

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 ultraviolet 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 infrared 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 infrared light.		
2021/3522	. . . . .	{balancing by two filters on two detectors}	2021/418	. . . . {Frequency/phase diagrams}
2021/3527	. . . . .	{and using one filter cell as attenuator}	2021/4186	. . . . {Phase modulation imaging}
2021/3531	. . . . .	{without instrumental source, i.e. radiometric}	2021/4193	. . . . {using a PSD}
2021/3536	. . . . .	{using modulation of pressure or density}	21/43	. . . by measuring critical angle
2021/354	. . . . .	{Hygrometry of gases}	21/431	. . . . {Dip refractometers, e.g. using optical fibres}
2021/3545	. . . . .	{Disposition for compensating effect of interfering gases}	2021/432	. . . . . {comprising optical fibres}
2021/355	. . . . .	{by using a third optical path, e.g. interference cuvette}	2021/433	. . . . . {with an unclad part on the fibre}
21/3554	. . . . .	for determining moisture content	2021/434	. . . . {Dipping block in contact with sample, e.g. prism}
21/3559	. . . . .	in sheets, e.g. in paper	2021/435	. . . . . {Sensing drops on the contact surface}
21/3563	. . . . .	for analysing solids; Preparation of samples therefor	2021/436	. . . . . {Sensing resonant reflection}
2021/3568	. . . . .	{applied to semiconductors, e.g. Silicon}	2021/437	. . . . . {with investigation of angle}
2021/3572	. . . . .	{Preparation of samples, e.g. salt matrices}	2021/438	. . . . . {with investigation of wavelength}
21/3577	. . . . .	for analysing liquids, e.g. polluted water	21/45	. . . using interferometric methods; using Schlieren methods
21/3581	. . . . .	using far infrared light; using Terahertz radiation	2021/451	. . . . {for determining the optical absorption}
21/3586	. . . . .	by Terahertz time domain spectroscopy [THz-TDS]	21/453	. . . . {Holographic interferometry (for dimensional measurements G01B 9/021 - G01B 9/029)}
21/359	. . . . .	using near infrared light	21/455	. . . . {Schlieren methods, e.g. for gradient index determination; Shadowgraph}
2021/3595	. . . . .	{using FTIR}	2021/456	. . . . {Moire deflectometry}
21/37	. . . . .	using pneumatic detection (opto-acoustic detection G01N 21/1702)}	2021/458	. . . . {using interferential sensor, e.g. sensor fibre, possibly on optical waveguide}
21/39	. . . . .	using tunable lasers	21/47	. . Scattering, i.e. diffuse reflection (G01N 21/25 , G01N 21/41 take precedence G01N 21/55 takes precedence)
2021/391	. . . . .	{Intracavity sample}	2021/4702	. . . {Global scatter; Total scatter, excluding reflections}
2021/392	. . . . .	{Measuring reradiation, e.g. fluorescence, backscatter}	2021/4704	. . . {Angular selective}
2021/393	. . . . .	{and using a spectral variation of the interaction of the laser beam and the sample}	2021/4707	. . . . {Forward scatter; Low angle scatter}
2021/394	. . . . .	{DIAL method}	2021/4709	. . . . {Backscatter}
2021/395	. . . . .	{using a topographic target}	2021/4711	. . . . {Multiangle measurement}
2021/396	. . . . .	{Type of laser source}	2021/4714	. . . . . {Continuous plural angles}
2021/397	. . . . .	{Dye laser}	2021/4716	. . . . . {Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}
2021/398	. . . . .	{CO ₂ laser}	2021/4719	. . . . . {using a optical fibre array}
2021/399	. . . . .	{Diode laser}	2021/4721	. . . . . {using a PSD}
21/41	. . .	Refractivity; Phase-affecting properties, e.g. optical path length (G01N 21/21 takes precedence)	2021/4723	. . . . . {Scanning scatter angles}
2021/4106	. . . .	{Atmospheric distortion; Turbulence}	2021/4726	. . . . . {Detecting scatter at 90°}
2021/4113	. . . .	{Atmospheric dispersion}	2021/4728	. . . . . {Optical definition of scattering volume}
21/412	. . . .	{Index profiling of optical fibres}	2021/473	. . . . {Compensating for unwanted scatter, e.g. reliefs, marks}
2021/4126	. . . .	{Index of thin films}	2021/4733	. . . . {Discriminating different types of scatterers}
