents by multiwavelength light}
2021/1787	. . . . {Tomographic, i.e. computerised reconstruction from projective measurements}	2021/3133	. . . . . {with selection of wavelengths before the sample}
2021/1789	. . . {Time resolved}	2021/3137	. . . . . {with selection of wavelengths after the sample}
2021/1791	. . . {stroboscopic; pulse gated; time range gated}	21/314	. . . . . {with comparison of measurements at specific and non-specific wavelengths (dual wavelength spectrometry G01J 3/427)}
2021/1793	. . . {Remote sensing}	2021/3144	. . . . . {for oxymetry}
2021/1795	. . . {Atmospheric mapping of gases}	2021/3148	. . . . . {using three or more wavelengths}
2021/1797	. . . {in landscape, e.g. crops}	21/3151	. . . . . {using two sources of radiation of different wavelengths (G01N 21/33 - G01N 21/39 take precedence)}
21/19	. . . Dichroism	2021/3155	. . . . . {Measuring in two spectral ranges, e.g. UV and visible}
21/21	. . . Polarisation-affecting properties (G01N 21/19 takes precedence)	2021/3159	. . . . . {Special features of multiplexing circuits}
21/211	. . . {Ellipsometry (optical thickness measurement G01B 11/06)}	2021/3162	. . . . . {with offset adjustment between filters}
2021/212	. . . . {Arrangement with total internal reflection}	2021/3166	. . . . . {using separate detectors and filters}
2021/213	. . . . {Spectrometric ellipsometry}	2021/317	. . . . . {Special constructive features}
2021/214	. . . . {Variance incidence arrangement}	2021/3174	. . . . . {Filter wheel}
2021/215	. . . . {Brewster incidence arrangement}	2021/3177	. . . . . {Use of spatially separated filters in simultaneous way}
2021/216	. . . {using circular polarised light}	2021/3181	. . . . . {using LEDs}
2021/217	. . . {Measuring depolarisation or comparing polarised and depolarised parts of light}	2021/3185	. . . . . {typically monochromatic or band-limited}
2021/218	. . . {Measuring properties of electrooptical or magneto-optical media}	2021/3188	. . . . . {band-limited}
21/23	. . . Bi-refringence	2021/3192	. . . . . {Absorption edge variation is measured}
21/25	. . . Colour; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands	2021/3196	. . . . . {Correlating located peaks in spectrum with reference data, e.g. fingerprint data}
21/251	. . . {Colorimeters; Construction thereof}	21/33	. . . . . using ultra-violet light (G01N 21/39 takes precedence)
21/253	. . . . {for batch operation, i.e. multisample apparatus (analytical automats G01N 35/00)}	2021/335	. . . . . {Vacuum UV}
21/255	. . . {Details, e.g. use of specially adapted sources, lighting or optical systems}	21/35	. . . . . using infra-red light (G01N 21/39 takes precedence)
21/256	. . . {Arrangements using two alternating lights and one detector}	21/3504	. . . . . for analysing gases, e.g. multi-gas analysis
2021/258	. . . {Surface plasmon spectroscopy, e.g. micro- or nanoparticles in suspension}	2021/3509	. . . . . {Correlation method, e.g. one beam alternating in correlator/sample field}
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)	2021/3513	. . . . . {Open path with an instrumental source}
21/272	. . . . {for following a reaction, e.g. for determining photometrically a reaction rate (photometric kinetic analysis)}	21/3518	. . . . . Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques
21/274	. . . . {Calibration, base line adjustment, drift correction}		
21/276	. . . . . {with alternation of sample and standard in optical path}		
21/278	. . . . . {Constitution of standards}		
21/29	. . . using visual detection (G01N 21/31 takes precedence)		
21/293	. . . . {with colour charts, graduated scales or turrets}		

NOTE

This group also covers devices without instrumental sources, e.g.

G01N

G01N 21/3518

(continued)

		radiometric-type devices using ambient infra-red light.			2021/418	. . . . .	{Frequency/phase diagrams}
					2021/4186	. . . . .	{Phase modulation imaging}
2021/3522	. . . . .	{balancing by two filters on two detectors}			2021/4193	. . . . .	{using a PSD}
2021/3527	. . . . .	{and using one filter cell as attenuator}			21/43	. . . . .	by measuring critical angle
2021/3531	. . . . .	{without instrumental source, i.e. radiometric}			21/431	. . . . .	{Dip refractometers, e.g. using optical fibres}
2021/3536	. . . . .	{using modulation of pressure or density}			2021/432	. . . . .	{comprising optical fibres}
2021/354	. . . . .	{Hygrometry of gases}			2021/433	. . . . .	{with an unclad part on the fibre}
2021/3545	. . . . .	{Disposition for compensating effect of interfering gases}			2021/434	. . . . .	{Dipping block in contact with sample, e.g. prism}
2021/355	. . . . .	{by using a third optical path, e.g. interference cuvette}			2021/435	. . . . .	{Sensing drops on the contact surface}
21/3554	. . . . .	for determining moisture content			2021/436	. . . . .	{Sensing resonant reflection}
21/3559	. . . . .	in sheets, e.g. in paper			2021/437	. . . . .	{with investigation of angle}
21/3563	. . . . .	for analysing solids; Preparation of samples therefor			2021/438	. . . . .	{with investigation of wavelength}
2021/3568	. . . . .	{applied to semiconductors, e.g. Silicon}			21/45	. . . . .	using interferometric methods; using Schlieren methods
2021/3572	. . . . .	{Preparation of samples, e.g. salt matrices}			2021/451	. . . . .	{for determining the optical absorption}
21/3577	. . . . .	for analysing liquids, e.g. polluted water			21/453	. . . . .	{Holographic interferometry (for dimensional measurements G01B 9/021 - G01B 9/029)}
21/3581	. . . . .	using far infra-red light; using Terahertz radiation			21/455	. . . . .	{Schlieren methods, e.g. for gradient index determination; Shadowgraph}
21/3586	. . . . .	by Terahertz time domain spectroscopy [THz-TDS]			2021/456	. . . . .	{Moire deflectometry}
21/359	. . . . .	using near infra-red light			2021/458	. . . . .	{using interferential sensor, e.g. sensor fibre, possibly on optical waveguide}
2021/3595	. . . . .	{using FTIR}			21/47	. . . . .	Scattering, i.e. diffuse reflection (G01N 21/25 , G01N 21/41 take precedence G01N 21/55 takes precedence)
21/37	. . . . .	using pneumatic detection (opto-acoustic detection G01N 21/1702)}			2021/4702	. . . . .	{Global scatter; Total scatter, excluding reflections}
21/39	. . . . .	using tunable lasers			2021/4704	. . . . .	{Angular selective}
2021/391	. . . . .	{Intracavity sample}			2021/4707	. . . . .	{Forward scatter; Low angle scatter}
2021/392	. . . . .	{Measuring reradiation, e.g. fluorescence, backscatter}			2021/4709	. . . . .	{Backscatter}
2021/393	. . . . .	{and using a spectral variation of the interaction of the laser beam and the sample}			2021/4711	. . . . .	{Multiangle measurement}
2021/394	. . . . .	{DIAL method}			2021/4714	. . . . .	{Continuous plural angles}
2021/395	. . . . .	{using a topographic target}			2021/4716	. . . . .	{Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}
2021/396	. . . . .	{Type of laser source}			2021/4719	. . . . .	{using a optical fibre array}
2021/397	. . . . .	{Dye laser}			2021/4721	. . . . .	{using a PSD}
2021/398	. . . . .	{CO ₂ laser}			2021/4723	. . . . .	{Scanning scatter angles}
2021/399	. . . . .	{Diode laser}			2021/4726	. . . . .	{Detecting scatter at 90°}
21/41	. . . . .	Refractivity; Phase-affecting properties, e.g. optical path length (G01N 21/21 takes precedence)			2021/4728	. . . . .	{Optical definition of scattering volume}
2021/4106	. . . . .	{Atmospheric distortion; Turbulence}			2021/473	. . . . .	{Compensating for unwanted scatter, e.g. reliefs, marks}
2021/4113	. . . . .	{Atmospheric dispersion}			2021/4733	. . . . .	{Discriminating different types of scatterers}
21/412	. . . . .	{Index profiling of optical fibres}			2021/4735	. . . . .	{Solid samples, e.g. paper, glass}
2021/4126	. . . . .	{Index of thin films}			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}
21/4133	. . . . .	{Refractometers, e.g. differential}			21/474	. . . . .	{Details of optical heads therefor, e.g. using optical fibres}
2021/414	. . . . .	{Correcting temperature effect in refractometers}			2021/4742	. . . . .	{comprising optical fibres}
2021/4146	. . . . .	{Differential cell arrangements}			2021/4745	. . . . .	{Fused bundle, i.e. for backscatter}
2021/4153	. . . . .	{Measuring the deflection of light in refractometers}			2021/4747	. . . . .	{Concentric bundles}
2021/416	. . . . .	{Visualising flow by index measurement}			2021/475	. . . . .	{Bifurcated bundle}
2021/4166	. . . . .	{Methods effecting a waveguide mode enhancement through the property being measured}			2021/4752	. . . . .	{Geometry}
2021/4173	. . . . .	{Phase distribution}			2021/4754	. . . . .	{Diffuse illumination}
					2021/4757	. . . . .	{Geometry 0/45° or 45/0°}
					2021/4759	. . . . .	{Annular illumination}
					2021/4761	. . . . .	{Mirror arrangements, e.g. in IR range}
					2021/4764	. . . . .	{Special kinds of physical applications}

2021/4766	. . . . .	{Sample containing fluorescent brighteners}	21/5911	. . . . .	{of the scanning type (scanning per se G02B)}
2021/4769	. . . . .	{Fluid samples, e.g. slurries, granulates; Compressible powdery of fibrous samples}	2021/5915	. . . . .	{Processing scan data in densitometry}
2021/4771	. . . . .	{Matte surfaces with reflecting particles}	2021/5919	. . . . .	{Determining total density of a zone}
2021/4773	. . . . .	{Partly or totally translucent samples}	2021/5923	. . . . .	{Determining zones of density; quantitating spots}
2021/4776	. . . . .	{Miscellaneous in diffuse reflection devices}	2021/5926	. . . . .	{Isodensitometers}
2021/4778	. . . . .	{Correcting variations in front distance}	2021/593	. . . . .	{Correcting from the background density}
2021/478	. . . . .	{Application in testing analytical test strips}	2021/5934	. . . . .	{Averaging on a zone}
2021/4783	. . . . .	{Examining under varying incidence; Angularly adjustable head}	2021/5938	. . . . .	{Features of monitor, display}
21/4785	. . .	{Standardising light scatter apparatus; Standards therefor}	2021/5942	. . . . .	{for dot area ratio in printing applications}
21/4788	. . .	{Diffraction (for sizing particles G01N 15/0205)}	2021/5946	. . . . .	{for binary signal}
2021/479	. . . . .	{Speckle}	2021/5949	. . . . .	{Correcting nonlinearity of signal, e.g. in measurement of photomedium}
2021/4792	. . .	{Polarisation of scatter light}	2021/5953	. . . . .	{for detecting a spatial spectrum}
21/4795	. . .	{spatially resolved investigating of object in scattering medium (in vivo A61B)}	2021/5957	. . . . .	{using an image detector type detector, e.g. CCD}
2021/4797	. . . . .	{time resolved, e.g. analysis of ballistic photons}	2021/5961	. . . . .	{using arrays of sources and detectors}
21/49	. . .	within a body or fluid	2021/5965	. . . . .	{using selected detectors in an array}
2021/495	. . . . .	{the fluid being adsorbed, e.g. in porous medium}	2021/5969	. . . . .	{Scanning of a tube, a cuvette, a volume of sample}
21/51	. . . . .	inside a container, e.g. in an ampoule (G01N 21/53 takes precedence)	2021/5973	. . . . .	{where the cuvette or tube is moved}
2021/513	. . . . .	{Cuvettes for scattering measurements}	2021/5976	. . . . .	{Image projected and scanning projected image}
2021/516	. . . . .	{Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays}	2021/598	. . . . .	{Features of mounting, adjusting}
21/53	. . . . .	within a flowing fluid, e.g. smoke	2021/5984	. . . . .	{height adjustable}
21/532	. . . . .	{with measurement of scattering and transmission}	2021/5988	. . . . .	{Fluid mounting or the like, e.g. vortex}
21/534	. . . . .	{by measuring transmission alone, i.e. determining opacity}	2021/5992	. . . . .	{Double pass}
2021/536	. . . . .	{Measurement device mounted at stack}	2021/5996	. . . . .	{Positioning the head}
21/538	. . . . .	{for determining atmospheric attenuation and visibility}	21/61	. . .	Non-dispersive gas analysers (G01N 21/3504 takes precedence)
21/55	. .	Specular reflectivity	21/62	. .	Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light
2021/551	. . .	{Retroreflectance}	2021/625	. .	{Excitation by energised particles such as metastable molecules}
21/552	. . .	Attenuated total reflection	21/63	. .	optically excited
21/553	. . . . .	{and using surface plasmons (fluorescence excitation G01N 21/648; enhanced Raman G01N 21/658)}	21/631	. . .	{using photolysis and investigating photolysed fragments}
21/554	. . . . .	{detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}	2021/632	. . . . .	{Predissociation, e.g. for fluorescence of transient excited radicals}
2021/555	. . .	{Measuring total reflection power, i.e. scattering and specular}	2021/633	. . .	{Photoinduced grating used for analysis}
2021/556	. . .	{Measuring separately scattering and specular}	2021/634	. . .	{Photochromic material analysis}
2021/557	. . .	{Detecting specular reflective parts on sample}	2021/635	. . .	{Photosynthetic material analysis, e.g. chlorophyll}
2021/558	. . .	{Measuring reflectivity and transmission}	21/636	. . .	{using an arrangement of pump beam and probe beam; using the measurement of optical non-linear properties; (non-linear optics per se G02F 1/35)}
2021/559	. . .	{Determining variation of specular reflection within diffusively reflecting sample}	2021/637	. . . . .	{Lasing effect used for analysis}
21/57	. . .	Measuring gloss	2021/638	. . . . .	{Brillouin effect, e.g. stimulated Brillouin effect}
2021/575	. . . . .	{Photogoniometering}	21/64	. . .	Fluorescence; Phosphorescence
21/59	. .	Transmissivity (G01N 21/25 takes precedence)	21/6402	. . . . .	{Atomic fluorescence; Laser induced fluorescence}
2021/5903	. . .	{using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}	21/6404	. . . . .	{Atomic fluorescence}
21/5907	. . .	{Densitometers}	2021/6406	. . . . .	{multi-element}
			21/6408	. . . . .	{with measurement of decay time, time resolved fluorescence}
			2021/641	. . . . .	{Phosphorimetry, gated}
			2021/6413	. . . . .	{Distinction short and delayed fluorescence or phosphorescence}

2021/6415	. . . . .	{with two excitations, e.g. strong pump/probe flash}	2021/656	. . . . .	{Raman microprobe}
2021/6417	. . . . .	{Spectrofluorimetric devices}	21/658	. . . . .	{enhancement Raman, e.g. surface plasmons}
2021/6419	. . . . .	{Excitation at two or more wavelengths}	21/66	. . .	electrically excited, e.g. electroluminescence
2021/6421	. . . . .	{Measuring at two or more wavelengths}	21/67	. . .	using electric arcs or discharges
2021/6423	. . . . .	{Spectral mapping, video display}	21/68	. . .	using high frequency electric fields
2021/6426	. . . . .	{Determining Fraunhofer lines}	21/69	. . .	specially adapted for fluids {, e.g. molten metal}
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)}	2021/695	. . . . .	{Molten metals}
21/643	. . . . .	{non-biological material}	21/70	. . .	mechanically excited, e.g. triboluminescence
2021/6432	. . . . .	{Quenching}	21/71	. . .	thermally excited
2021/6434	. . . . .	{Optrodes}	2021/712	. . .	{using formation of volatile hydride}
2021/6436	. . . . .	{for analysing tapes}	21/714	. . .	{Sample nebulisers for flame burners or plasma burners (nebulizers per se B05B)}
2021/6439	. . . . .	{with indicators, stains, dyes, tags, labels, marks}	21/716	. . .	{by measuring the radiation emitted by a test object treated by combustion gases for investigating the composition of gas mixtures}
2021/6441	. . . . .	{with two or more labels}	21/718	. . .	{Laser microanalysis, i.e. with formation of sample plasma}
2021/6443	. . . . .	{Fluorimetric titration}	21/72	. . .	using flame burners
21/6445	. . . . .	{Measuring fluorescence polarisation}	2021/725	. . . . .	{for determining of metalloids, using Beilstein type reaction}
21/6447	. . . . .	{by visual observation}	21/73	. . .	using plasma burners or torches
21/645	. . . . .	{Specially adapted constructive features of fluorimeters}	21/74	. . .	using flameless atomising, e.g. graphite furnaces
21/6452	. . . . .	{Individual samples arranged in a regular 2D-array, e.g. multiwell plates}	2021/745	. . . . .	{Control of temperature, heating, ashing}
21/6454	. . . . .	{using an integrated detector array}	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)
21/6456	. . . . .	{Spatial resolved fluorescence measurements; Imaging}	2021/751	. . .	{Comparing reactive/non reactive substances}
21/6458	. . . . .	{Fluorescence microscopy (fluorescence microscopes per se G02B 21/0076 and G02B 21/16)}	2021/752	. . .	{Devices comprising reaction zones}
2021/646	. . . . .	{Detecting fluorescent inhomogeneities at a position, e.g. for detecting defects}	2021/754	. . .	{Reagent flow and intermittent injection of sample or <i>vice versa</i> }
2021/6463	. . . . .	{Optics}	2021/755	. . .	{Comparing readings with/without reagents, or before/after reaction}
2021/6465	. . . . .	{Angular discrimination}	2021/757	. . .	{using immobilised reagents}
2021/6467	. . . . .	{Axial flow and illumination}	2021/758	. . .	{using reversible reaction}
2021/6469	. . . . .	{Cavity, e.g. ellipsoid}	21/76	. . .	Chemiluminescence; Bioluminescence
2021/6471	. . . . .	{Special filters, filter wheel}	21/763	. . .	{Bioluminescence}
2021/6473	. . . . .	{In-line geometry}	21/766	. . .	{of gases}
2021/6476	. . . . .	{Front end, i.e. backscatter, geometry}	21/77	. . .	by observing the effect on a chemical indicator
2021/6478	. . . . .	{Special lenses}	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)}
21/648	. . . . .	{using evanescent coupling or surface plasmon coupling for the excitation of fluorescence}	2021/7706	. . . . .	{Reagent provision}
2021/6482	. . . . .	{Sample cells, cuvettes}	2021/7709	. . . . .	{Distributed reagent, e.g. over length of guide}
2021/6484	. . . . .	{Optical fibres}	2021/7713	. . . . .	{in core}
21/6486	. . . . .	{Measuring fluorescence of biological material, e.g. DNA, RNA, cells (G01N 21/6428 takes precedence)}	2021/7716	. . . . .	{in cladding}
21/6489	. . . . .	{Photoluminescence of semiconductors}	2021/772	. . . . .	{Tip coated light guide}
2021/6491	. . . . .	{Measuring fluorescence and transmission; Correcting inner filter effect}	2021/7723	. . . . .	{Swelling part, also for adsorption sensor, i.e. without chemical reaction}
2021/6493	. . . . .	{by alternating fluorescence/transmission or fluorescence/reflection}	2021/7726	. . . . .	{Porous glass}
2021/6495	. . . . .	{Miscellaneous methods}	2021/773	. . . . .	{Porous polymer jacket; Polymer matrix with indicator}
2021/6497	. . . . .	{Miscellaneous applications}	2021/7733	. . . . .	{Reservoir, liquid reagent}
21/65	. . .	Raman scattering	2021/7736	. . . . .	{exposed, cladding free}
2021/651	. . . . .	{Cuvettes therefore}	21/774	. . . . .	{the reagent being on a grating or periodic structure}
2021/653	. . . . .	{Coherent methods [CARS]}			
2021/655	. . . . .	{Stimulated Raman}			