21/4133	. . . .	{Refractometers, e.g. differential}	2021/4735	. . . . {Solid samples, e.g. paper, glass}
2021/414	. . . .	{Correcting temperature effect in refractometers}	21/4738	. . . . {Diffuse reflection (precedence is given to G01N 21/55 - G01N 21/57 if specular component is taken into consideration), e.g. also for testing fluids, fibrous materials}
2021/4146	. . . .	{Differential cell arrangements}	21/474	. . . . {Details of optical heads therefor, e.g. using optical fibres}
2021/4153	. . . .	{Measuring the deflection of light in refractometers}	2021/4742	. . . . . {comprising optical fibres}
2021/416	. . . .	{Visualising flow by index measurement}	2021/4745	. . . . . {Fused bundle, i.e. for backscatter}
2021/4166	. . . .	{Methods effecting a waveguide mode enhancement through the property being measured}	2021/4747	. . . . . {Concentric bundles}
2021/4173	. . . .	{Phase distribution}	2021/475	. . . . . {Bifurcated bundle}
			2021/4752	. . . . . {Geometry}
			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}	23/025	. . {using neutrons}
2021/9511	. . . . {Optical elements other than lenses, e.g. mirrors (testing of optical apparatus in G01M 11/00)}	23/04	. . and forming images of the material
2021/9513	. . . . {Liquid crystal panels}	23/041	. . . Phase-contrast imaging, e.g. using grating interferometers
21/9515	. . . . {Objects of complex shape, e.g. examined with use of a surface follower device (measuring contours and curvatures G01B 11/24)}	23/043	. . . {using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images}
2021/9516	. . . . . {whereby geometrical features are being masked}	23/044	. . . using laminography or tomosynthesis
2021/9518	. . . . . {using a surface follower, e.g. robot}	23/046	. . . using tomography, e.g. computed tomography [CT]
21/952	. . . . Inspecting the exterior surface of cylindrical bodies or wires (G01N 21/956 takes precedence)	23/05	. . . using neutrons
21/954	. . . . Inspecting the inner surface of hollow bodies, e.g. bores	23/06	. . and measuring the absorption
2021/9542	. . . . . {using a probe}	23/083	. . . the radiation being X-rays
2021/9544	. . . . . {with emitter and receiver on the probe}	23/085	. . . . X-ray absorption fine structure [XAFS], e.g. extended XAFS [EXAFS]
2021/9546	. . . . . {with remote light transmitting, e.g. optical fibres}	23/087	. . . . using polyenergetic X-rays
2021/9548	. . . . . {Scanning the interior of a cylinder}	23/09	. . . the radiation being neutrons
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)}	23/095	. . . Gamma-ray resonance absorption, e.g. using the Mössbauer effect
21/95607	. . . . . {using a comparative method}	23/10	. . . the material being confined in a container, e.g. in a luggage X-ray scanners
2021/95615	. . . . . {with stored comparison signal}	23/12	. . . the material being a flowing fluid or a flowing granular solid
21/95623	. . . . . {using a spatial filtering method (per se G02B)}	23/125	. . . . {with immersed detecting head}
2021/9563	. . . . . {and suppressing pattern images}	23/16	. . . the material being a moving sheet or film
2021/95638	. . . . . {for PCB's}	23/18	. . . Investigating the presence of flaws defects or foreign matter
2021/95646	. . . . . {Soldering}	23/185	. . . . {in tyres}
2021/95653	. . . . . {Through-holes}	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
2021/95661	. . . . . {for leads, e.g. position, curvature}	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)
2021/95669	. . . . . {for solder coating, coverage}	23/20016	. . . Goniometers
2021/95676	. . . . . {Masks, reticles, shadow masks}	23/20025	. . . Sample holders or supports therefor
21/95684	. . . . . {Patterns showing highly reflecting parts, e.g. metallic elements}	23/20033	. . . . provided with temperature control or heating means
21/95692	. . . . . {Patterns showing hole parts, e.g. honeycomb filtering structures}	23/20041	. . . . for high pressure testing, e.g. anvil cells
21/958	. . . . Inspecting transparent materials {or objects, e.g. windscreens (for conveyed flat sheet or rod G01N 21/896)}	23/2005	. . . Preparation of powder samples therefor