21/7743	. . . . . {the reagent-coated grating coupling light in or out of the waveguide}	2021/8528	. . . . . {Immerged light conductor}
21/7746	. . . . . {the waveguide coupled to a cavity resonator}	2021/8535	. . . . . {presenting a cut}
2021/775	. . . . . {Indicator and selective membrane}	2021/8542	. . . . . {presenting an exposed part of the core}
2021/7753	. . . . . {Reagent layer on photoelectrical transducer}	2021/855	. . . . . {Underground probe, e.g. with provision of a penetration tool}
2021/7756	. . . . . {Sensor type}	2021/8557	. . . . . {Special shaping of flow, e.g. using a by-pass line, jet flow, curtain flow}
2021/7759	. . . . . {Dipstick; Test strip}	2021/8564	. . . . . {Sample as drops}
2021/7763	. . . . . {Sample through flow}	2021/8571	. . . . . {using filtering of sample fluid}
2021/7766	. . . . . {Capillary fill}	2021/8578	. . . . . {Gaseous flow (IR analysers G01N 21/8507)}
2021/7769	. . . . . {Measurement method of reaction-produced change in sensor}	2021/8585	. . . . . {using porous sheets, e.g. for separating aerosols}
2021/7773	. . . . . {Reflection}	2021/8592	. . . . . {Grain or other flowing solid samples}
2021/7776	. . . . . {Index}	21/86	. . . . . Investigating moving sheets (G01N 21/89 takes precedence)
2021/7779	. . . . . {interferometric}	2021/8609	. . . . . {Optical head specially adapted}
2021/7783	. . . . . {Transmission, loss}	2021/8618	. . . . . {with an optically integrating part, e.g. hemisphere}
2021/7786	. . . . . {Fluorescence}	2021/8627	. . . . . {with an illuminator over the whole width}
2021/7789	. . . . . {Cavity or resonator}	2021/8636	. . . . . {Detecting arrangement therefore, e.g. collimators, screens}
2021/7793	. . . . . {Sensor comprising plural indicators}	2021/8645	. . . . . {using multidetectors, detector array}
2021/7796	. . . . . {Special mountings, packaging of indicators}	2021/8654	. . . . . {Mechanical support; Mounting of sheet}
21/78	. . . . . producing a change of colour	2021/8663	. . . . . {Paper, e.g. gloss, moisture content (inspecting the presence of flaws in moving materials, e.g. paper G01N 21/89; measurement of gloss in general G01N 21/57)}
21/783	. . . . . {for analysing gases}	2021/8672	. . . . . {Paper formation parameter}
2021/786	. . . . . {with auxiliary heating for reaction}	2021/8681	. . . . . {Paper fibre orientation}
21/79	. . . . . Photometric titration	2021/869	. . . . . {Plastics or polymeric material, e.g. polymers orientation in plastic, adhesive imprinted band}
21/80	. . . . . Indicating pH value	21/87	. . . . . Investigating jewels (G01N 21/88 takes precedence)
21/81	. . . . . Indicating humidity	21/88	. . . . . Investigating the presence of flaws or contamination
21/82	. . . . . producing a precipitate or turbidity	21/8803	. . . . . {Visual inspection (measuring projectors G01B 9/08)}
2021/825	. . . . . {Agglutination}	21/8806	. . . . . {Specially adapted optical and illumination features}
21/83	. . . . . Turbidimetric titration	2021/8809	. . . . . {Adjustment for highlighting flaws}
21/84	. . . . . Systems specially adapted for particular applications	2021/8812	. . . . . {Diffuse illumination, e.g. "sky"}
2021/8405	. . . . . {Application to two-phase or mixed materials, e.g. gas dissolved in liquids}	2021/8816	. . . . . {by using multiple sources, e.g. LEDs}
2021/8411	. . . . . {Application to online plant, process monitoring}	2021/8819	. . . . . {by using retroreflecting screen}
2021/8416	. . . . . {and process controlling, not otherwise provided for}	2021/8822	. . . . . {Dark field detection}
21/8422	. . . . . {Investigating thin films, e.g. matrix isolation method}	2021/8825	. . . . . {Separate detection of dark field and bright field}
2021/8427	. . . . . {Coatings}	2021/8829	. . . . . {Shadow projection or structured background, e.g. for deflectometry (three-dimensional metrology of surfaces G01B 11/25)}
2021/8433	. . . . . {Comparing coated/uncoated parts}	2021/8832	. . . . . {Structured background, e.g. for transparent objects}
2021/8438	. . . . . {Multilayers}	2021/8835	. . . . . {Adjustable illumination, e.g. software adjustable screen}
2021/8444	. . . . . {Fibrous material}	2021/8838	. . . . . {Stroboscopic illumination; synchronised illumination}
2021/845	. . . . . {Objects on a conveyor}	2021/8841	. . . . . {Illumination and detection on two sides of object}
2021/8455	. . . . . {and using position detectors}	2021/8845	. . . . . {Multiple wavelengths of illumination or detection}
2021/8461	. . . . . {Investigating impurities in semiconductor, e.g. Silicon}	2021/8848	. . . . . {Polarisation of light}
2021/8466	. . . . . {Investigation of vegetal material, e.g. leaves, plants, fruits}		
2021/8472	. . . . . {Investigation of composite materials}		
2021/8477	. . . . . {Investigating crystals, e.g. liquid crystals}		
21/8483	. . . . . {Investigating reagent band (test-element handling not specific to a test method G01N 33/4875; analytical elements specific to chemical analysis of biological material G01N 33/52; autometer with reagent band G01N 35/04)}		
2021/8488	. . . . . {the band presenting reference patches}		
2021/8494	. . . . . {Measuring or storing parameters of the band}		
21/85	. . . . . Investigating moving fluids or granular solids		
21/8507	. . . . . {Probe photometers, i.e. with optical measuring part dipped into fluid sample}		
2021/8514	. . . . . {with immersed mirror}		
2021/8521	. . . . . {with a combination mirror cell-cuvette}		

21/8851	. . .	{Scan or image signal processing specially adapted therefor, e.g. for scan signal adjustment, for detecting different kinds of defects, for compensating for structures, markings, edges (G01N 21/8806 and G01N 21/93 - G01N 21/95692 take precedence; optical measurement of dimensions G01B 11/00 ; optical scanning G02B 26/10 ; image transformation G06T 3/00 ; computerised image enhancement G06T 5/00 ; image processing per se for flaw detection G06T 7/0002)}	2021/8927	. . . . .	{Defects in a structured web}
			2021/8928	. . . . .	{Haze defects, i.e. with a part of diffracted light}
			21/894	. . . . .	Pinholes
			21/896	. . . . .	Optical defects in or on transparent materials, e.g. distortion, surface flaws {in conveyed flat sheet or rod (for other objects G01N 21/958)}
			2021/8962	. . . . .	{for detecting separately opaque flaws and refracting flaws}
			2021/8965	. . . . .	{using slant illumination, using internally reflected light}
			2021/8967	. . . . .	{Discriminating defects on opposite sides or at different depths of sheet or rod}
2021/8854	. . . . .	{Grading and classifying of flaws}	21/898	. . . . .	Irregularities in textured or patterned surfaces, e.g. textiles, wood
2021/8858	. . . . .	{Flaw counting}	21/8983	. . . . .	{for testing textile webs, i.e. woven material}
2021/8861	. . . . .	{Determining coordinates of flaws}	21/8986	. . . . .	{Wood}
2021/8864	. . . . .	{Mapping zones of defects}	21/90	. . .	in a container or its contents (G01N 21/91 takes precedence)
2021/8867	. . . . .	{using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing}	21/9009	. . . . .	{Non-optical constructional details affecting optical inspection, e.g. cleaning mechanisms for optical parts, vibration reduction}
2021/887	. . . . .	{the measurements made in two or more directions, angles, positions}	21/9018	. . . . .	{Dirt detection in containers}
2021/8874	. . . . .	{Taking dimensions of defect into account}	21/9027	. . . . .	{in containers after filling}
2021/8877	. . . . .	{Proximity analysis, local statistics}	21/9036	. . . . .	{using arrays of emitters or receivers}
2021/888	. . . . .	{Marking defects}	21/9045	. . . . .	{Inspection of ornamented or stippled container walls}
2021/8883	. . . . .	{involving the calculation of gauges, generating models}	21/9054	. . . . .	{Inspection of sealing surface and container finish}
2021/8887	. . . . .	{based on image processing techniques}	2021/9063	. . . . .	{Hot-end container inspection}
2021/889	. . . . .	{providing a bare video image, i.e. without visual measurement aids}	21/9072	. . . . .	{with illumination or detection from inside the container}
2021/8893	. . . . .	{providing a video image and a processed signal for helping visual decision}	21/9081	. . . . .	{Inspection especially designed for plastic containers, e.g. preforms}
2021/8896	. . . . .	{Circuits specially adapted for system specific signal conditioning}	21/909	. . . . .	{in opaque containers or opaque container parts, e.g. cans, tins, caps, labels}
21/89	. . .	in moving material, e.g. running paper or textiles (G01N 21/90 , G01N 21/91 , G01N 21/94 take precedence)	21/91	. . .	using penetration of dyes, e.g. fluorescent ink
21/8901	. . . . .	{Optical details; Scanning details (per se G02B)}	21/93	. . .	Detection standards; Calibrating {baseline adjustment, drift correction}
2021/8902	. . . . .	{Anamorphic spot}	2021/933	. . . . .	{Adjusting baseline or gain (also for web inspection)}
21/8903	. . . . .	{using a multiple detector array}	2021/936	. . . . .	{Adjusting threshold, e.g. by way of moving average}
2021/8904	. . . . .	{Sheetwide light conductor on detecting side, e.g. fluorescing light rod}	21/94	. . .	Investigating contamination, e.g. dust (G01N 21/85 takes precedence)
2021/8905	. . . . .	{Directional selective optics, e.g. slits, spatial filters}	2021/945	. . . . .	{Liquid or solid deposits of macroscopic size on surfaces, e.g. drops, films, or clustered contaminants (dust particles and microscopic contaminants in G01N 21/94)}
2021/8907	. . . . .	{Cylindrical optics}	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)
2021/8908	. . . . .	{Strip illuminator, e.g. light tube}	21/9501	. . . . .	{Semiconductor wafers (manufacturing processes per se of semiconductor devices implementing a measuring step H01L 22/10)}
2021/8909	. . . . .	{Scan signal processing specially adapted for inspection of running sheets}	21/9503	. . . . .	{Wafer edge inspection}
2021/891	. . . . .	{Edge discrimination, e.g. by signal filtering}	21/9505	. . . . .	{Wafer internal defects, e.g. microcracks}
2021/8911	. . . . .	{Setting scan-width signals}	21/9506	. . . . .	{Optical discs}
2021/8912	. . . . .	{Processing using lane subdivision}	21/9508	. . . . .	{Capsules; Tablets}
21/8914	. . . . .	{characterised by the material examined}			
21/8915	. . . . .	{non-woven textile material}			
21/8916	. . . . .	{for testing photographic material}			
2021/8917	. . . . .	{Paper, also undulated}			
2021/8918	. . . . .	{Metal}			
21/892	. . . . .	characterised by the flaw, defect or object feature examined			
21/8921	. . . . .	{Streaks}			
21/8922	. . . . .	{Periodic flaws}			
2021/8924	. . . . .	{Dents; Relief flaws}			
2021/8925	. . . . .	{Inclusions}			

- 21/951 {Balls}
- 2021/9511 {Optical elements other than lenses, e.g. mirrors (testing of optical apparatus in [G01M 11/00](#))}
- 2021/9513 {Liquid crystal panels}
- 21/9515 {Objects of complex shape, e.g. examined with use of a surface follower device (measuring contours and curvatures [G01B 11/24](#))}
- 2021/9516 {whereby geometrical features are being masked}
- 2021/9518 {using a surface follower, e.g. robot}
- 21/952 Inspecting the exterior surface of cylindrical bodies or wires ([G01N 21/956](#) takes precedence)
- 21/954 Inspecting the inner surface of hollow bodies, e.g. bores
- 2021/9542 {using a probe}
- 2021/9544 {with emitter and receiver on the probe}
- 2021/9546 {with remote light transmitting, e.g. optical fibres}
- 2021/9548 {Scanning the interior of a cylinder}
- 21/956 Inspecting patterns on the surface of objects (contactless testing of electronic circuits [G01R 31/308](#); testing currency [G07D](#) {manufacturing processes per se of semiconductor devices implementing a measuring step [H01L 22/10](#)})
- 21/95607 {using a comparative method}
- 2021/95615 {with stored comparison signal}
- 21/95623 {using a spatial filtering method (per se [G02B](#))}
- 2021/9563 {and suppressing pattern images}
- 2021/95638 {for PCB's}
- 2021/95646 {Soldering}
- 2021/95653 {Through-holes}
- 2021/95661 {for leads, e.g. position, curvature}
- 2021/95669 {for solder coating, coverage}
- 2021/95676 {Masks, reticles, shadow masks}
- 21/95684 {Patterns showing highly reflecting parts, e.g. metallic elements}
- 21/95692 {Patterns showing hole parts, e.g. honeycomb filtering structures}
- 21/958 Inspecting transparent materials {or objects, e.g. windscreens (for conveyed flat sheet or rod [G01N 21/896](#))}
- 2021/9583 {Lenses}
- 2021/9586 {Windscreens}
- 22/00** **Investigating or analysing materials by the use of microwaves 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 23/227](#) 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 . . . Goniometers
 - 23/20025 . . . Sample holders or supports therefor
 - 23/20033 provided with temperature control or heating means
 - 23/20041 for high pressure testing, e.g. anvil cells
 - 23/2005 . . . Preparation of powder samples therefor
 - 23/20058 . . Measuring diffraction of electrons, e.g. low energy electron diffraction [LEED] method or reflection high energy electron diffraction [RHEED] method
 - 23/20066 . . Measuring inelastic scatter of gamma rays, e.g. Compton effect
 - 23/20075 . . {by measuring interferences of X-rays, e.g. Borrmann effect}
 - 23/20083 . . {by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement}
 - 23/20091 . . Measuring the energy-dispersion spectrum [EDS] of diffracted radiation
 - 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	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)
25/30	. . . . using electric temperature-responsive elements	27/002	. {by investigating the work function voltage}
25/32	. . . . . using thermoelectric elements	27/005	. . {by determining the work function in vacuum}
25/34	. . . . . using mechanical temperature-responsive elements, e.g. bimetallic (bimetallic elements per se G12B 1/02)	27/007	. {by investigating the electric dipolar moment (measuring piezo-electric properties G01R 29/22)}
25/36	. . . . . for investigating the composition of gas mixtures	27/02	. by investigating impedance
25/38	. . . . . using the melting or combustion of a solid	27/021	. . {before and after chemical transformation of the material}
25/385	. . . . . {for investigating the composition of gas mixtures}	27/023	. . {where the material is placed in the field of a coil}
25/40	. . . the heat developed being transferred to a flowing fluid	27/025	. . . {a current being generated within the material by induction}
25/42	. . . . continuously	27/026	. . {Dielectric impedance spectroscopy (electrochemical impedance spectroscopy for measuring corrosion G01N 17/02)}
25/44	. . . the heat developed being transferred to a fixed quantity of fluid	27/028	. . {Circuits therefor (measuring impedance per se G01R 27/02)}
25/46	. . . . for investigating the composition of gas mixtures	27/04	. . by investigating resistance
25/48	. . on solution, sorption, or a chemical reaction not involving combustion or catalytic oxidation	27/041	. . . {of a solid body}
25/4806	. . . {Details not adapted to a particular type of sample}	27/043	. . . {of a granular material}
25/4813	. . . . {concerning the measuring means}	27/045	. . . {Circuits (measuring resistance per se G01R 27/00 , e.g. G01R 27/22)}
25/482	. . . . . {concerning the temperature responsive elements (measuring temperature or quantity of heat, thermally-sensitive elements G01K ; thermoelectric devices H01L 35/00 , H01L 37/00)}	27/046	. . . . {provided with temperature compensation}
25/4826	. . . . . {concerning the heating or cooling arrangements (heating apparatus for chemical or physical laboratory apparatus in general B01L 7/00)}	27/048	. . . {for determining moisture content of the material}
25/4833	. . . . . {specially adapted for temperature scanning}	27/06	. . . of a liquid (involving electrolysis G01N 27/26)
25/484	. . . . . {Heat insulation}	27/07	. . . . Construction of measuring vessels; Electrodes therefor
25/4846	. . . {for a motionless, e.g. solid sample}	27/08	. . . . which is flowing continuously
25/4853	. . . . {Details}	27/10	. . . . . Investigation or analysis specially adapted for controlling or monitoring operations or for signalling
25/486	. . . . . {Sample holders}	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}
25/4866	. . . . . {by using a differential method}	27/121	. . . . {for determining moisture content, e.g. humidity, of the fluid (moisture content of the tested material G01N 27/048)}
25/4873	. . . {for a flowing, e.g. gas sample}	27/122	. . . . {Circuits particularly adapted therefor, e.g. linearising circuits}
25/488	. . . . {Details}	27/123	. . . . . {for controlling the temperature (temperature control per se G05D 23/00)}
25/4886	. . . . . {concerning the circulation of the sample}	27/124	. . . . . {varying the temperature, e.g. in a cyclic manner}
25/4893	. . . . {by using a differential method}	27/125	. . . . {Composition of the body, e.g. the composition of its sensitive layer}
25/50	. by investigating flash-point; by investigating explosibility	27/126	. . . . . {comprising organic polymers}
25/52	. . by determining flash-point of liquids	27/127	. . . . . {comprising nanoparticles}
25/54	. . by determining explosibility	27/128	. . . . {Microapparatus}
25/56	. by investigating moisture content	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)}
25/58	. . by measuring changes of properties of the material due to heat, cold or expansion	27/14	. . . of an electrically-heated body in dependence upon change of temperature
25/60	. . . for determining the wetness of steam	27/16	. . . . caused by burning or catalytic oxidation of surrounding material to be tested, e.g. of gas
25/62	. . by psychrometric means, e.g. wet-and-dry bulb thermometers		
25/64	. . . using electric temperature-responsive elements		
25/66	. . by investigating dew-point		
25/68	. . . by varying the temperature of a condensing surface		
25/70	. . . by varying the temperature of the material, e.g. by compression, by expansion		
25/72	. Investigating presence of flaws		

27/18	. . . .	caused by changes in the thermal conductivity of a surrounding material to be tested (G01N 27/20 takes precedence)	27/3272	. . . . .	{Test elements therefor, i.e. disposable laminated substrates with electrodes, reagent and channels (optical biosensors G01N 33/52)}
27/185	. . . . .	{using a catharometer}	27/3273	. . . . .	{Devices therefor, e.g. test element readers, circuitry (details not specific to biochemical electrodes G01N 33/4875)}
27/20	. . . .	Investigating the presence of flaws	27/3274	. . . . .	{Corrective measures, e.g. error detection, compensation for temperature or hematocrit, calibration (coding of calibration information G01N 33/48771)}
27/205	. . . . .	{in insulating materials}	27/3275	. . . . .	{Sensing specific biomolecules, e.g. nucleic acid strands, based on an electrode surface reaction}
27/22	. . .	by investigating capacitance	27/3276	. . . . .	{being a hybridisation with immobilised receptors (using a FET type sensor G01N 27/4145 ; concerning the hybridisation C12Q 1/68)}
27/221	. . . .	{by investigating the dielectric properties (using microwaves G01N 22/00 ; measuring loss factors or dielectric constants per se G01R 27/26)}	27/3277	. . . . .	{being a redox reaction, e.g. detection by cyclic voltammetry (voltammetry per se G01N 27/42 , G01N 27/48)}
2027/222	. . . .	{for analysing gases}	27/3278	. . . . .	{involving nanosized elements, e.g. nanogaps or nanoparticles (nanopores G01N 33/48721 ; magnetic beads G01N 27/745)}
27/223	. . .	{for determining moisture content, e.g. humidity (rain detectors on vehicle windows B60S 1/0825)}	27/333	. . . .	Ion-selective electrodes or membranes (glass electrodes G01N 27/36)
27/225	. . . .	{by using hygroscopic materials}	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)}
27/226	. . .	{Construction of measuring vessels; Electrodes therefor}	27/34	. . . .	Dropping-mercury electrodes
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)}	27/36	. . . .	Glass electrodes
27/228	. . .	{Circuits therefor (measuring capacitance per se G01R 27/26)}	27/38	. . . .	Cleaning of electrodes
27/24	. . .	Investigating the presence of flaws	27/40	. . .	Semi-permeable membranes or partitions
27/26	. .	by investigating electrochemical variables; by using electrolysis or electrophoresis	27/401	. . .	Salt-bridge leaks; Liquid junctions
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	27/403	. .	Cells and electrode assemblies
27/28	. .	Electrolytic cell components	27/4035	. . .	{Combination of a single ion-sensing electrode and a single reference electrode (G01N 27/406 and G01N 27/413 take precedence)}
27/283	. . .	{Means for supporting or introducing electrochemical probes}	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}
27/286	. . . .	{Power or signal connectors associated therewith}	27/4045	. . . .	{for gases other than oxygen}
27/30	. . .	Electrodes, e.g. test electrodes; Half-cells (G01N 27/414 takes precedence)	27/406	. . .	Cells and probes with solid electrolytes
27/301	. . . .	{Reference electrodes}	27/4062	. . . .	{Electrical connectors associated therewith}
27/302	. . . .	{pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes (ion selective electrodes G01N 27/333 , glass electrodes G01N 27/36)}	27/4065	. . . .	{Circuit arrangements specially adapted therefor}
27/304	. . . .	{Gas permeable electrodes}	27/4067	. . . .	{Means for heating or controlling the temperature of the solid electrolyte}
27/305	. . . .	{optically transparent or photoresponsive electrodes}	27/407	. . . .	for investigating or analysing gases (G01N 27/411 takes precedence)}
27/307	. . . .	{Disposable laminated or multilayered electrodes (G01N 27/3272 takes precedence)}	27/4071	. . . . .	{using sensor elements of laminated structure}
27/308	. . . .	{at least partially made of carbon}	27/4072	. . . . .	{characterized by the diffusion barrier}
27/31	. . . .	Half-cells with permeable membranes, e.g. semi-porous or perm-selective membranes	27/4073	. . . . .	{Composition or fabrication of the solid electrolyte}
27/32	. . . .	Calomel electrodes	27/4074	. . . . .	{for detection of gases other than oxygen}
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)}			

- 27/4075 {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 ([CMOS processing per se H01L 21/82](#))}
- 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
- WARNING**
- Group [G01N 27/62](#) is impacted by reclassification into group [G01N 27/623](#).
- Groups [G01N 27/62](#) and [G01N 27/623](#) should be considered in order to perform a complete search.
- 27/622 . . Ion mobility spectrometry
- WARNING**
- Group [G01N 27/622](#) is impacted by reclassification into group [G01N 27/623](#).
- Groups [G01N 27/622](#) and [G01N 27/623](#) should be considered in order to perform a complete search.
- 27/623 . . . combined with mass spectrometry
- WARNING**
- Group [G01N 27/623](#) is incomplete pending reclassification of documents from groups [G01N 27/62](#) and [G01N 27/622](#).
- Groups [G01N 27/62](#), [G01N 27/622](#), and [G01N 27/623](#) should be considered in order to perform a complete search.
- 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 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#) take precedence)**
- 29/02 . Analysing fluids (using acoustic emission techniques [G01N 29/14](#) {; constructional or flow details for analysing fluids [G01N 29/222](#); optoacoustic fluid cells [G01N 29/2425](#)})
- 29/022 . . {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](#))}
- 2030/0075 . {Separation due to differential desorption}
- 2030/008 . . {Thermal desorption}
- 2030/0085 . . {the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds}
- 2030/009 . {Extraction}
- 2030/0095 . {Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments}
- 30/02 . Column chromatography
- 2030/022 . . {characterised by the kind of separation mechanism}
- 2030/025 . . . {Gas chromatography}
- 2030/027 . . . {Liquid chromatography}
- 30/04 . . Preparation or injection of sample to be analysed
- 2030/042 . . . {Standards}
- 2030/045 {internal}
- 2030/047 {external}
- 30/06 . . . Preparation
- 2030/062 {extracting sample from raw material}
- 2030/065 {using different phases to separate parts of sample}
- 2030/067 {by reaction, e.g. derivatising the sample}
- 30/08 using an enricher
- 2030/085 {using absorbing precolumn}
- 30/10 using a splitter
- 30/12 by evaporation
- 2030/121 {cooling; cold traps}
- 2030/122 {cryogenic focusing}
- 2030/123 {using more than one trap}
- 2030/125 {pyrolysing}
- 2030/126 {evaporating sample}
- 2030/127 {PTV evaporation}
- 2030/128 {Thermal desorption analysis}
- 30/14 by elimination of some components
- 2030/143 {selective absorption}
- 2030/146 {using membranes}
- 30/16 . . . Injection ([G01N 30/24 takes precedence](#))
- 2030/162 {electromigration}
- 2030/165 {retention gaps}
- 2030/167 {on-column injection}
- 30/18 using a septum or microsyringe
- 2030/185 {specially adapted to seal the inlet}

30/20	. . . .	using a sampling valve
2030/201	. . . .	{multiport valves, i.e. having more than two ports}
2030/202	. . . .	{rotary valves}
2030/204	. . . .	{Linearly moving valves, e.g. sliding valves}
2030/205	. . . .	{Diaphragm valves, e.g. deformed member closing the passage}
2030/207	. . . .	{with metering cavity, e.g. sample loop}
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}
2030/3015	. . . .	{temperature gradients along column}
2030/3023	. . . .	{using cryogenic fluids}
2030/303	. . . .	{using peltier elements}
2030/3038	. . . .	{temperature control of column exit, e.g. of restrictors}
2030/3046	. . . .	{temperature control of column inlet}
2030/3053	. . . .	{using resistive heating}
2030/3061	. . . .	{column or associated structural member used as heater}
2030/3069	. . . .	{electrical resistance used to determine control temperature}
2030/3076	. . . .	{using specially adapted T(t) profile}
2030/3084	. . . .	{ovens}
2030/3092	. . . .	{Heat exchange between incoming and outgoing mobile phase}
30/32	. . . .	of pressure or speed (G01N 30/36 takes precedence)
2030/322	. . . .	{pulse dampers}
2030/324	. . . .	{speed, flow rate}
2030/326	. . . .	{pumps}
2030/328	. . . .	{valves, e.g. check valves of pumps}
30/34	. . . .	of fluid composition, e.g. gradient (G01N 30/36 takes precedence)
2030/342	. . . .	{fluid composition fixed during analysis}
2030/345	. . . .	{fluid electrical conductivity fixed during analysis}
2030/347	. . . .	{mixers}
30/36	. . . .	in high pressure liquid systems
30/38	. . .	Flow patterns
2030/381	. . . .	{centrifugal chromatography}
2030/382	. . . .	{flow switching in a single column}
2030/383	. . . .	{by using auxiliary fluid}
2030/385	. . . .	{by switching valves}
2030/386	. . . .	{Radial chromatography, i.e. with mobile phase traversing radially the stationary phase}
2030/387	. . . .	{Turbulent flow of mobile phase}
2030/388	. . . .	{Elution in two different directions on one stationary phase}
30/40	. . . .	using back flushing
2030/402	. . . .	{purging a device}
2030/405	. . . .	{re-concentrating or inverting previous separation}
2030/407	. . . .	{carrying out another separation}
30/42	. . . .	using counter-current

30/44	. . . .	using recycling of the fraction to be distributed
2030/445	. . . .	{heart cut}
30/46	. . . .	using more than one column (G01N 30/44 takes precedence)
30/461	. . . .	{with serial coupling of separation columns}
30/462	. . . .	{with different eluents or with eluents in different states (G01N 30/463 takes precedence)}
30/463	. . . .	{for multidimensional chromatography}
30/465	. . . .	{with specially adapted interfaces between the columns}
30/466	. . . .	{with separation columns in parallel}
30/467	. . . .	{all columns being identical}
30/468	. . . .	{involving switching between different column configurations}
30/48	. .	{Sorbent materials therefor}
(Frozen)		

WARNING

Group [G01N 30/48](#) is no longer used for the classification of documents as of May 1, 2022.

The content of this group is being reclassified into groups [B01J 20/281](#) - [B01J 20/29](#).

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

30/482	. . .	{Solid sorbents}
(Frozen)		

WARNING

Group [G01N 30/482](#) is no longer used for the classification of documents as of May 1, 2022.

The content of this group is being reclassified into groups [B01J 20/281](#) - [B01J 20/29](#).

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

2030/484	. . .	{Solid sorbents}
(Frozen)		

WARNING

Group [G01N 2030/484](#) is no longer used for the classification of documents as of May 1, 2022.

The content of this group is being reclassified into groups [B01J 20/281](#) - [B01J 20/29](#).

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

30/50	. .	Conditioning of the sorbent material or stationary liquid
30/52	. . .	Physical parameters
2030/521	. . . .	{form}
2030/522	. . . .	{pressure}
2030/524	. . . .	{structural properties}
2030/525	. . . .	{surface properties, e.g. porosity}
2030/527	. . . .	{sorbent material in form of a membrane}
2030/528	. . . .	{Monolithic sorbent material}
30/54	. . . .	Temperature
30/56	. . .	Packing methods or coating methods

2030/562	. . . . {packing}	30/7213	. . . . {splitting of the gaseous effluent}
2030/565	. . . . {slurry packing}	30/722	. . . . {through a gas permeable barrier (membranes, porous layers)}
2030/567	. . . . {coating}	2030/7226	. . . . {OWTC, short capillaries or transfer line used as column}
30/58	. . . the sorbent moving as a whole	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)}
2030/582	. . . . {micellar electrokinetic capillary chromatography [MECC]}	30/724	. . . . {Nebulising, aerosol formation or ionisation (spraying or atomising in general B05B)}
2030/585	. . . . {Parallel current chromatography}	30/7246	. . . . {by pneumatic means}
2030/587	. . . . {Continuous annular chromatography}	30/7253	. . . . {by thermal means, e.g. thermospray}
30/60	. . Construction of the column	30/726	. . . . {by electrical or glow discharge}
30/6004	. . . {end pieces}	30/7266	. . . . {by electric field, e.g. electrospray}
2030/6008	. . . . {capillary restrictors}	30/7273	. . . . {Desolvation chambers}
2030/6013	. . . . {interfaces to detectors}	30/728	. . . . {Intermediate storage of effluent, including condensation on surface}
30/6017	. . . . {Fluid distributors}	30/7286	. . . . {the store moving as a whole, e.g. moving wire}
30/6021	. . . . {Adjustable pistons}	30/7293	. . . . {Velocity or momentum separators}
30/6026	. . . . {Fluid seals}	30/74	. . . Optical detectors {(measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light G01J)}
30/603	. . . . {retaining the stationary phase, e.g. Frits}	2030/743	. . . . {FTIR}
30/6034	. . . {joining multiple columns}	2030/746	. . . . {detecting along the line of flow, e.g. axial}
30/6039	. . . . {in series}	30/76	. . . Acoustical detectors {(measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves G01H)}
30/6043	. . . . {in parallel}	2030/765	. . . . {for measuring mechanical vibrations}
30/6047	. . . {with supporting means; Holders}	2030/77	. . . {detecting radioactive properties}
30/6052	. . . {body}	30/78	. . . using more than one detector
30/606	. . . . {with fluid access or exit ports}	30/80	. . Fraction collectors
30/6065	. . . . {with varying cross section}	30/82	. . . Automatic means therefor
30/6069	. . . . {with compartments or bed substructure}	30/84	. . Preparation of the fraction to be distributed
30/6073	. . . . {in open tubular form}	2030/8405	. . . {using pyrolysis}
30/6078	. . . . {Capillaries}	2030/8411	. . . {Intermediate storage of effluent, including condensation on surface}
30/6082	. . . . {transparent to radiation}	2030/8417	. . . . {the store moving as a whole, e.g. moving wire}
30/6086	. . . . {form designed to optimise dispersion}	2030/8423	. . . {using permeable separator tubes}
30/6091	. . . {Cartridges}	2030/8429	. . . {adding modifying material}
30/6095	. . . {Micromachined or nanomachined, e.g. micro- or nanosize}	2030/8435	. . . . {for chemical reaction}
NOTE		2030/8441	. . . . {to modify physical properties}
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"		2030/8447	. . . {Nebulising, aerosol formation or ionisation}
30/62	. . Detectors specially adapted therefor	2030/8452	. . . . {Generation of electrically charged aerosols or ions}
2030/621	. . . {signal-to-noise ratio}	2030/8458	. . . . {of ions or clusters of individual ions}
2030/623	. . . . {by modulation of sample feed or detector response}	2030/8464	. . . . {Uncharged atoms or aerosols}
2030/625	. . . . {by measuring reference material, e.g. carrier without sample}	2030/847	. . . . {by pneumatic means}
2030/626	. . . {calibration, baseline}	2030/8476	. . . . {by thermal means}
2030/628	. . . {Multiplexing, i.e. several columns sharing a single detector}	2030/8482	. . . . {by electrical or glow discharge}
30/64	. . . Electrical detectors	2030/8488	. . . . {by electric field}
2030/642	. . . . {photoionisation detectors}	2030/8494	. . . . {Desolvation chambers}
2030/645	. . . . {electrical conductivity detectors}	30/86	. . Signal analysis
2030/647	. . . . {surface ionisation}	30/8603	. . . {with integration or differentiation}
30/66	. . . . Thermal conductivity detectors	30/8606	. . . . {Integration}
30/68	. . . . Flame ionisation detectors	30/861	. . . . {Differentiation}
2030/685	. . . . {flame photometry}	30/8613	. . . . {Dividing or multiplying by a constant}
30/70	. . . . Electron capture detectors	30/8617	. . . . {Filtering, e.g. Fourier filtering}
30/72	. . . Mass spectrometers {(mass spectrometers per se H01J 49/00)}		
30/7206	. . . . {interfaced to gas chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see H01J 49/04)}		

2030/862	. . . . {Other mathematical operations for data preprocessing}	2030/889	. . . {monitoring the quality of the stationary phase; column performance}
30/8624	. . . {Detection of slopes or peaks; baseline correction}	2030/8895	. . . {Independent juxtaposition of embodiments; Reviews}
30/8627	. . . . {Slopes}	30/89	. Inverse chromatography
30/8631	. . . . {Peaks}	30/90	. Plate chromatography, e.g. thin layer or paper chromatography
30/8634	. . . . . {Peak quality criteria}	2030/903	. . {centrifugal chromatography}
30/8637	. . . . . {Peak shape}	2030/906	. . {pressurised fluid phase}
30/8641	. . . . . {Baseline}	30/91	. . Application of the sample
30/8644	. . . . . {Data segmentation, e.g. time windows}	30/92	. . Construction of the plate
2030/8648	. . . . {Feature extraction not otherwise provided for}	30/93	. . . Application of the sorbent layer
30/8651	. . . {Recording, data acquisition, archiving and storage}	30/94	. . Development
30/8655	. . . . {Details of data formats}	2030/945	. . . {Application of reagents to undeveloped plate}
30/8658	. . . {Optimising operation parameters}	30/95	. . Detectors specially adapted therefor; Signal analysis
30/8662	. . . . {Expert systems; optimising a large number of parameters}	30/96	. using ion-exchange (G01N 30/02 , G01N 30/90 take precedence)
30/8665	. . . {for calibrating the measuring apparatus}	2030/965	. . {suppressor columns}
30/8668	. . . . {using retention times}	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
30/8672	. . . . {not depending on an individual instrument, e.g. retention time indexes or calibration transfer}	31/002	. {Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method}
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)}	31/005	. {investigating the presence of an element by oxidation (G01N 31/12 takes precedence)}
30/8679	. . . . {Target compound analysis, i.e. whereby a limited number of peaks is analysed}	31/007	. . {by measuring the quantity of water resulting therefrom (G01N 31/12 takes precedence)}
30/8682	. . . . {Group type analysis, e.g. of components having structural properties in common}	NOTE	
30/8686	. . . . {Fingerprinting, e.g. without prior knowledge of the sample components}		The observation of the progress of the reaction specified below by any of the methods specified in groups G01N 3/00 - G01N 3/00 - G01N 29/00 , if this is of major importance, is dealt with in the group concerned.
30/8689	. . . . {Peak purity of co-eluting compounds}	31/02	. using precipitation ({measuring deposition or liberation of materials from an electrolyte G01N 27/42)}
30/8693	. . . {Models, e.g. prediction of retention times, method development and validation}	31/10	. using catalysis
30/8696	. . . {Details of Software}	31/12	. using combustion (G01N 25/20 takes precedence)
30/88	. . Integrated analysis systems specially adapted therefor, not covered by a single one of the groups G01N 30/04 - G01N 30/86	31/16	. using titration
2030/8804	. . . . {automated systems}	31/162	. . {Determining the equivalent point by means of a discontinuity}
2030/8809	. . . . {analysis specially adapted for the sample}	31/164	. . . {by electrical or electrochemical means}
2030/8813	. . . . {biological materials}	31/166	. . {Continuous titration of flowing liquids}
2030/8818	. . . . . {involving amino acids}	31/168	. . {Determining water content by using Karl Fischer reagent}
2030/8822	. . . . . {involving blood}	31/18	. . Burettes specially adapted for titration
2030/8827	. . . . . {involving nucleic acids}	31/20	. using microanalysis, e.g. drop reaction
2030/8831	. . . . . {involving peptides or proteins}	31/22	. using chemical indicators (G01N 31/02 takes precedence)
2030/8836	. . . . . {involving saccharides}	31/221	. . {for investigating pH value}
2030/884	. . . . {organic compounds}	31/222	. . {for investigating moisture content}
2030/8845	. . . . . {involving halogenated organic compounds}	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)}
2030/885	. . . . . {involving polymers}	31/224	. . . {for investigating presence of dangerous gases}
2030/8854	. . . . . {involving hydrocarbons}	31/225	. . . {for oxygen, e.g. including dissolved oxygen}
2030/8859	. . . . {inorganic compounds}	31/226	. . {for investigating the degree of sterilisation}
2030/8863	. . . . . {Fullerenes}		
2030/8868	. . . . {elemental analysis, e.g. isotope dilution analysis}		
2030/8872	. . . . {impurities}		
2030/8877	. . . . {optical isomers}		
2030/8881	. . . {Modular construction, specially adapted therefor}		
2030/8886	. . . {Analysis of industrial production processes}		