2021/9583	. . . . . {Lenses}	23/20058	. . Measuring diffraction of electrons, e.g. low energy electron diffraction [LEED] method or reflection high energy electron diffraction [RHEED] method
2021/9586	. . . . . {Windscreens}	23/20066	. . Measuring inelastic scatter of gamma rays, e.g. Compton effect
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)	23/20075	. . {by measuring interferences of X-rays, e.g. Borrmann effect}
22/005	. {and using Stark effect modulation}	23/20083	. . {by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement}
22/02	. Investigating the presence of flaws	23/20091	. . Measuring the energy-dispersion spectrum [EDS] of diffracted radiation
22/04	. Investigating moisture content	23/201	. . by measuring small-angle scattering
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	23/202	. . . using neutrons
23/005	. {by using neutrons (G01N 23/02 - G01N 23/227 take precedence)}	23/203	. . Measuring back scattering
23/02	. by transmitting the radiation through the material	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 piezoelectric 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 H10N 10/00 , H10N 15/00)}	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
- 27/622 Ion mobility spectrometry
- 27/623 combined with mass spectrometry

- 27/624 . . . Differential mobility spectrometry [DMS];
Field asymmetric-waveform ion mobility
spectrometry [FAIMS]
- 27/626 . . . using heat to ionise a gas
- 27/628 . . . {and a beam of energy, e.g. laser enhanced
ionisation}
- 27/64 . . . using wave or particle radiation to ionise a gas,
e.g. in an ionisation chamber
- 27/66 . . . and measuring current or voltage
- 27/68 . . . using electric discharge to ionise a gas
- 27/70 . . . and measuring current or voltage
- 27/72 . . . by investigating magnetic variables
- 27/725 . . . {by using magneto-acoustical effects or the
Barkhausen effect}
- 27/74 . . . of fluids ([G01N 24/00](#) takes precedence)
- 27/745 . . . {for detecting magnetic beads used in
biochemical assays (concerning the
assays [G01N 33/54326](#); sensors therefor
[G01R 33/1269](#); automatic analysers therefor
[G01N 35/0098](#))}
- 27/76 . . . by investigating susceptibility
- 27/80 . . . for investigating mechanical hardness, e.g.
by investigating saturation or remanence of
ferromagnetic material
- 27/82 . . . for investigating the presence of flaws
- 27/825 . . . {by using magnetic attraction force
([G01N 27/84](#) takes precedence)}
- 27/83 . . . by investigating stray magnetic fields
- 27/84 by applying magnetic powder or magnetic
ink
- 27/85 using magnetographic methods
- 27/87 using probes
- 27/90 using eddy currents
- 27/9006 {Details, e.g. in the structure or functioning
of sensors}
- 27/9013 Arrangements for scanning
- 27/902 {by moving the sensors}
- 27/9026 {by moving the material}
- 27/904 with two or more sensors
- 27/9046 {by analysing electrical signals}
- 27/9053 {Compensating for probe to workpiece
spacing}
- 27/906 {Compensating for velocity}
- 27/9066 {by measuring the propagation time, or
delaying the signals}
- 27/9073 {Recording measured data}
- 27/908 {synchronously with scanning}
- 27/9086 {Calibrating of recording device}
- 27/9093 Arrangements for supporting the sensor;
Combinations of eddy-current sensors and
auxiliary arrangements for marking or for
rejecting
- 27/92 . . . by investigating breakdown voltage ([G01N 27/60](#),
[G01N 27/62](#) take precedence)
- 29/00 Investigating or analysing materials by the use of
ultrasonic, sonic or infrasonic waves; Visualisation
of the interior of objects by transmitting ultrasonic
or sonic waves through the object ([G01N 3/00](#),
[G01N 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}	2303/022	. . {characterised by the kind of separation mechanism}
29/4472	. . {Mathematical theories or simulation}	2303/025	. . . {Gas chromatography}
29/4481	. . {Neural networks}	2303/027	. . . {Liquid chromatography}