31/227	. . {for nitrates or nitrites}	33/005	. . . . . {for H ₂ }
31/228	. . {for peroxides}	33/0052	. . . . . {for gaseous halogens}
31/229	. . {for investigating time/temperature history}	33/0054	. . . . . {for ammonia}
33/00	Investigating or analysing materials by specific methods not covered by groups	33/0055	. . . . . {for radionuclides}
	<u>G01N 1/00 - G01N 31/00</u>	33/0057	. . . . . {for warfare agents or explosives (properties of explosives G01N 33/227)}
	NOTE	33/0059	. . . . . {avoiding interference of a gas with the gas to be measured}
	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.	33/006	. . . . . {avoiding interference of water vapour with the gas to be measured}
	{This Note corresponds to IPC Note (I) relating to G01N 33/52 - G01N 33/98 .}	33/0062	. . . {concerning the measuring method, e.g. intermittent, or the display, e.g. digital}
33/0001	. {by organoleptic means}	33/0063	. . . . {using a threshold to release an alarm or displaying means (alarm arrangements G08B , e.g. fire alarm actuated by the presence of smoke or gases G08B 17/10 , for other abnormal conditions G08B 21/00)}
2033/0003	. {Composite materials}	33/0065	. . . . . {using more than one threshold}
33/0004	. {Gaseous mixtures, e.g. polluted air (gaseous biological material G01N 33/497 ; exhaust gas of internal combustion engines G01M 15/102)}	33/0067	. . . . {by measuring the rate of variation of the concentration}
33/0006	. . {Calibrating gas analysers}	2033/0068	. . . . {using a computer specifically programmed}
33/0008	. . . {Details concerning storage of calibration data, e.g. in EEPROM}	33/007	. . . {Arrangements to check the analyser (calibrating G01N 33/0006)}
33/0009	. . {General constructional details of gas analysers, e.g. portable test equipment (G01N 1/22 takes precedence)}	2033/0072	. . . . {by generating a test gas}
33/0011	. . . {Sample conditioning (in general G01N 1/28)}	33/0073	. . . {Control unit therefor}
33/0013	. . . . {by a chemical reaction (G01N 33/0024 takes precedence)}	33/0075	. . . . {for multiple spatially distributed sensors, e.g. for environmental monitoring (transmission systems for measured values G08C)}
33/0014	. . . . {by eliminating a gas (G01N 33/0013 and G01N 33/0024 take precedence)}	2033/0077	. {testing material properties on individual granules or tablets}
33/0016	. . . . {by regulating a physical variable, e.g. pressure, temperature}	2033/0078	. {testing material properties on manufactured objects}
33/0018	. . . . {by diluting a gas}	2033/008	. . {sport articles (balls, skis, rackets)}
2033/0019	. . . . {by preconcentration}	2033/0081	. . {containers; packages; bottles}
33/0021	. . . . {involving the use of a carrier gas for transport to the sensor}	2033/0083	. . {vehicle parts}
33/0022	. . . {using a number of analysing channels}	2033/0085	. . . {wheels}
33/0024	. . . . {a chemical reaction taking place or a gas being eliminated in one or more channels}	2033/0086	. . {clothes; hosiery}
33/0026	. . . {use of an alternating circulation of another gas (calibrating gas analysers G01N 33/0006)}	2033/0088	. . {other articles}
33/0027	. . . {concerning the detector}	2033/009	. . . {seals}
33/0029	. . . . {cleaning}	2033/0091	. {Powders}
33/0031	. . . . {comprising two or more sensors, e.g. a sensor array (electrochemical electrode arrays G01N 27/27)}	2033/0093	. {radioactive materials}
33/0032	. . . . . {using two or more different physical functioning modes}	2033/0095	. {Semiconductive materials}
33/0034	. . . . . {comprising neural networks or related mathematical techniques}	2033/0096	. {testing material properties on thin layers or coatings}
33/0036	. . . . {Specially adapted to detect a particular component (all the other sub-groups of G01N 33/0004 take precedence)}	33/0098	. {Plants or trees (wood G01N 33/46)}
33/0037	. . . . . {for NO _x }	33/02	. Food
33/0039	. . . . . {for O ₃ }	33/025	. . {Fruits or vegetables}
33/004	. . . . . {for CO, CO ₂ }	33/03	. . Edible oils or edible fats
33/0042	. . . . . {for SO ₂ , SO ₃ }	33/04	. . Dairy products
33/0044	. . . . . {for H ₂ S, sulfides}	33/06	. . . Determining fat content, e.g. by butyrometer
33/0045	. . . . . {for Hg}	33/08	. . Eggs, e.g. by candling
33/0047	. . . . . {for organic compounds}	33/085	. . . {by candling}
33/0049	. . . . . {for halogenated organic compounds}	33/10	. . Starch-containing substances, e.g. dough
		2033/105	. . . {Pasta}
		33/12	. . Meat; fish
		33/14	. . Beverages
		33/143	. . . {containing sugar}
		33/146	. . . {containing alcohol}
		33/15	. Medicinal preparations {; Physical properties thereof, e.g. dissolubility (drug screening with animal cells G01N 33/5008)}
		33/18	. Water

- 33/1806 . . {biological or chemical oxygen demand (BOD or COD)}
- 33/1813 . . {specific cations in water, e.g. heavy metals (electrochemical analysis [G01N 27/26](#); detection of ions by colorimetry [G01N 31/22](#))}
- 33/182 . . {specific anions in water (electrochemical analysis [G01N 27/26](#); detection of ions by colorimetry [G01N 31/22](#))}
- 33/1826 . . {organic contamination in water}
- 33/1833 . . . {Oil in water (water in oil [G01N 33/2847](#))}
- 2033/184 . . . {herbicides, pesticides, fungicides, insecticides, or the like}
- 33/1846 . . . {Total carbon analysis}
- 33/1853 . . {hardness of water}
- 33/186 . . {using one or more living organisms, e.g. a fish}
- 33/1866 . . . {using microorganisms ([G01N 33/1806](#) takes precedence)}
- 2033/1873 . . {ice or snow}
- 33/188 . . {Determining the state of nitrification (biological treatment of water by aerobic or anaerobic processes for denitrification of water [C02F 3/305](#))}
- 33/1886 . . {using probes, e.g. submersible probes, buoys}
- 33/1893 . . {using flow cells}
- 33/20 . Metals
- 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 ({liquid hydrocarbons [G01N 33/28](#))}
- 33/222 . . {Solid fuels, e.g. coal}
- 33/225 . . {Gaseous fuels, e.g. natural gas}
- 33/227 . . {Explosives, e.g. combustive properties thereof (detecting explosives in air [G01N 33/0057](#))}
- 33/24 . Earth materials ([G01N 33/42](#) takes precedence)
- 33/241 . . {for hydrocarbon content (drilling mud [G01N 33/2823](#); drilling per se [E21B](#); prospecting [G01V](#))}
- 2033/243 . . {for determining biological parameters concerning composting, biodegradability or bioavailability}
- 2033/245 . . {for agricultural purposes}
- 33/246 . . {for water content (for control of watering [A01G 25/167](#))}
- 2033/248 . . {related to manure as a biological product, i.e. excluding artificial fertilizers}
- 33/26 . Oils; viscous liquids; paints; inks ([G01N 33/22](#) takes precedence)
- 33/28 . . Oils {, i.e. hydrocarbon liquids}({gaseous fuels [G01N 33/225](#); } edible oils or edible fats [G01N 33/03](#))
- 33/2805 . . . {investigating the resistance to heat or oxidation (to the weather, to corrosion, or to light [G01N 17/00](#))}
- 33/2811 . . . {by measuring cloud point or pour point of oils}
- 33/2817 . . . {using a test engine (testing of engines [G01M 15/00](#))}
- 33/2823 . . . {raw oil, drilling fluid or polyphasic mixtures (hydrocarbon content of earth materials [G01N 33/241](#); prospecting [G01V](#); drilling per se [E21B](#))}
- 33/2829 . . . {mixtures of fuels, e.g. determining the RON-number}
- 33/2835 . . . {specific substances contained in the oil or fuel}
- 33/2841 {gas in oil, e.g. hydrogen in insulating oil}
- 33/2847 {Water in oil (basic sediment and water [G01N 33/2823](#); oil in water [G01N 33/1833](#))}
- 33/2852 {alcohol/fuel mixtures}
- 33/2858 {metal particles}
- 33/2864 {lead content}
- 33/287 {Sulfur content}
- 33/2876 {Total acid number}
- 33/2882 {Markers (marking of fuels [C10L 1/003](#))}
- 33/2888 . . . {Lubricating oil characteristics, e.g. deterioration (lubricating properties [G01N 33/30](#))}
- 33/2894 . . . {for metal working or machining}
- 33/30 . . . for lubricating properties
- 33/32 . . Paints; inks {(investigating resistance to the weather, to corrosion, to light [G01N 17/00](#))}
- 33/34 . Paper
- 33/343 . . {paper pulp}
- 33/346 . . {paper sheets}
- 33/36 . Textiles
- 33/362 . . {material before processing, e.g. bulk cotton or wool}
- 33/365 . . {filiform textiles, e.g. yarns (for measuring diameter [G01B](#))}
- 33/367 . . {Fabric or woven textiles (optical analysis of moving sheets [G01N 21/86](#))}
- 33/38 . Concrete; ceramics; glass; bricks
- 33/381 . . {precious stones; pearls}
- 33/383 . . {Concrete, cement}
- 33/385 . . {Crystals}
- 33/386 . . {Glass}
- 33/388 . . {Ceramics}
- 33/40 . Grinding-materials
- 33/42 . Road-making materials ([G01N 33/38](#) takes precedence)
- 33/44 . Resins; rubber; leather
- 33/442 . . {Resins, plastics}
- 33/445 . . {Rubber}
- 33/447 . . {Leather}
- 33/46 . Wood
- 33/48 . Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- 33/483 . . Physical analysis of biological material
- 33/4833 . . . {of solid biological material, e.g. tissue samples, cell cultures (tissue in vivo [A61B 5/00](#); cell suspensions [G01N 33/48735](#))}
- 33/4836 {using multielectrode arrays}
- 33/487 . . . of liquid biological material
- 33/48707 {by electrical means ([G01N 33/49](#), [G01N 33/493](#) take precedence)}

33/48714	. . . . .	{for determining substances foreign to the organism, e.g. drugs or heavy metals (drugs by chemical analysis G01N 33/94)}	33/50	. . .	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)
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)}			NOTES
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)}			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.
33/48742	. . . . .	{Determining urea by measuring the volume of a gas (in general G01N 7/14 - G01N 7/18)}			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.
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)}			3. Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass C07K or in group C12N 9/00 according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group.
33/48757	. . . . .	{Test elements dispensed from a stack}			
33/48764	. . . . .	{Test tape taken off a spool}			
33/48771	. . . . .	{Coding of information, e.g. calibration data, lot number}			
33/48778	. . . . .	{Containers specially adapted therefor, e.g. for dry storage}	33/5002	. . .	{Partitioning blood components}
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}	33/5005	. . .	{involving human or animal cells (immunoassay G01N 33/56966 ; immunoassays of protozoa G01N 33/56905 ; protozoa in screening assays C12Q 1/025)}
33/48792	. . . . .	{Data management, e.g. communication with processing unit (for in vivo diagnostics A61B 5/0002 ; transmission systems for measured values G08C)}	33/5008	. . . . .	{for testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics}
33/49	. . . . .	Blood {(chemical methods for determining blood cell populations G01N 33/5094 ; chemical analysis of blood groups or blood types G01N 33/80)}	33/5011	. . . . .	{for testing antineoplastic activity}
33/4905	. . . . .	{Determining clotting time of blood (by chemical methods G01N 33/86 , C12Q 1/54)}	33/5014	. . . . .	{for testing toxicity}
33/491	. . . . .	{by separating the blood components (G01N 15/05 takes precedence)}	33/5017	. . . . .	{for testing neoplastic activity}
33/4915	. . . . .	{using flow cells (flow cytometry G01N 15/14)}	33/502	. . . . .	{for testing non-proliferative effects}
33/492	. . . . .	{Determining multiple analytes}	33/5023	. . . . .	{on expression patterns}
33/4925	. . . . .	{measuring blood gas content, e.g. O ₂ , CO ₂ , HCO ₃ }	33/5026	. . . . .	{on cell morphology}
33/493	. . . . .	urine	33/5029	. . . . .	{on cell motility}
33/497	. . . . .	of gaseous biological material, e.g. breath	33/5032	. . . . .	{on intercellular interactions}
33/4972	. . . . .	{Determining alcohol content (for vehicle safety devices B60K 28/06)}	33/5035	. . . . .	{on sub-cellular localization}
2033/4975	. . . . .	{other than oxygen, carbon dioxide or alcohol, e.g. organic vapours}	33/5038	. . . . .	{involving detection of metabolites per se }
2033/4977	. . . . .	{metabolic gass from microbes, cell cultures, plant tissues and the like}	33/5041	. . . . .	{involving analysis of members of signalling pathways}
			33/5044	. . . . .	{involving specific cell types}
			33/5047	. . . . .	{Cells of the immune system}
			33/505	. . . . .	{involving T-cells}
			33/5052	. . . . .	{involving B-cells}
			33/5055	. . . . .	{involving macrophages}
			33/5058	. . . . .	{Neurological cells}
			33/5061	. . . . .	{Muscle cells}
			33/5064	. . . . .	{Endothelial cells}
			33/5067	. . . . .	{Liver cells}
			33/507	. . . . .	{Pancreatic cells}
			33/5073	. . . . .	{Stem cells}

- 33/5076 {involving cell organelles, e.g. Golgi complex, endoplasmic reticulum}
- 33/5079 {Mitochondria}
- 33/5082 {Supracellular entities, e.g. tissue, organisms}
- 33/5085 {of invertebrates}
- 33/5088 {of vertebrates}
- 33/5091 {for testing the pathological state of an organism}
- 33/5094 {for blood cell populations (red blood cells [G01N 33/80](#))}
- 33/5097 {involving plant cells (immunoassays of plant cells [G01N 33/56961](#); unicellular algae, phytoplankton and photosynthetic bacteria in screening assays [C12Q 1/025](#))}
- 33/52 Use of compounds or compositions for colorimetric, spectrophotometric or fluorometric investigation, e.g. use of reagent paper {and including single- and multilayer analytical elements (immunological elements [G01N 33/54386](#); involving labelled immunochemicals [G01N 33/58](#); for haemoglobin or occult blood [G01N 33/72](#))}
- 33/521 {Single-layer analytical elements}
- 33/523 {the element being adapted for a specific analyte}
- 33/525 {Multi-layer analytical elements}
- 33/526 {the element being adapted for a specific analyte}
- 33/528 {Atypical element structures, e.g. gloves, rods, tampons, toilet paper}
- 33/53 Immunoassay; Biospecific binding assay; Materials therefor
- 33/5302 {Apparatus specially adapted for immunological test procedures}
- 33/5304 {Reaction vessels, e.g. agglutination plates (for solid-phase systems [G01N 33/543](#))}
- 33/5306 {Improving reaction conditions, e.g. reduction of non-specific binding, promotion of specific binding}
- 33/5308 {for analytes not provided for elsewhere, e.g. nucleic acids, uric acid, worms, mites}
- 33/531 Production of immunochemical test materials
- 33/532 Production of labelled immunochemicals
- 33/533 with fluorescent label
- 33/534 with radioactive label
- 33/535 with enzyme label {or co-enzymes, co-factors, enzyme inhibitors or enzyme substrates}
- 33/536 with immune complex formed in liquid phase
- 33/537 with separation of immune complex from unbound antigen or antibody
- 33/5375 {by changing the physical or chemical properties of the medium or immunochemicals, e.g. temperature, density, pH, partitioning}
- 33/538 by sorbent column, particles or resin strip {, i.e. sorbent materials}
- 33/539 involving precipitating reagent {, e.g. ammonium sulfate}
- 33/541 Double or second antibody {, i.e. precipitating antibody}
- 33/542 with steric inhibition or signal modification, e.g. fluorescent quenching
- 33/543 with an insoluble carrier for immobilising immunochemicals
- 33/54306 {Solid-phase reaction mechanisms}
- 33/54313 {the carrier being characterised by its particulate form}
- 33/5432 {Liposomes or microcapsules}
- 33/54326 {Magnetic particles}
- 33/54333 {Modification of conditions of immunological binding reaction, e.g. use of more than one type of particle, use of chemical agents to improve binding, choice of incubation time or application of magnetic field during binding reaction}
- 33/5434 {using magnetic particle immunoreagent carriers which constitute new materials [per se](#)}
- 33/54346 {Nanoparticles}
- 33/54353 {with ligand attached to the carrier via a chemical coupling agent (coatings [G01N 33/54393](#))}
- 33/5436 {with ligand physically entrapped within the solid phase (liposomes [G01N 33/5432](#); immunological test elements [G01N 33/54386](#))}
- 33/54366 {Apparatus specially adapted for solid-phase testing}
- 33/54373 {involving physiochemical end-point determination, e.g. wave-guides, FETS, gratings}
- 33/5438 {Electrodes}
- 33/54386 {Analytical elements}
- WARNING**
- Group [G01N 33/54386](#) is impacted by reclassification into groups [G01N 33/54387](#), [G01N 33/54388](#), [G01N 33/54389](#) and [G01N 33/54391](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 33/54387 {Immunochromatographic test strips}
- WARNING**
- Groups [G01N 33/54387](#), [G01N 33/54388](#), [G01N 33/54389](#) and [G01N 33/54391](#) are incomplete pending reclassification of documents from groups [G01N 33/54386](#) and [G01N 33/558](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 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](#)}

WARNING

Group [G01N 33/558](#) is impacted by reclassification into groups [G01N 33/54387](#), [G01N 33/54388](#), [G01N 33/54389](#) and [G01N 33/54391](#).

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

- 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, ATP}
- 33/574 for cancer

NOTE

In this group:

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

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

- 33/577 involving monoclonal antibodies {binding reaction mechanisms characterised by the use of monoclonal antibodies; monoclonal antibodies per se are classified with their corresponding antigens; ([G01N 33/53](#) - [G01N 33/576](#) take precedence)}
- 33/579 involving limulus lysate
- 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-idiotypic}
- 33/6863 {Cytokines, i.e. immune system proteins modifying a biological response such as cell growth proliferation or differentiation, e.g. TNF, CNF, GM-CSF, lymphotoxin, MIF or their receptors}
- 33/6866 {Interferon}
- 33/6869 {Interleukin}
- 33/6872 {Intracellular protein regulatory factors and their receptors, e.g. including ion channels}
- 33/6875 {Nucleoproteins}
- 33/6878 {in epitope analysis}
- 33/6881 {from skin}
- 33/6884 {from lung}
- 33/6887 {from muscle, cartilage or connective tissue}
- 33/689 {related to pregnancy or the gonads}
- 33/6893 {related to diseases not provided for elsewhere}
- 33/6896 {Neurological disorders, e.g. Alzheimer's disease}
- 33/70 involving creatine or creatinine
- 33/72 involving blood pigments, e.g. haemoglobin, bilirubin {or other porphyrins; involving occult blood}
- 33/721 {Haemoglobin}
- 33/723 {Glycosylated haemoglobin}
- 33/725 {using peroxidative activity}
- 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 {Erythropoietin}
- 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}	2035/00346	. {Heating or cooling arrangements}
33/946	. . . . {CNS-stimulants, e.g. cocaine, amphetamines}	2035/00356	. . {Holding samples at elevated temperature (incubation)}
33/9466	. . . . {Antidepressants}	2035/00366	. . . {Several different temperatures used}
33/9473	. . . . {Anticonvulsants, e.g. phenobarbitol, phenytoin}	2035/00376	. . . {Conductive heating, e.g. heated plates}
33/948	. . . . {Sedatives, e.g. cannabinoids, barbiturates (opiates G01N 33/9486)}	2035/00386	. . . {using fluid heat transfer medium}
33/9486	. . . . {Analgesics, e.g. opiates, aspirine}	2035/00396	. . . . {where the fluid is a liquid}
33/9493	. . . . {Immunosuppressants}	2035/00405	. . . {Microwaves}
33/96	. . . involving blood or serum control standard	2035/00415	. . . {Other radiation}
33/98	. . . involving alcohol, e.g. ethanol in breath	2035/00425	. . {Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature}
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	2035/00435	. . {Refrigerated reagent storage}
35/00009	. {provided with a sample supporting tape, e.g. with absorbent zones}	2035/00445	. . {Other cooling arrangements}
2035/00019	. . {cassette structures}	2035/00455	. . {Controlling humidity in analyser}
35/00029	. {provided with flat sample substrates, e.g. slides (G01N 35/028 takes precedence)}	2035/00465	. {Separating and mixing arrangements}
2035/00039	. . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}	2035/00475	. . {Filters}
2035/00049	. . . {for loading/unloading a carousel}	2035/00485	. . . {combined with sample carriers}
2035/00059	. . . {vacuum chucks}	2035/00495	. . {Centrifuges}
35/00069	. . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}	2035/00504	. . . {combined with carousels}
2035/00079	. . {Evaporation covers for slides}	2035/00514	. . {Stationary mixing elements}
2035/00089	. . {Magazines}	2035/00524	. . {Mixing by agitating sample carrier}
2035/00099	. . {Characterised by type of test elements}	2035/00534	. . {Mixing by a special element, e.g. stirrer}
2035/00108	. . . {Test strips, e.g. paper}	2035/00544	. . . {using fluid flow}
2035/00118	. . . . {for multiple tests}	2035/00554	. . . {using ultrasound}
2035/00128	. . . . {with pressing or squeezing devices}	2035/00564	. . {Handling or washing solid phase elements, e.g. beads}
2035/00138	. . . {Slides}	2035/00574	. . . {Means for distributing beads}
2035/00148	. . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}	35/00584	. {Control arrangements for automatic analysers}
2035/00158	. . . {Elements containing microarrays, i.e. "biochip"}	35/00594	. . {Quality control, including calibration or testing of components of the analyser}
2035/00168	. . {Manufacturing or preparing test elements}	35/00603	. . . {Reinspection of samples}
2035/00178	. {Special arrangements of analysers}	35/00613	. . . {Quality control}
2035/00188	. . {the analyte being in the solid state}	35/00623	. . . . {of instruments}
2035/00198	. . . {Dissolution analysers}	2035/00633	. . . . . {logging process history of individual samples}
2035/00207	. . {Handling bulk quantities of analyte}	2035/00643	. . . . . {detecting malfunctions in conveying systems}
2035/00217	. . . {involving measurement of weight}	2035/00653	. . . . . {statistical methods comparing labs or apparatuses}
2035/00227	. . . {Monitoring a process (online)}	35/00663	. . . . . {of consumables}
2035/00237	. . {Handling microquantities of analyte, e.g. microvalves, capillary networks}	2035/00673	. . . . . {of reagents}
2035/00247	. . . {Microvalves}	2035/00683	. . . . . {of detectors}
2035/00257	. . . . {Capillary stop flow circuits}	35/00693	. . . {Calibration}
2035/00267	. . . . {Melttable plugs}	2035/00702	. . . . {Curve-fitting; Parameter matching; Calibration constants}
2035/00277	. . {Special precautions to avoid contamination (e.g. enclosures, glove-boxes, sealed sample carriers, disposal of contaminated material)}	35/00712	. . . {Automatic status testing, e.g. at start-up or periodic}
2035/00287	. . . {movable lid/cover for sample or reaction tubes}	35/00722	. . {Communications; Identification}
2035/00297	. . . {Antistatic arrangements}	35/00732	. . . {Identification of carriers, materials or components in automatic analysers}
2035/00306	. . {Housings, cabinets, control panels (details)}	2035/00742	. . . . {Type of codes}
2035/00316	. . . {Detecting door closure}	2035/00752	. . . . . {bar codes}
2035/00326	. . {Analysers with modular structure}	2035/00762	. . . . . {magnetic code}
2035/00336	. . . {Analysers adapted for operation in microgravity, i.e. spaceflight}	2035/00772	. . . . . {mechanical or optical code other than bar code}
		2035/00782	. . . . . {reprogrammable code}
		2035/00792	. . . . {Type of components bearing the codes, other than sample carriers}
		2035/00801	. . . . . {Holders for sample carriers, e.g. trays, carousel, racks}

2035/00811	. . . . .	{ consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells}	2035/042	. . . . .	{ moved independently, e.g. by fork manipulator}
2035/00821	. . . . .	{ nature of coded information}	2035/0422	. . . . .	{ carried on a linear conveyor}
2035/00831	. . . . .	{ identification of the sample, e.g. patient identity, place of sampling}	2035/0424	. . . . .	{ Two or more linear conveyors}
2035/00841	. . . . .	{ results of the analyses}	2035/0425	. . . . .	{ Stacks, magazines or elevators for plates}
2035/00851	. . . . .	{ process control parameters}	2035/0427	. . . . .	{ nestable or stockable}
2035/00861	. . . . .	{ printing and sticking of identifiers}	2035/0429	. . . . .	{ Sample carriers adapted for special purposes}
35/00871	. . .	{ Communications between instruments or with remote terminals}	2035/0431	. . . . .	{ characterised by material of construction}
2035/00881	. . . . .	{ network configurations}	2035/0432	. . . . .	{ integrated with measuring devices}
2035/00891	. . .	{ Displaying information to the operator}	2035/0434	. . . . .	{ in the form of a syringe or pipette tip}
2035/009	. . . . .	{ alarms, e.g. audible}	2035/0436	. . . . .	{ with pre-packaged reagents, i.e. test-packs}
2035/0091	. . . . .	{ GUI [graphical user interfaces]}	2035/0437	. . . . .	{ Cleaning cuvettes or reaction vessels}
35/0092	. .	{ Scheduling}	2035/0439	. . .	{ Rotary sample carriers, i.e. carousels}
2035/0093	. . .	{ random access not determined by physical position}	2035/0441	. . . . .	{ for samples}
2035/0094	. . .	{ optimisation; experiment design}	2035/0443	. . . . .	{ for reagents}
35/0095	. . .	{ introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS]}	2035/0444	. . . . .	{ for cuvettes or reaction vessels}
2035/0096	. . .	{ post analysis management of samples, e.g. marking, removing, storing}	2035/0446	. . . . .	{ Combinations of the above}
2035/0097	. .	{ monitoring reactions as a function of time}	2035/0448	. . . . .	{ composed of interchangeable ring elements}
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)}	2035/0449	. . . . .	{ using centrifugal transport of liquid}
35/0099	. .	{ comprising robots or similar manipulators (robots per se B25J)}	2035/0451	. . . . .	{ composed of interchangeable sectors}
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)}	2035/0453	. . . . .	{ Multiple carousels working in parallel}
35/021	. .	{ having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes}	2035/0455	. . . . .	{ Coaxial carousels}
2035/023	. . .	{ forming cuvettes <i>in situ</i> , e.g. from plastic strip}	2035/0456	. . . . .	{ Spiral tracks}
35/025	. .	{ having a carousel or turntable for reaction cells or cuvettes}	2035/0458	. . . . .	{ Multiple concentric rows of wells}
35/026	. .	{ having blocks or racks of reaction cells or cuvettes}	2035/046	. . .	{ General conveyor features}
35/028	. .	{ having reaction cells in the form of microtitration plates}	2035/0462	. . . . .	{ Buffers [FIFO] or stacks [LIFO] for holding carriers between operations}
35/04	. .	{ Details of the conveyor system (G01N 35/021 - G01N 35/028 take precedence)}	2035/0463	. . . . .	{ in incubators}
2035/0401	. . .	{ Sample carriers, cuvettes or reaction vessels}	2035/0465	. . . . .	{ Loading or unloading the conveyor}
2035/0403	. . . . .	{ Sample carriers with closing or sealing means}	2035/0467	. . . . .	{ Switching points ("aiguillages")}
2035/0405	. . . . .	{ manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers}	2035/0468	. . . . .	{ converging, e.g. selecting carriers from multiple incoming streams}
2035/0406	. . . . .	{ Individual bottles or tubes}	2035/047	. . . . .	{ diverging, e.g. sending carriers to different analysers}
2035/0408	. . . . .	{ connected in a flexible chain}	2035/0472	. . . . .	{ for selective recirculation of carriers}
2035/041	. . . . .	{ lifting items out of a rack for access}	2035/0474	. . .	{ Details of actuating means for conveyors or pipettes}
2035/0412	. . . . .	{ Block or rack elements with a single row of samples}	2035/0475	. . . . .	{ electric, e.g. stepper motor, solenoid}
2035/0413	. . . . .	{ moving in one dimension}	2035/0477	. . . . .	{ Magnetic}
2035/0415	. . . . .	{ moving in two dimensions in a horizontal plane}	2035/0479	. . . . .	{ hydraulic or pneumatic}
2035/0417	. . . . .	{ forming an endless chain in a vertical plane}	2035/0481	. . . . .	{ Pneumatic tube conveyors; Tube mails; "Rohrpost"}
2035/0418	. . . . .	{ Plate elements with several rows of samples}	2035/0482	. . . . .	{ Transmission}
			2035/0484	. . . . .	{ Belt or chain}
			2035/0486	. . . . .	{ Gearing, cams}
			2035/0487	. . . . .	{ Helix or lead screw}
			2035/0489	. . . . .	{ Self-propelled units}
			2035/0491	. . . . .	{ Position sensing, encoding; closed-loop control}
			2035/0493	. . . . .	{ Locating samples; identifying different tube sizes}
			2035/0494	. . . . .	{ Detecting or compensating positioning errors}
			2035/0496	. . .	{ Other details}
			2035/0498	. . . . .	{ Drawers used as storage or dispensing means for vessels or cuvettes}
			35/08	. .	{ using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis}
			35/085	. .	{ Flow Injection Analysis}

35/10	. Devices for transferring samples {or any liquids} to, in, or from, the analysis apparatus, e.g. suction devices, injection devices { (G01N 35/0099 takes precedence) }	35/1097	. . . {characterised by the valves (valves in general F16K)}
35/1002	. . {Reagent dispensers}	37/00	Details not covered by any other group of this subclass
35/1004	. . {Cleaning sample transfer devices}	37/005	. {Measurement methods not based on established scientific theories}
2035/1006	. . . {Rinsing only the inside of the tip}	2201/00	Features of devices classified in G01N 21/00
35/1009	. . {Characterised by arrangements for controlling the aspiration or dispense of liquids}	2201/02	. Mechanical
35/1011	. . . {Control of the position or alignment of the transfer device}	2201/021	. . Special mounting in general
2035/1013	. . . . {Confirming presence of tip}	2201/0212	. . . Liquid borne; swimming apparatus
35/1016	. . . {Control of the volume dispensed or introduced}	2201/0214	. . . Airborne
2035/1018	. . . . {Detecting inhomogeneities, e.g. foam, bubbles, clots}	2201/0216	. . . Vehicle borne
2035/102	. . . . {Preventing or detecting loss of fluid by dripping}	2201/0218	. . . Submersible, submarine
2035/1023	. . . . . {using a valve in the tip or nozzle}	2201/022	. . Casings
2035/1025	. . . {Fluid level sensing}	2201/0221	. . . Portable; cableless; compact; hand-held
2035/1027	. . {General features of the devices}	2201/0222	. . . Pocket size
2035/103	. . . {using disposable tips}	2201/0224	. . . Pivoting casing
2035/1032	. . . {Dilution or aliquotting}	2201/0225	. . . Part of casing being slidable, telescopic
2035/1034	. . . {Transferring microquantities of liquid}	2201/0227	. . . Sealable enclosure
2035/1037	. . . . {Using surface tension, e.g. pins or wires}	2201/0228	. . . Moulded parts
2035/1039	. . . . {Micropipettes, e.g. microcapillary tubes}	2201/023	. . Controlling conditions in casing
2035/1041	. . . . {Ink-jet like dispensers}	2201/0231	. . . Thermostating
2035/1044	. . . . {Using pneumatic means}	2201/0233	. . . Gas purge
2035/1046	. . . . {Levitated, suspended drops}	2201/0235	. . . . with gas filters in casing
2035/1048	. . . {using the transfer device for another function}	2201/0236	. . . Explosion proof
2035/1051	. . . . {for transporting containers, e.g. retained by friction}	2201/0238	. . . Moisture monitoring or controlling
2035/1053	. . . . {for separating part of the liquid, e.g. filters, extraction phase}	2201/024	. . Modular construction
2035/1055	. . . . {for immobilising reagents, e.g. dried reagents}	2201/0245	. . . with insertable-removable part
2035/1058	. . . . {for mixing}	2201/025	. . Mechanical control of operations
2035/106	. . . . . {by sucking and blowing}	2201/0253	. . . Switches mounted at the casing
2035/1062	. . . . {for testing the liquid while it is in the transfer device}	2201/0256	. . . Sensor for insertion of sample, cuvette, test strip
35/1065	. . {Multiple transfer devices}	2201/04	. Batch operation; multisample devices
35/1067	. . . {for transfer to or from containers having different spacing}	2201/0407	. . with multiple optical units, e.g. one per sample
2035/1069	. . . . {by adjusting the spacing between multiple probes of a single transferring head}	2201/0415	. . Carrusel, sequential
35/1072	. . . {with provision for selective pipetting of individual channels}	2201/0423	. . . with rotating optics
35/1074	. . . {arranged in a two-dimensional array}	2201/043	. . . . optics constituted by optical fibre multiplex selector
2035/1076	. . . {plurality or independently movable heads}	2201/0438	. . Linear motion, sequential
35/1079	. . {with means for piercing stoppers or septums}	2201/0446	. . Multicell plate, 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)}	2201/0453	. . Multicell sequential and multitest, e.g. multiwavelength
35/1083	. . . {with one horizontal degree of freedom}	2201/0461	. . Simultaneous, e.g. video imaging
2035/1086	. . . . {Cylindrical, e.g. variable angle}	2201/0469	. . One cell, sequential, e.g. successive samples
2035/1088	. . . . . {Coaxial with a carousel}	2201/0476	. . Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding
35/109	. . . {with two horizontal degrees of freedom}	2201/0484	. . Computer controlled
2035/1093	. . . . {Cylindrical, e.g. variable radius and angle}	2201/0492	. . Automatised microscope
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)}	2201/06	. Illumination; Optics
		2201/061	. . Sources
		2201/06106	. . . Plural sources used for calibration
		2201/06113	. . . Coherent sources; lasers
		2201/0612	. . . . Laser diodes
		2201/06126	. . . Large diffuse sources
		2201/06133	. . . . Light tables
		2201/0614	. . . . Diffusing light tube with sample within
		2201/06146	. . . Multisources for homogeneisation, as well sequential as simultaneous operation
		2201/06153	. . . . the sources being LED's
		2201/0616	. . . Ambient light is used
		2201/06166	. . . Line selective sources

2201/06173	. . . .	IR sources from heated molecular species	2201/0833	. .	Fibre array at detector, resolving
2201/0618	. . . .	Halogene sources	2201/084	. .	Fibres for remote transmission
2201/06186	. . .	Resistance heated; wire sources; lamelle sources	2201/0846	. .	Fibre interface with sample, e.g. for spatial resolution
2201/06193	. . .	Secondary <u>in-situ</u> sources, e.g. fluorescent particles	2201/0853	. .	Movable fibre optical member, e.g. for scanning or selecting
2201/062	. .	LED's	2201/086	. .	Modular construction, e.g. disconnectable fibre parts
2201/0621	. . .	Supply	2201/0866	. .	Use of GRIN elements
2201/0622	. . .	Use of a compensation LED	2201/0873	. .	Using optically integrated constructions
2201/0623	. . .	Use of a reference LED	2201/088	. .	Using a sensor fibre
2201/0624	. . .	Compensating variation in output of LED source	2201/0886	. . .	and using OTDR
2201/0625	. . .	Modulated LED	2201/0893	. .	Using fibres for resolution in time
2201/0626	. . .	Use of several LED's for spatial resolution	2201/10	. .	Scanning
2201/0627	. . .	Use of several LED's for spectral resolution	2201/101	. .	Scanning measuring head
2201/0628	. . .	Organic LED [OLED]	2201/102	. .	Video camera
2201/063	. .	Illuminating optical parts	2201/103	. .	Scanning by mechanical motion of stage
2201/0631	. . .	Homogeneising elements	2201/1035	. . .	3D motion
2201/0632	. . . .	homogeneising by integrating sphere	2201/104	. .	Mechano-optical scan, i.e. object and beam moving
2201/0633	. . .	Directed, collimated illumination	2201/1042	. . .	X, Y scan, i.e. object moving in X, beam in Y
2201/0634	. . .	Diffuse illumination	2201/1045	. . .	Spiral scan
2201/0635	. . .	Structured illumination, e.g. with grating	2201/1047	. . .	with rotating optics and moving stage
2201/0636	. . .	Reflectors	2201/105	. .	Purely optical scan
2201/0637	. . . .	Elliptic	2201/1053	. . .	System of scan mirrors for composite motion of beam
2201/0638	. . .	Refractive parts	2201/1056	. . .	Prism scan, diasporameter
2201/0639	. . . .	Sphere lens	2201/106	. .	Acousto-optical scan
2201/064	. .	Stray light conditioning	2201/107	. .	CRT flying spot scan
2201/0642	. . .	Light traps; baffles	2201/108	. .	Miscellaneous
2201/0644	. . . .	Simple baffled tube construction	2201/1082	. . .	Descanning
2201/0646	. . .	Light seals	2201/1085	. . .	Using optical fibre array and scanner
2201/0648	. . .	Shutters	2201/1087	. . .	Focussed scan beam, e.g. laser
2201/065	. .	Integrating spheres	2201/11	. .	Monitoring and controlling the scan
2201/0655	. . .	Hemispheres	2201/112	. . .	Grating pulse time encoder
2201/066	. .	Modifiable path; multiple paths in one sample	2201/115	. . .	Optical equalisation of scan intensity
2201/0662	. . .	Comparing measurements on two or more paths in one sample	2201/117	. . .	Indexed, memorised or programmed scan
2201/0664	. . .	Using two ways, i.e. two devices in same path in one sample	2201/12	. .	Circuits of general importance; Signal processing
2201/0666	. . .	Selectable paths; insertable multiple sources	2201/121	. .	Correction signals
2201/0668	. . .	Multiple paths; optimisable path length	2201/1211	. . .	for temperature
2201/067	. .	Electro-optic, magneto-optic, acousto-optic elements	2201/1212	. . . .	and switch-off from upwarming
2201/0675	. . .	SLM	2201/1214	. . .	for humidity
2201/068	. .	Optics, miscellaneous	2201/1215	. . .	for interfering gases
2201/0683	. . .	Brewster plate; polarisation controlling elements	2201/1217	. . .	for index of solution, carrying fluids
2201/0686	. . .	Cold filter; IR filter	2201/1218	. . .	for pressure variations
2201/069	. .	Supply of sources	2201/122	. .	Kinetic analysis; determining reaction rate
2201/0691	. . .	Modulated (not pulsed supply)	2201/1222	. . .	Endpoint determination; reaction time determination
2201/0692	. . .	Regulated sources; stabilised supply	2201/1224	. . .	Polymerisation
2201/0693	. . .	Battery powered circuitry	2201/1226	. . .	Relaxation methods, e.g. temperature jump, field jump
2201/0694	. . .	Microprocessor controlled supply	2201/1228	. . .	Reading time being controlled, e.g. by microprocessor
2201/0695	. . .	Supply to maintain constant beam intensity	2201/123	. .	Conversion circuit
2201/0696	. . .	Pulsed	2201/1232	. . .	Log representation, e.g. for low transmittance
2201/0697	. . . .	Pulsed lasers	2201/1235	. . .	Measuring or displaying selectably absorbance or density
2201/0698	. . . .	Using reference pulsed source	2201/1237	. . .	Measuring extrema
2201/0699	. . . .	Randomly pulsed source	2201/124	. .	Sensitivity
2201/08	. .	Optical fibres; light guides	2201/1241	. . .	Multirange
2201/0806	. .	Light rod	2201/1242	. . .	Validating, e.g. range invalidation, suspending operation
2201/0813	. .	Arrangement of collimator tubes, glass or empty			
2201/082	. .	Fibres for a reference path			
2201/0826	. .	Fibre array at source, distributing			

2201/1244	. . . Ambient light detector, e.g. for invalidating	2203/0037	. . . involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects
2201/1245	. . . Averaging several measurements	2203/0039	. . . Hammer or pendulum
2201/1247	. . . Thresholding	2203/0041	. . . Human or animal power
2201/1248	. . . Validating from signal shape, slope, peak	2203/0042	. . . Pneumatic or hydraulic means
2201/125	. . Digital circuitry	2203/0044	. . . Pneumatic means
2201/126	. . Microprocessor processing	2203/0046	. . . . Vacuum
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	2203/0092	. . Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
2203/0001	. Type of application of the stress	2203/0094	. . . Visco-elasticity
2203/0003	. . Steady	2203/0096	. . Fibre-matrix interaction in composites
2203/0005	. . Repeated or cyclic	2203/0098	. Tests specified by its name, e.g. Charpy, Brinell, Mullen
2203/0007	. . . Low frequencies up to 100 Hz	2203/02	. Details not specific for a particular testing method
2203/0008	. . . High frequencies from 10 000 Hz	2203/0202	. . Control of the test
2203/001	. . Impulsive	2203/0204	. . . Safety arrangements, e.g. remote control, emergency stop
2203/0012	. . Constant speed test	2203/0206	. . . Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
2203/0014	. Type of force applied	2203/0208	. . . Specific programs of loading, e.g. incremental loading or pre-loading
2203/0016	. . Tensile or compressive	2203/021	. . . Treatment of the signal; Calibration
2203/0017	. . . Tensile	2203/0212	. . . Theories, calculations
2203/0019	. . . Compressive	2203/0214	. . . . Calculations a priori without experimental data
2203/0021	. . Torsional	2203/0216	. . . . Finite elements
2203/0023	. . Bending	2203/0218	. . . . Calculations based on experimental data
2203/0025	. . Shearing	2203/022	. . Environment of the test
2203/0026	. . Combination of several types of applied forces	2203/0222	. . . Temperature
2203/0028	. . . Rotation and bending	2203/0224	. . . . Thermal cycling
2203/003	. Generation of the force	2203/0226	. . . . High temperature; Heating means
2203/0032	. . using mechanical means		
2203/0033	. . . Weight		
2203/0035	. . . Spring		

2203/0228	. . . .	Low temperature; Cooling means	2203/0476	. . . .	in parallel
2203/023	. . .	Pressure	2203/0482	. . .	comprising sensing means
2203/0232	. . . .	High pressure	2203/0488	. . . .	Diamond anvil cells
2203/0234	. . . .	Low pressure; Vacuum	2203/0494	. . . .	Clamping ring, "whole periphery" clamping
2203/0236	. . .	Other environments	2203/06	. .	Indicating or recording means; Sensing means
2203/0238	. . . .	Inert	2203/0605	. . .	Mechanical indicating, recording or sensing means
2203/024	. . . .	Corrosive	2203/0611	. . .	Hydraulic or pneumatic indicating, recording or sensing means
2203/0242	. . . .	With circulation of a fluid	2203/0617	. . .	Electrical or magnetic indicating, recording or sensing means
2203/0244	. . .	Tests performed " <u>in situ</u> " or after " <u>in situ</u> " use	2203/0623	. . . .	using piezo-electric gauges
2203/0246	. . . .	Special simulation of " <u>in situ</u> " conditions, scale models or dummies	2203/0629	. . . .	using thin films, paintings
2203/0248	. . .	Tests "on-line" during fabrication	2203/0635	. . . .	using magnetic properties
2203/025	. .	Geometry of the test	2203/0641	. . .	using optical, X-ray, ultra-violet, infrared or similar detectors
2203/0252	. . .	Monoaxial, i.e. the forces being applied along a single axis of the specimen	2203/0647	. . . .	Image analysis
2203/0254	. . .	Biaxial, the forces being applied along two normal axes of the specimen	2203/0652	. . . .	using contrasting ink, painting, staining
2203/0256	. . .	Triaxial, i.e. the forces being applied along three normal axes of the specimen	2203/0658	. . .	using acoustic or ultrasonic detectors
2203/0258	. . .	Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen	2203/0664	. . .	using witness specimens
2203/026	. .	Specifications of the specimen	2203/067	. . .	Parameter measured for estimating the property
2203/0262	. . .	Shape of the specimen	2203/0676	. . . .	Force, weight, load, energy, speed or acceleration
2203/0264	. . . .	Beam	2203/0682	. . . .	Spatial dimension, e.g. length, area, angle
2203/0266	. . . .	Cylindrical specimens	2203/0688	. . . .	Time or frequency
2203/0268	. . . .	Dumb-bell specimens	2203/0694	. . . .	Temperature
2203/027	. . . .	Specimens with holes or notches	2223/00		Investigating materials by wave or particle radiation
2203/0272	. . . .	Cruciform specimens	2223/01	. . .	by radioactivity, nuclear decay
2203/0274	. . . .	Tubular or ring-shaped specimens	2223/03	. . .	by transmission
2203/0276	. . . .	Spherical specimens	2223/04	. .	and measuring absorption
2203/0278	. . . .	Thin specimens	2223/041	. . .	X-ray absorption fine structure [EXAFS]
2203/028	. . . . .	One dimensional, e.g. filaments, wires, ropes or cables	2223/043	. . .	gamma ray resonance absorption (Mossbauer effect)
2203/0282	. . . . .	Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes	2223/045	. . .	combination of at least 2 measurements (transmission and scatter)
2203/0284	. . .	Bulk material, e.g. powders	2223/05	. . .	by diffraction, scatter or reflection
2203/0286	. . .	Miniature specimen; Testing on microregions of a specimen	2223/051	. .	correcting for scatter
2203/0288	. . .	Springs	2223/052	. .	reflection
2203/029	. . . .	Leaf spring	2223/053	. .	back scatter
2203/0292	. . . .	Coil spring	2223/054	. .	small angle scatter
2203/0294	. . . .	Airs-spring, air bag spring or bellows	2223/055	. .	scatter raster collimator
2203/0296	. . .	Welds	2223/056	. .	diffraction
2203/0298	. . .	Manufacturing or preparing specimens	2223/0561	. . .	diffraction cameras
2203/04	. .	Chucks, fixtures, jaws, holders or anvils	2223/0563	. . .	measure of energy-dispersion spectrum of diffracted radiation
2203/0405	. . .	Features allowing alignment between specimen and chucks	2223/0565	. . .	diffraction of electrons, e.g. LEED
2203/0411	. . .	using pneumatic or hydraulic pressure	2223/0566	. . .	analysing diffraction pattern
2203/0417	. . .	using vacuum	2223/0568	. . .	spectro-diffractometry
2203/0423	. . .	using screws	2223/063	. .	inelastic scatter, e.g. Compton effect
2203/0429	. . .	using adhesive bond; Gluing	2223/064	. .	interference of radiation, e.g. Borrmann effect
2203/0435	. . .	modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test	2223/07	. . .	secondary emission
2203/0441	. . .	with dampers or shock absorbing means	2223/071	. . .	combination of measurements, at least 1 secondary emission
2203/0447	. . .	Holders for quick insertion/removal of test pieces	2223/072	. . .	combination of measurements, 2 kinds of secondary emission
2203/0452	. . .	Cushioning layer between test piece and grip	2223/073	. .	use of a laser
2203/0458	. . .	characterised by their material	2223/074	. .	activation analysis
2203/0464	. . .	with provisions for testing more than one specimen at the time	2223/0745	. . .	neutron-gamma activation analysis
2203/047	. . . .	in series	2223/076	. .	X-ray fluorescence
			2223/0763	. . .	Compton background correcting
			2223/0766	. . .	X-ray fluorescence with indicator, tags

2223/079	. . incident electron beam and measuring excited X-rays	2223/318	. . protective films
2223/08	. . incident electron beam and measuring cathode luminescence (U.V.)	2223/319	. . using opaque penetrant medium
2223/081	. . incident ion beam, e.g. proton	2223/32	. . adjustments of elements during operation
2223/0813	. . . incident ion beam and measuring X-rays [PIXE]	2223/321	. . manipulator for positioning a part
2223/0816	. . . incident ion beam and measuring secondary ion beam [SIMS]	2223/322	. . immersed detecting head
2223/084	. . photo-electric effect	2223/323	. . irradiation range monitor, e.g. light beam
2223/085	. . photo-electron spectrum [ESCA, XPS]	2223/33	. . scanning, i.e. relative motion for measurement of successive object-parts
2223/086	. . Auger electrons	2223/3301	. . . beam is modified for scan, e.g. moving collimator
2223/09	. . exo-electron emission	2223/3302	. . . object and detector fixed
2223/095	. . tribo-emission	2223/3303	. . . object fixed; source and detector move
2223/10	. Different kinds of radiation or particles	2223/3304	. . . helicoidal scan
2223/1003	. . monochromatic	2223/3305	. . . detector fixed; source and body moving
2223/1006	. . different radiations, e.g. X and alpha	2223/3306	. . . object rotates
2223/101	. . electromagnetic radiation	2223/3307	. . . source and detector fixed; object moves
2223/1013	. . . gamma	2223/3308	. . . object translates
2223/1016	. . . X-ray	2223/331	. . rocking curve analysis
2223/102	. . beta or electrons	2223/335	. . electronic scanning
2223/104	. . ions	2223/34	. . sensing means for gap between source and detector
2223/1045	. . . alpha	2223/345	. . mathematical transformations on beams or signals, e.g. Fourier
2223/105	. . molecular or atomic beams	2223/348	. . ellipsoidal collector
2223/106	. . neutrons	2223/351	. . prohibiting charge accumulation on sample substrate
2223/1063	. . . fast	2223/40	. Imaging
2223/1066	. . . thermal	2223/401	. . image processing
2223/107	. . protons	2223/402	. . mapping distribution of elements
2223/108	. . positrons; electron-positron annihilation	2223/403	. . mapping with false colours
2223/11	. . neutrino	2223/404	. . contrast medium
2223/20	. Sources of radiation	2223/405	. . mapping of a material property
2223/201	. . betatron	2223/406	. . fluoroscopic image
2223/202	. . isotopes	2223/407	. . stimuable phosphor sheet
2223/203	. . synchrotron	2223/408	. . display on monitor
2223/204	. . source created from radiated target	2223/409	. . embedding or impregnating the object
2223/205	. . natural source	2223/41	. . imaging specifically internal structure
2223/206	. . sources operating at different energy levels	2223/411	. . tv imaging from fluorescent screen
2223/30	. Accessories, mechanical or electrical features	2223/412	. . use of image converter tube [PMT]
2223/301	. . portable apparatus	2223/413	. . sensor array [CCD]
2223/302	. . comparative arrangements	2223/414	. . stereoscopic system
2223/303	. . calibrating, standardising	2223/415	. . radiographic film
2223/3032	. . . periodic calibration, e.g. with filter wheel	2223/416	. . wrap around
2223/3035	. . . phantom	2223/417	. . recording with co-ordinate markings
2223/3037	. . . standards (constitution)	2223/418	. . electron microscope
2223/304	. . electric circuits, signal processing	2223/419	. . computed tomograph
2223/305	. . computer simulations	2223/42	. . image digitised, -enhanced in an image processor
2223/306	. . computer control	2223/421	. . digitised image, analysed in real time (recognition algorithms)
2223/307	. . cuvettes-sample holders	2223/422	. . windows within the image
2223/3075	. . . correcting for the properties of the container, e.g. empty	2223/423	. . multispectral imaging-multiple energy imaging
2223/308	. . support of radiation source	2223/424	. . energy subtraction image processing (dual energy processing)
2223/309	. . support of sample holder	2223/425	. . temporal (time difference) subtraction processing
2223/31	. . temperature control	2223/426	. . image comparing, unknown with known substance
2223/3103	. . . cooling, cryostats	2223/427	. . stepped imaging (selected area of sample is changed)
2223/3106	. . . heating, furnaces	2223/50	. Detectors
2223/311	. . high pressure testing, anvil cells	2223/501	. . array
2223/312	. . powder preparation	2223/5015	. . . linear array
2223/313	. . filters, rotating filter disc		
2223/314	. . chopper		
2223/315	. . monochromators		
2223/316	. . collimators		
2223/317	. . windows		

2223/502	. . ionisation chamber	2223/6462	. . . microdefects
2223/503	. . auxiliary reference detector	2223/6464	. . . radioactive substance into defect site
2223/504	. . pin-diode	2223/6466	. . . flaws comparing to predetermined standards
2223/505	. . scintillation	2223/6468	. . . at different temperatures
2223/5055	. . . scintillation crystal coupled to PMT	2223/647	. . leak detection
2223/506	. . time-of-flight	2223/648	. . voids
2223/507	. . secondary-emission detector	2223/649	. . porosity
2223/508	. . photo-acoustic	2223/65	. . cavitation pits
2223/509	. . infra-red	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		
2223/643	. . object on conveyor		
2223/645	. . quality control		
2223/646	. . flaws, defects		

2291/0257	. . . .	with a layer containing at least one organic compound	2291/2677	. . .	Lapp welding
2291/0258	. . .	Structural degradation, e.g. fatigue of composites, ageing of oils	2291/269	. .	Various geometry objects
2291/028	. .	Material parameters	2291/2691	. . .	Bolts, screws, heads
2291/02809	. . .	Concentration of a compound, e.g. measured by a surface mass change	2291/2692	. . .	Tyres
2291/02818	. . .	Density, viscosity	2291/2693	. . .	Rotor or turbine parts
2291/02827	. . .	Elastic parameters, strength or force	2291/2694	. . .	Wings or other aircraft parts
2291/02836	. . .	Flow rate, liquid level	2291/2695	. . .	Bottles, containers
2291/02845	. . .	Humidity, wetness	2291/2696	. . .	Wheels, Gears, Bearings
2291/02854	. . .	Length, thickness	2291/2697	. . .	Wafer or (micro)electronic parts
2291/02863	. . .	Electric or magnetic parameters	2291/2698	. . .	Other discrete objects, e.g. bricks
2291/02872	. . .	Pressure			
2291/02881	. . .	Temperature	2333/00		Assays involving biological materials from specific organisms or of a specific nature
2291/0289	. . .	Internal structure, e.g. defects, grain size, texture			NOTE
2291/04	. .	Wave modes and trajectories			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.
2291/042	. .	Wave modes	2333/001	. .	by chemical synthesis
2291/0421	. . .	Longitudinal waves	2333/003	. .	of Peptide-nucleic acids (PNAs)
2291/0422	. . .	Shear waves, transverse waves, horizontally polarised waves	2333/005	. .	from viruses
2291/0423	. . .	Surface waves, e.g. Rayleigh waves, Love waves	2333/01	. .	DNA viruses
2291/0425	. . .	Parallel to the surface, e.g. creep waves	2333/015	. . .	Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus
2291/0426	. . .	Bulk waves, e.g. quartz crystal microbalance, torsional waves	2333/02	. . .	Hepadnaviridae, e.g. hepatitis B virus
2291/0427	. . .	Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever	2333/025	. . .	Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
2291/0428	. . .	Mode conversion	2333/03	. . .	Herpetoviridae, e.g. pseudorabies virus
2291/043	. .	Complex trajectories	2333/032	. . . .	Pseudorabies virus, i.e. Aujeszky virus
2291/044	. .	Internal reflections (echoes), e.g. on walls or defects	2333/035	. . . .	Herpes simplex virus I or II
2291/045	. .	External reflections, e.g. on reflectors	2333/04	. . . .	Varicella-zoster virus
2291/048	. .	Transmission, i.e. analysed material between transmitter and receiver	2333/045	. . . . .	Cytomegalovirus
2291/051	. .	Perpendicular incidence, perpendicular propagation	2333/05	. . . .	Epstein-Barr virus
2291/052	. .	Perpendicular incidence, angular propagation	2333/055	. . . .	Marek's disease virus
2291/055	. .	Angular incidence, perpendicular propagation	2333/06	. . . .	Infectious bovine rhinotracheitis virus
2291/056	. .	Angular incidence, angular propagation	2333/065	. . .	Poxviridae, e.g. avipoxvirus
2291/057	. .	Angular incidence, parallel to surface propagation	2333/07	. . . .	Vaccinia virus; Variola virus
2291/10	. .	Number of transducers	2333/075	. . .	Adenoviridae
2291/101	. .	one transducer	2333/08	. .	RNA viruses
2291/102	. .	one emitter, one receiver	2333/085	. . .	Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
2291/103	. .	one emitter, two or more receivers	2333/09	. . . .	Foot-and-mouth disease virus
2291/104	. .	two or more emitters, one receiver	2333/095	. . . .	Rhinovirus
2291/105	. .	two or more emitters, two or more receivers	2333/10	. . . .	Hepatitis A virus
2291/106	. .	one or more transducer arrays	2333/105	. . . .	Poliovirus
2291/26	. .	Scanned objects	2333/11	. . .	Orthomyxoviridae, e.g. influenza virus
2291/262	. .	Linear objects	2333/115	. . .	Paramyxoviridae, e.g. parainfluenza virus
2291/2623	. . .	Rails; Railroads	2333/12	. . . .	Mumps virus; Measles virus
2291/2626	. . .	Wires, bars, rods	2333/125	. . . .	Newcastle disease virus
2291/263	. .	Surfaces	2333/13	. . . .	Canine distemper virus
2291/2632	. . .	flat	2333/135	. . . .	Respiratory syncytial virus
2291/2634	. . .	cylindrical from outside	2333/14	. . .	Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
2291/2636	. . .	cylindrical from inside	2333/145	. . .	Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokola virus or vesicular stomatitis virus
2291/2638	. . .	Complex surfaces	2333/15	. . .	Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus
2291/265	. .	Spherical objects	2333/155	. . . .	Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
2291/267	. .	Welds	2333/16	. . . . .	HIV-1, HIV-2
2291/2672	. . .	Spot welding			
2291/2675	. . .	Seam, butt welding			

2333/161	. . . . .	gag-pol, e.g. p55, p24/25, p17/18, p.7, p6, p66/68, p51/52, p31/34, p32, p40	2333/315	. .	from Streptococcus (G), e.g. Enterococci
2333/162	. . . . .	env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site	2333/3153	. . .	Streptokinase
2333/163	. . . . .	Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx	2333/3156	. . .	from Streptococcus pneumoniae (Pneumococcus) (Streptokinase G01N 2333/3153)
2333/165	. . .	Coronaviridae, e.g. avian infectious bronchitis virus	2333/32	. .	from Bacillus (G)
2333/17	. . . .	Porcine transmissible gastroenteritis virus	2333/325	. . .	Bacillus thuringiensis crystal protein (delta-endotoxin)
2333/175	. . .	Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus	2333/33	. .	from Clostridium (G)
2333/18	. . .	Togaviridae; Flaviviridae	2333/335	. .	from Lactobacillus (G)
2333/181	. . . .	Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus (rubella virus G01N 2333/19)	2333/34	. .	from Corynebacterium (G)
2333/183	. . . .	Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus) or border disease virus	2333/345	. .	from Brevibacterium (G)
2333/185	. . . . .	Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue	2333/35	. .	from Mycobacteriaceae (F)
2333/186	. . . . .	Hepatitis C; Hepatitis NANB	2333/355	. .	from Nocardia (G)
2333/188	. . . . .	Hepatitis G; Hepatitis NANBNCNDNE	2333/36	. .	from Actinomyces; from Streptomyces (G)
2333/19	. . . .	Rubella virus	2333/365	. .	from Actinoplanes (G)
2333/195	. .	from bacteria	2333/37	. .	from fungi
NOTE			2333/375	. .	from Basidiomycetes
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.			2333/38	. .	from Aspergillus
2333/20	. .	from Spirochaetales (O), e.g. Treponema, Leptospira	2333/385	. .	from Penicillium
2333/205	. .	from Campylobacter (G)	2333/39	. .	from yeasts
2333/21	. .	from Pseudomonadaceae (F)	2333/395	. . .	from Saccharomyces
2333/212	. . .	Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter	2333/40	. . .	from Candida
2333/215	. .	from Halobacteriaceae (F)	2333/405	. .	from algae
2333/22	. .	from Neisseriaceae (F), e.g. Acinetobacter	2333/41	. .	from lichens
2333/225	. .	from Alcaligenes (G)	2333/415	. .	from plants
2333/23	. .	from Brucella (G)	2333/42	. .	Lectins, e.g. concanavalin, phytohaemagglutinin
2333/235	. .	from Bordetella (G)	2333/425	. .	Zeins
2333/24	. .	from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia	2333/43	. .	Sweetening agents, e.g. thaumatin, monellin
2333/245	. . .	Escherichia (G)	2333/435	. .	from animals; from humans
2333/25	. . .	Shigella (G)	2333/43504	. . .	from invertebrates
2333/255	. . .	Salmonella (G)	2333/43508	. . .	from crustaceans
2333/26	. . .	Klebsiella (G)	2333/43513	. . .	from arachnidae
2333/265	. . .	Enterobacter (G)	2333/43517	. . . .	from spiders
2333/27	. . .	Erwinia (G)	2333/43521	. . . .	from scorpions
2333/275	. . .	Hafnia (G)	2333/43526	. . .	from worms
2333/28	. .	from Vibrionaceae (F)	2333/4353	. . . .	from nematodes
2333/285	. .	from Pasteurellaceae (F), e.g. Haemophilus influenza	2333/43534	. . . . .	from Caenorhabditis
2333/29	. .	from Richettsiales (o)	2333/43539	. . . .	from cestodes
2333/295	. .	from Chlamydiales (o)	2333/43543	. . . . .	from Taenia
2333/30	. .	from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]	2333/43547	. . . .	from trematodes
2333/305	. .	from Micrococcaceae (F)	2333/43552	. . .	from insects
2333/31	. . .	from Staphylococcus (G)	2333/43556	. . . .	from ticks
			2333/4356	. . . .	from wasps
			2333/43565	. . . .	from bees
			2333/43569	. . . .	from flies
			2333/43573	. . . . .	from Drosophila
			2333/43578	. . . .	from silkworm
			2333/43582	. . . .	from mites
			2333/43586	. . . .	from fleas
			2333/43591	. . . .	from mosquitoes
			2333/43595	. . .	from coelenteratae, e.g. medusae
			2333/44	. .	from protozoa
			2333/445	. . .	Plasmodium
			2333/45	. . .	Toxoplasma
			2333/455	. . .	Eimeria
			2333/46	. .	from vertebrates
			2333/4603	. . .	from fish
			2333/4606	. . .	from amphibians
			2333/4609	. . .	from reptiles
			2333/4613	. . . .	Snake venom

2333/4616	. . . . .	from Russell's viper	2333/4756	. . .	Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor
2333/462	. . . . .	from Agkistrodon sp., e.g. acutase, ACTE	2333/48	. . .	Nerve growth factor [NGF]
2333/4623	. . . . .	from Agkistrodon rhodostoma (Malayan pit viper); Arvin (R); Batroxobin; Ancrod	2333/485	. . .	Epidermal growth factor [EGF] (urogastrone)
2333/4626	. . . . .	from Agkistrodon contortrix contortrix (copperhead snake); Protac (R)	2333/49	. . .	Platelet-derived growth factor [PDGF]
2333/463	. . . . .	from Croatalus adamanteus (Eastern Diamondback rattlesnake); Crotolase	2333/495	. . .	Transforming growth factor [TGF]
2333/4633	. . . . .	from Echis carinatus; Ecarin	2333/50	. . .	Fibroblast growth factors [FGF]
2333/4636	. . . . .	from Bothrops sp.	2333/501	. . . .	acidic FGF [aFGF]
2333/464	. . . . .	from Bothrops atrox; Reptilase; Atroxin	2333/503	. . . .	basic FGF [bFGF]
2333/4643	. . . . .	from Bothrops jararaca; Botrocetin	2333/505	. . .	Erythropoietin [EPO]
2333/4646	. . . . .	from Oxyuran(eo)us scutellatus (Taipan snake of Elapidae family)	2333/51	. . .	Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor
2333/465	. . .	from birds	2333/515	. . .	Angiogenesis factors; Angiogenin
2333/47	. . .	Assays involving proteins of known structure or function as defined in the subgroups	2333/52	. .	Assays involving cytokines
2333/4701	. . . .	Details	2333/521	. . .	Chemokines
2333/4703	. . . . .	Regulators; Modulating activity	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
2333/4704	. . . . .	Inhibitors; Suppressors	2333/523	. . . .	Beta-chemokines, e.g. RANTES, I-309/TCA-3, MIP-1alpha, MIP-1beta/ACT-2/LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1 or LDCF-2
2333/4706	. . . . .	stimulating, promoting or activating activity	2333/524	. . .	Thrombopoietin, i.e. C-MPL ligand
2333/4707	. . . . .	Guanosine triphosphatase activating protein, GAP	2333/525	. . .	Tumor necrosis factor [TNF]
2333/4709	. . . . .	Amyloid plaque core protein	2333/5255	. . . .	Lymphotoxin [LT]
2333/471	. . . . .	Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein	2333/53	. . .	Colony-stimulating factor [CSF]
2333/4712	. . . . .	Muscle proteins, e.g. myosin, actin, protein	2333/535	. . . .	Granulocyte CSF; Granulocyte-macrophage CSF
2333/4713	. . . . .	Plasma globulins, lactoglobulin	2333/54	. . .	Interleukins [IL]
2333/4715	. . . . .	Cytokine-induced proteins	2333/5403	. . . .	IL-3
2333/4716	. . . . .	Complement proteins, e.g. anaphylatoxin, C3a, C5a	2333/5406	. . . .	IL-4
2333/4718	. . . . .	Lipocortins	2333/5409	. . . .	IL-5
2333/4719	. . . . .	G-proteins	2333/5412	. . . .	IL-6
2333/4721	. . . . .	Cationic antimicrobial peptides, e.g. defensins	2333/5415	. . . .	Leukaemia inhibitory factor [LIF]
2333/4722	. . . . .	Proteoglycans, e.g. aggrecan	2333/5418	. . . .	IL-7
2333/4724	. . . . .	Lectins	2333/5421	. . . .	IL-8
2333/4725	. . . . .	Mucins, e.g. human intestinal mucin	2333/5425	. . . .	IL-9
2333/4727	. . . . .	Calcium binding proteins, e.g. calmodulin	2333/5428	. . . .	IL-10
2333/4728	. . . . .	alpha-Glycoproteins	2333/5431	. . . .	IL-11
2333/473	. . . . .	Recognins, e.g. malignin	2333/5434	. . . .	IL-12
2333/4731	. . . . .	Casein	2333/5437	. . . .	IL-13
2333/4733	. . . . .	Acute pancreatitis-associated protein	2333/544	. . . .	IL-14
2333/4734	. . . . .	Villin	2333/5443	. . . .	IL-15
2333/4736	. . . . .	Retinoblastoma protein	2333/5446	. . . .	IL-16
2333/4737	. . . . .	C-reactive protein	2333/545	. . . .	IL-1
2333/4739	. . . . .	Cyclin; Prad 1	2333/55	. . . .	IL-2
2333/474	. . . . .	Pancreatic thread protein; Reg protein	2333/555	. . .	Interferons [IFN]
2333/4742	. . . . .	Keratin; Cytokeratin	2333/56	. . . .	IFN-alpha
2333/4743	. . . . .	Bactericidal/Permeability-increasing protein BPI	2333/565	. . . .	IFN-beta
2333/4745	. . . . .	Insulin-like growth factor binding protein	2333/57	. . . .	IFN-gamma
2333/4746	. . . . .	Cancer-associated SCM-recognition factor, CRISPP	2333/575	. .	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin G01N 2333/665 , corticotropin G01N 2333/695)
2333/4748	. . . . .	p53	2333/5751	. . .	Corticotropin releasing factor [CRF] (Urotensin)
2333/475	. .	Assays involving growth factors	2333/5752	. . .	Placental lactogen; Chorionic Somatomammotropin
2333/4753	. . .	Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II	2333/5753	. . .	Calcitonin gene related peptide
			2333/5754	. . .	Endothelin, vasoactive intestinal contractor [VIC]
			2333/5755	. . .	Neuropeptide Y

2333/5756	. . .	Prolactin	2333/7056	. . .	Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
2333/5757	. . .	Vasoactive intestinal peptide [VIP] or related peptides	2333/70564	. . . .	Selectins, e.g. CD62
2333/5758	. . .	Gastrin releasing peptide	2333/70567	. . .	Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors
2333/5759	. . .	Thymosin or related peptides	2333/70571	. . .	for neuromediators, e.g. serotonin receptor, dopamine receptor
2333/58	. . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatrin; Cardiodilatin	2333/70575	. . .	NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 (NGF G01N 2333/48 , TNF G01N 2333/525)
2333/585	. . .	Calcitonins	2333/70578	. . .	NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 (NGF-receptor G01N 2333/71 , TNF-receptor G01N 2333/7151)
2333/59	. . .	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) (Somatoliberein)	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	. . .	Thymopoiетins	2333/72	. . .	for hormones (for neuromediators G01N 2333/70571)
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	. .	Apolipopptides
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	. .	Porphyrim- 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			
2333/70557	. . . .	Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61			

2333/8114	. . . .	Kunitz type inhibitors	2333/90264	. . . . .	Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)
2333/8117	. . . . .	Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)	2333/90267	. . . . .	Cholesterol monooxygenase (cytochrome P 450scs)(1.14.15.6)
2333/8121	. . . . .	Serpins	2333/9027	. . . . .	Miscellaneous (1.14.99)
2333/8125	. . . . .	Alpha-1-antitrypsin	2333/90274	. . . . .	with a definite EC number (1.14.99.-)
2333/8128	. . . . .	Antithrombin III	2333/90277	. . . . .	Steroid 17 alpha-monooxygenase (1.14.99.9)
2333/8132	. . . . .	Plasminogen activator inhibitors	2333/9028	. . . . .	Steroid 21-monooxygenase (1.14.99.10)
2333/8135	. . . . .	Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid	2333/90283	. . . . .	acting on superoxide radicals as acceptor (1.15)
2333/8139	. . . . .	Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin	2333/90287	. . . . .	oxidising metal ions (1.16)
2333/8142	. . . . .	Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors	2333/9029	. . . . .	acting on -CH ₂ - groups (1.17)
2333/8146	. . . . .	Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metallo proteinase, TIMP	2333/90293	. . . . .	acting on reduced ferredoxin as donor (1.18)
2333/815	. . . . .	from leeches, e.g. hirudin, eglin	2333/90296	. . . . .	acting on reduced flavodoxin as donor (1.19)
2333/82	. . . . .	Translation products from oncogenes	2333/904	. . . . .	acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)
2333/825	. . . . .	Metallothioneins	2333/906	. . . . .	acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)
2333/90	. . . . .	Enzymes; Proenzymes	2333/90605	. . . . .	acting on the CH-NH ₂ group of donors (1.4)
NOTE			2333/90611	. . . . .	with NAD or NADP as acceptor (1.4.1) in general
Enzymes are generally categorised below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.			2333/90616	. . . . .	with a definite EC number (1.4.1.-)
			2333/90622	. . . . .	Phenylalanine dehydrogenase (1.4.1.20)
2333/9005	. . . . .	Enzymes with nucleic acid structure; e.g. ribozymes	2333/90627	. . . . .	with a cytochrome as acceptor (1.4.2)
2333/901	. . . . .	Antibodies with enzymatic activity; e.g. abzymes	2333/90633	. . . . .	with oxygen as acceptor (1.4.3) in general
2333/9015	. . . . .	Ligases (6)	2333/90638	. . . . .	with a definite EC number (1.4.3.-)
2333/902	. . . . .	Oxidoreductases (1.)	2333/90644	. . . . .	D-Amino acid oxidase (1.4.3.3)
2333/90203	. . . . .	acting on the aldehyde or oxo group of donors (1.2)	2333/9065	. . . . .	acting on CH-NH groups of donors (1.5)
2333/90206	. . . . .	acting on the CH-CH group of donors (1.3)	2333/90655	. . . . .	with NAD or NADP as acceptor (1.5.1) in general
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)	2333/90661	. . . . .	with a definite EC number (1.5.1.-)
2333/90212	. . . . .	acting on a sulfur group of donors (1.8)	2333/90666	. . . . .	Dihydrofolate reductase [DHFR] (1.5.1.3)
2333/90216	. . . . .	acting on a heme group of donors (1.9)	2333/90672	. . . . .	with oxygen as acceptor (1.5.3) in general
2333/90219	. . . . .	acting on diphenols and related substances as donors (1.10)	2333/90677	. . . . .	with a definite EC number (1.5.3.-)
2333/90222	. . . . .	with oxygen as acceptor (1.10.3) in general	2333/90683	. . . . .	Sarcosine oxidase (1.5.3.1)
2333/90225	. . . . .	with a definite EC number (1.10.3.-)	2333/90688	. . . . .	acting on other nitrogen compounds as donors (1.7)
2333/90229	. . . . .	Catechol oxidase, i.e. Tyrosinase (1.10.3.1)	2333/90694	. . . . .	with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
2333/90232	. . . . .	Laccase (1.10.3.2)	2333/908	. . . . .	acting on hydrogen peroxide as acceptor (1.11)
2333/90235	. . . . .	Ascorbate oxidase (1.10.3.3)	2333/91	. . . . .	Transferases (2.)
2333/90238	. . . . .	acting on hydrogen as donor (1.12)	2333/91005	. . . . .	transferring one-carbon groups (2.1)
2333/90241	. . . . .	acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)	2333/91011	. . . . .	Methyltransferases (general) (2.1.1.)
2333/90245	. . . . .	acting on paired donors with incorporation of molecular oxygen (1.14)	2333/91017	. . . . .	with definite EC number (2.1.1.-)
2333/90248	. . . . .	with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13	2333/91022	. . . . .	Catecholmethyltransferases (2.1.1.6)
2333/90251	. . . . .	with a definite EC number (1.14.13.-)	2333/91028	. . . . .	Hydroxymethyl-, formyl-transferases (2.1.2)
2333/90254	. . . . .	Nitric-oxide synthase (NOS; 1.14.13.39)	2333/91034	. . . . .	Carboxyl- and carbamoyl transferases (2.1.3)
2333/90258	. . . . .	with a reduced iron-sulfur protein as one donor (1.14.15) in general	2333/9104	. . . . .	Aldehyde and ketone transferases (2.2)
2333/90261	. . . . .	with a definite EC number (1.14.15.-)	2333/91045	. . . . .	Acytransferases (2.3)
			2333/91051	. . . . .	Acytransferases 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)	2333/922	. . . . Ribonucleases (RNAses); Deoxyribonucleases (DNAses)
2333/91102	. . . . with definite EC number (2.4.1.-)	2333/924	. . . acting on glycosyl compounds (3.2)
2333/91108	. . . . Levansucrases (2.4.1.10)	2333/926	. . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase
2333/91114	. . . . Cellulose synthases (2.4.1.12)	2333/928	. . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase
2333/91112	. . . . Sucrose synthases (2.4.1.13)	2333/93	. . . . Fungal source
2333/91125	. . . . Sucrose phosphate synthases (2.4.1.14)	2333/932	. . . . alpha-amylase from plant source
2333/91131	. . . . Glucan branching enzymes (2.4.1.18)	2333/934	. . . . Glucoamylase
2333/91137	. . . . Cyclomalto dextrin glucano transferases (2.4.1.19)	2333/936	. . . acting on beta-1, 4 bonds between N- acetylmuramic acid and 2-acetyl-amino 2- deoxy-D-glucose, e.g. lysozyme
2333/91142	. . . . Pentosyltransferases (2.4.2)	2333/938	. . . acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase
2333/91148	. . . transferring other glycosyl groups (2.4.99)	2333/94	. . . acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase
2333/91154	. . . transferring alkyl or aryl groups other than methyl groups (2.5)	2333/942	. . . acting on beta-1, 4-glucosidic bonds, e.g. cellulase
2333/9116	. . . transferring alkyl or aryl groups other than methyl groups (2.5)	2333/944	. . . acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
2333/91165	. . . . general (2.5.1)	2333/946	. . . . Dextranase
2333/91171	. . . . with definite EC number (2.5.1.-)	2333/948	. . . acting on peptide bonds (3.4)
2333/91177	. . . . Glutathione transferases (2.5.1.18)	2333/95	. . . Proteinases, i.e. endopeptidases (3.4.21-3.4.99)
2333/91182	. . . . Enolpyruvylshikimate-phosphate synthases (2.5.1.19)	2333/9506	. . . . derived from viruses
2333/91188	. . . transferring nitrogenous groups (2.6)	2333/9513	. . . . derived from RNA viruses
2333/91194	. . . transferring sulfur containing groups (2.8)	2333/952	. . . . derived from bacteria
2333/912	. . . transferring phosphorus containing groups, e.g. kinases (2.7)	2333/954	. . . . bacteria being Bacillus
2333/91205	. . . . Phosphotransferases in general	2333/956	. . . . Bacillus subtilis or Bacillus licheniformis
2333/9121	. . . . with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases	2333/958	. . . . derived from fungi
2333/91215	. . . . with a definite EC number (2.7.1.-)	2333/96	. . . . from yeast
2333/9122	. . . . Thymidine kinase (2.7.1.21)	2333/962	. . . . from Aspergillus
2333/91225	. . . . with a carboxyl group as acceptor (2.7.2)	2333/964	. . . . derived from animal tissue
2333/9123	. . . . with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases	2333/96402	. . . . from non-mammals
2333/91235	. . . . with a phosphate group as acceptor (2.7.4)	2333/96405	. . . . in general
2333/9124	. . . . Diphosphotransferases (2.7.6)	2333/96408	. . . . with EC number
2333/91245	. . . . Nucleotidyltransferases (2.7.7)	2333/96411	. . . . Serine endopeptidases (3.4.21)
2333/9125	. . . . with a definite EC number (2.7.7.-)	2333/96413	. . . . Cysteine endopeptidases (3.4.22)
2333/91255	. . . . DNA-directed RNA polymerase (2.7.7.6)	2333/96416	. . . . Aspartic endopeptidases (3.4.23)
2333/9126	. . . . DNA-directed DNA polymerase (2.7.7.7)	2333/96419	. . . . Metalloendopeptidases (3.4.24)
2333/91265	. . . . Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)	2333/96422	. . . . from snakes
2333/9127	. . . . DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)	2333/96425	. . . . from mammals
2333/91275	. . . . RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)	2333/96427	. . . . in general
2333/9128	. . . . RNA-directed DNA polymerases, e.g. RT (2.7.7.49)	2333/9643	. . . . with EC number
2333/91285	. . . . RNA uridyltransferases (2.7.7.52)	2333/96433	. . . . Serine endopeptidases (3.4.21)
2333/9129	. . . . Transferases for other substituted phosphate groups (2.7.8)	2333/96436	. . . . Granzymes
2333/91295	. . . . with paired acceptors (2.7.9)	2333/96438	. . . . Dibasic site splicing serine proteases, e.g. furin
2333/914	. . . Hydrolases (3)	2333/96441	. . . . with definite EC number
2333/916	. . . acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)	2333/96444	. . . . Factor X (3.4.21.6)
2333/918	. . . . Carboxylic ester hydrolases (3.1.1)	2333/96447	. . . . Factor VII (3.4.21.21)
2333/92	. . . . Triglyceride splitting, e.g. by means of lipase	2333/9645	. . . . Factor IX (3.4.21.22)
		2333/96452	. . . . Factor XI (3.4.21.27)
		2333/96455	. . . . Kallikrein (3.4.21.34; 3.4.21.35)
		2333/96458	. . . . Factor XII (3.4.21.38)
		2333/96461	. . . . Protein C (3.4.21.69)

- 2333/96463 Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
- 2333/96466 Cysteine endopeptidases (3.4.22)
- 2333/96469 Interleukin 1-beta convertase-like enzymes
- 2333/96472 Aspartic endopeptidases (3.4.23)
- 2333/96475 with definite EC number
- 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)
- 2333/966 Elastase
- 2333/968 Plasmin, i.e. fibrinolysin
- 2333/972 Plasminogen activators
- 2333/9723 Urokinase
- 2333/9726 Tissue plasminogen activator
- 2333/974 Thrombin
- 2333/976 Trypsin; Chymotrypsin
- 2333/978 acting on carbon to nitrogen bonds other than peptide bonds (3.5)
- 2333/98 acting on amide bonds in linear amides (3.5.1)
- 2333/982 Asparaginase
- 2333/984 Penicillin amidase
- 2333/986 acting on amide bonds in cyclic amides (3.5.2), e.g. beta-lactamase (penicillinase, 3.5.2.6), creatinine amidohydrolase (creatininase, EC 3.5.2.10), N-methylhydantoinase (3.5.2.6)
- 2333/988 Lyases (4.), e.g. aldolases, heparinase, enolases, fumarase
- 2333/99 Isomerases (5.)
- 2333/992 Glucose isomerase; Xylose isomerase; Glucose-6-phosphate isomerase
- 2333/994 Pancreatin
- 2400/00 Assays, e.g. immunoassays or enzyme assays, involving carbohydrates**
- 2400/02 involving antibodies to sugar part of glycoproteins ([lectins from plants G01N 2333/42](#), [lectins from mammals G01N 2333/4724](#))
- 2400/10 Polysaccharides, i.e. having more than five saccharide radicals attached to each other by glycosidic linkages; Derivatives thereof, e.g. ethers, esters
- 2400/12 Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar
- 2400/14 alpha-D-Glucans, i.e. having alpha 1,n (n=3,4,6) linkages between saccharide units, e.g. pullulan
- 2400/16 Starch, amylose, amylopectin
- 2400/18 Cyclodextrin
- 2400/22 Dextran
- 2400/24 beta-D-Glucans, i.e. having beta 1,n (n=3,4,6) linkages between saccharide units, e.g. xanthan
- 2400/26 Cellulose
- 2400/28 Chitin, chitosan
- 2400/32 Galactans, e.g. agar, agarose, agaropectin, carrageenan
- 2400/34 alpha-D-Galacturonans, e.g. pectin
- 2400/36 beta-D-Fructofuranans, e.g. levan, insulin
- 2400/38 Heteroglycans, i.e. polysaccharides having more than one sugar residue in the main chain in either alternating or less regular sequence, e.g. gluco- or galactomannans, e.g. Konjac gum, Locust bean gum, Guar gum ([proteoglycans G01N 2333/4722](#))
- 2400/40 Glycosaminoglycans, i.e. GAG or mucopolysaccharides, e.g. chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparin, heparan sulfate, and related sulfated polysaccharides
- 2400/44 Guluromannuronans, e.g. alginic acid
- 2400/46 Pectin
- 2400/48 Reserve carbohydrates, e.g. glycogen
- 2400/50 Lipopolysaccharides; LPS
- 2405/00 Assays, e.g. immunoassays or enzyme assays, involving lipids (lipopolysaccharides [G01N 2400/50](#))**
- 2405/02 Triacylglycerols
- 2405/04 Phospholipids, i.e. phosphoglycerides
- 2405/06 Glycophospholipids, e.g. phosphatidyl inositol
- 2405/08 Sphingolipids
- 2405/10 Glycosphingolipids, e.g. cerebrosides, gangliosides
- 2407/00 Assays, e.g. immunoassays or enzyme assays, involving terpenes**
- 2407/02 Taxol; Taxanes
- 2410/00 Assays, e.g. immunoassays or enzyme assays, involving peptides of less than 20 amino acids**
- 2410/02 Angiotensins; Related peptides
- 2410/04 Oxytocins; Vasopressins; Related peptides
- 2410/06 Kallidins; Bradykinins; Related peptides
- 2410/08 Cyclosporins and related peptides
- 2410/10 Valinomycins and derivatives thereof
- 2415/00 Assays, e.g. immunoassays or enzyme assays, involving penicillins or cephalosporins**
- 2430/00 Assays, e.g. immunoassays or enzyme assays, involving synthetic organic compounds as analytes**
- 2430/10 Insecticides
- 2430/12 Pyrethroids
- 2430/20 Herbicides, e.g. DDT
- 2430/30 Polychlorinated biphenyls (PCBs)
- 2430/40 Dioxins
- 2430/50 Polyaromatic hydrocarbons (PAHs)
- 2430/60 Synthetic polymers other than synthetic polypeptides as analytes
- 2440/00 Post-translational modifications [PTMs] in chemical analysis of biological material**
- 2440/10 acylation, e.g. acetylation, formylation, lipoylation, myristoylation, palmitoylation
- 2440/12 alkylation, e.g. methylation, (iso-)prenylation, farnesylation
- 2440/14 phosphorylation
- 2440/16 (de-)amidation

- 2440/18 . citrullination
- 2440/20 . formation of disulphide bridges
- 2440/22 . iodination
- 2440/24 . hydroxylation
- 2440/26 . nitrosylation
- 2440/28 . PEGylation
- 2440/30 . sulphation
- 2440/32 . biotinylation
- 2440/34 . addition of amino acid(s), e.g. arginylation, (poly-)glutamylolation, (poly-)glycylation
- 2440/36 . addition of addition of other proteins or peptides, e.g. SUMOylation, ubiquitination
- 2440/38 . addition of carbohydrates, e.g. glycosylation, glycation
- 2440/40 . addition of nucleotides or derivatives, e.g. adenylation, flavin attachment
- 2446/00 Magnetic particle immunoreagent carriers**
- 2446/10 . the magnetic material being used to coat a pre-existing polymer particle but not being present in the particle core
- 2446/20 . the magnetic material being present in the particle core
- 2446/30 . the magnetic material being dispersed in the polymer composition before their conversion into particulate form
- 2446/40 . the magnetic material being dispersed in the monomer composition prior to polymerisation
- 2446/60 . the magnetic material being dispersed in a medium other than the main solvent prior to incorporation into the polymer particle
- 2446/62 . . Magnetic material dispersed in water drop
- 2446/64 . . Magnetic material dispersed in oil drop
- 2446/66 . . Magnetic material dispersed in surfactant
- 2446/80 . characterised by the agent used to coat the magnetic particles, e.g. lipids
- 2446/84 . . Polymer coating, e.g. gelatin
- 2446/86 . . the coating being pre-functionalised for attaching immunoreagents, e.g. aminodextran
- 2446/90 . . characterised by small molecule linker used to couple immunoreagents to magnetic particles
- 2458/00 Labels used in chemical analysis of biological material**
- 2458/10 . Oligonucleotides as tagging agents for labelling antibodies
- 2458/15 . Non-radioactive isotope labels, e.g. for detection by mass spectrometry
- 2458/20 . Labels for detection by gas chromatography, e.g. haloaryl systems
- 2458/30 . Electrochemically active labels
- 2458/40 . Rare earth chelates
- 2469/00 Immunoassays for the detection of microorganisms**
- 2469/10 . Detection of antigens from microorganism in sample from host
- 2469/20 . Detection of antibodies in sample from host which are directed against antigens from microorganisms
- 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, polyvinyl alcohol ([casein G01N 2333/4731](#), [albumins G01N 2333/76](#), [polysaccharides G01N 2400/10](#))
- 2496/30 . . Polyethylene glycol, e.g. PEG
- 2496/35 . . Polyvinylpyrrolidone, e.g. PVP
- 2496/45 . containing protease inhibitors, e.g. sulfonylfluorides, chloromethylketones, organophosphates ([peptide-based protease inhibitors G01N 2333/81](#))
- 2496/70 . Blood gas control solutions containing dissolved oxygen, bicarbonate and the like
- 2496/80 . Multi-analyte reference solutions containing cholesterol, glucose and the like
- 2500/00 Screening for compounds of potential therapeutic value**
- 2500/02 . Screening involving studying the effect of compounds C on the interaction between interacting molecules A and B (e.g. A = enzyme and B = substrate for A, or A = receptor and B = ligand for the receptor)
- 2500/04 . Screening involving studying the effect of compounds C directly on molecule A (e.g. C are potential ligands for a receptor A, or potential substrates for an enzyme A)
- 2500/10 . involving cells
- 2500/20 . cell-free systems
- 2510/00 Detection of programmed cell death, i.e. apoptosis**
- 2520/00 Use of whole organisms as detectors of pollution**
- 2550/00 Electrophoretic profiling, e.g. for proteome analysis**
- 2560/00 Chemical aspects of mass spectrometric analysis of biological material**
- NOTES**
- 1. Analysis of proteins, peptides or amino acids by mass spectrometry is classified in [G01N 33/6848](#) and [G01N 33/6851](#).
- 2. Analysis of nucleic acids by mass spectrometry is classified in [C12Q 1/6872](#), [C12Q 2563/167](#) and [C12Q 2565/627](#).
- 2570/00 Omics, e.g. proteomics, glycomics or lipidomics; Methods of analysis focusing on the entire complement of classes of biological molecules or subsets thereof, i.e. focusing on proteomes, glycomes or lipidomes**

2600/00	Assays involving molecular imprinted polymers/ polymers created around a molecular template	2800/14	. Disorders of ear, nose or throat
2610/00	Assays involving self-assembled monolayers [SAMs]	2800/16	. Ophthalmology
2650/00	Assays involving polymers whose constituent monomers bore biological functional groups before polymerization, i.e. vinyl, acryl derivatives of amino acids, sugars	2800/162	. . Conjunctival disorders, e.g. conjunctivitis
2800/00	Detection or diagnosis of diseases	2800/164	. . Retinal disorders, e.g. retinopathy
	NOTES	2800/166	. . Cataract
	1. The indexing codes	2800/168	. . Glaucoma
	G01N 2800/02 - G01N 2800/44 are based on The	2800/18	. Dental and oral disorders
	Merck Manual of Diagnosis and Therapy (17th.	2800/20	. Dermatological disorders
	Edition, Mark Beers and Robert Berkow).	2800/202	. . Dermatitis
	2. For diseases caused by microorganism where	2800/205	. . Scaling palmar diseases, e.g. psoriasis, pythiasis
	the microorganism is detected, which subject	2800/207	. . Pigmentation disorders
	matter is classified in G01N 33/569 and subgroups,	2800/22	. Haematology
	G01N 33/571 or G01N 33/576 , the present	2800/222	. . Platelet disorders
	indexing scheme is not used.	2800/224	. . Haemostasis or coagulation
	3. For cancers, which subject matter is classified in	2800/226	. . Thrombotic disorders, i.e. thrombo-embolism
	G01N 33/574 and subgroups, the present indexing		irrespective of location/organ involved, e.g. renal
	scheme is not used.		vein thrombosis, venous thrombosis
	4. When indexing in the following scheme, the	2800/228	. . Disorders of the spleen, e.g. splenic rupture,
	organ takes precedence, e.g. inflammation of the		splenomegaly
	skin is indexed with dermatological disorders	2800/24	. Immunology or allergic disorders (SLE
	and not with immunology or allergic disorders,		G01N 2800/104)
	asthma with pulmonary disorders and not with	2800/245	. . Transplantation related diseases, e.g. graft versus
	immunology or allergic disorders. Exception		host disease
	is made for thrombosis which is indexed with	2800/26	. Infectious diseases, e.g. generalised sepsis
	haematological disorders.		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
2800/02	. Nutritional disorders	2800/28	. Neurological disorders
2800/04	. Endocrine or metabolic disorders	2800/2807	. . Headache; Migraine
2800/042	. . Disorders of carbohydrate metabolism, e.g.	2800/2814	. . Dementia; Cognitive disorders
	diabetes, glucose metabolism	2800/2821	. . . Alzheimer
2800/044	. . Hyperlipemia or hypolipemia, e.g. dyslipidaemia,	2800/2828	. . . Prion diseases
	obesity	2800/2835	. . Movement disorders, e.g. Parkinson, Huntington,
2800/046	. . Thyroid disorders		Tourette
2800/048	. . Pituitary or hypothalamic - pituitary relationships,	2800/2842	. . Pain, e.g. neuropathic pain, psychogenic pain
	e.g. vasopressin or ADH related	2800/285	. . Demyelinating diseases; Multiple sclerosis
2800/06	. Gastro-intestinal diseases	2800/2857	. . Seizure disorders; Epilepsy
2800/062	. . Gastritis or peptic ulcer disease	2800/2864	. . Sleep disorders
2800/065	. . Bowel diseases, e.g. Crohn, ulcerative colitis, IBS	2800/2871	. . Cerebrovascular disorders, e.g. stroke, cerebral
2800/067	. . Pancreatitis or colitis		infarct, cerebral haemorrhage, transient ischemic
2800/08	. Hepato-biliary disorders other than hepatitis		event
2800/085	. . Liver diseases, e.g. portal hypertension, fibrosis,	2800/2878	. . Muscular dystrophy
	cirrhosis, bilirubin	2800/2885	. . . Duchenne dystrophy
2800/10	. Musculoskeletal or connective tissue disorders	2800/2892	. . . Myotonic dystrophy
2800/101	. . Diffuse connective tissue disease, e.g. Sjögren,	2800/30	. Psychoses; Psychiatry
	Wegener's granulomatosis	2800/301	. . Anxiety or phobic disorders
2800/102	. . . Arthritis; Rheumatoid arthritis, i.e.	2800/302	. . Schizophrenia
	inflammation of peripheral joints	2800/303	. . Eating disorders, e.g. anorexia, bulimia
2800/104	. . . Lupus erythematosus [SLE]	2800/304	. . Mood disorders, e.g. bipolar, depression
2800/105	. . Osteoarthritis, e.g. cartilage alteration,	2800/305	. . Attention deficit disorder; Hyperactivity
	hypertrophy of bone	2800/306	. . Chronic fatigue syndrome
2800/107	. . Crystal induced conditions; Gout	2800/307	. . Drug dependency, e.g. alcoholism
2800/108	. . Osteoporosis	2800/308	. . Psychosexual disorders, e.g. sexual arousal
2800/12	. Pulmonary diseases		disorder
2800/122	. . Chronic or obstructive airway disorders, e.g.	2800/32	. Cardiovascular disorders
	asthma COPD	2800/321	. . Arterial hypertension
2800/125	. . Adult respiratory distress syndrome	2800/322	. . Orthostatic hypertension or syncope
2800/127	. . Bronchitis	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