29/449	. . {Statistical methods not provided for in G01N 29/4409 , e.g. averaging, smoothing and interpolation}	30/04	. . Preparation or injection of sample to be analysed
29/46	. . by spectral analysis, e.g. Fourier analysis {or wavelet analysis (spectral signal processing per se G06F 17/14)}	2303/042	. . . {Standards}
29/48	. . by amplitude comparison	2303/045	. . . . {internal}
29/50	. . using auto-correlation techniques or cross-correlation techniques	2303/047	. . . . {external}
29/52	. . using inversion methods other than spectral analysis, e.g. conjugated gradient inversion	30/06	. . . Preparation
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)	2303/062	. . . . {extracting sample from raw material}
	NOTE	2303/065	. . . . {using different phases to separate parts of sample}
	In this group, the following term is used with the meaning indicated:	2303/067	. . . . {by reaction, e.g. derivatising the sample}
	• "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.	30/08	. . . . using an enricher
30/0005	. {Field flow fractionation}	2303/085	. . . . . {using absorbing precolumn}
2303/001	. . {hydrodynamic fractionation, e.g. CHDF or HDC}	30/10	. . . . using a splitter
2303/0015	. . {characterised by driving force}	30/12	. . . . by evaporation
2303/002	. . . {sedimentation or centrifugal FFF}	2303/121	. . . . . {cooling; cold traps}
2303/0025	. . . {cross flow FFF}	2303/122	. . . . . {cryogenic focusing}
2303/003	. . . . {Asymmetrical flow}	2303/123	. . . . . {using more than one trap}
2303/0035	. . . {electrical field}	2303/125	. . . . . {pyrolysing}
2303/004	. . {characterised by opposing force}	2303/126	. . . . . {evaporating sample}
2303/0045	. . . {normal, i.e. diffusion or thermal FFF}	2303/127	. . . . . {PTV evaporation}
2303/005	. . . {steric FFF, i.e. diffusion negligible for larger particles; separation due to protrusion depth into carrier flow profile}	2303/128	. . . . . {Thermal desorption analysis}
2303/0055	. . . {hyperlayer, i.e. different particle populations in hyperlayers elevated above wall}	30/14	. . . . by elimination of some components
2303/006	. . . . {lift hyperlayer, i.e. hydrodynamic lift forces dominate steric effect}	2303/143	. . . . . {selective absorption}
2303/0065	. . . {Dielectric FFF, i.e. opposing forces dominate hydrodynamic lift forces and steric effects}	2303/146	. . . . . {using membranes}
2303/007	. . {programming of driving force (carrier programming G01N 30/02)}	30/16	. . . Injection (G01N 30/24 takes precedence)
2303/0075	. {Separation due to differential desorption}	2303/162	. . . . {electromigration}
2303/008	. . {Thermal desorption}	2303/165	. . . . {retention gaps}
2303/0085	. . {the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds}	2303/167	. . . . {on-column injection}
2303/009	. {Extraction}	30/18	. . . . using a septum or microsyringe
2303/0095	. {Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments}	2303/185	. . . . . {specially adapted to seal the inlet}
30/02	. Column chromatography	30/20	. . . . using a sampling valve
		2303/201	. . . . . {multiport valves, i.e. having more than two ports}
		2303/202	. . . . . {rotary valves}
		2303/204	. . . . . {Linearly moving valves, e.g. sliding valves}
		2303/205	. . . . . {Diaphragm valves, e.g. deformed member closing the passage}
		2303/207	. . . . . {with metering cavity, e.g. sample loop}
		2303/208	. . . . . {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
		2303/285	. . . . {electrically driven carrier}
		30/30	. . . . of temperature
		2303/3007	. . . . . {same temperature for whole column}
		2303/3015	. . . . . {temperature gradients along column}
		2303/3023	. . . . . {using cryogenic fluids}
		2303/303	. . . . . {using peltier elements}
		2303/3038	. . . . . {temperature control of column exit, e.g. of restrictors}
		2303/3046	. . . . . {temperature control of column inlet}
		2303/3053	. . . . . {using resistive heating}
		2303/3061	. . . . . {column or associated structural member used as heater}
		2303/3069	. . . . . {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}
2030/565	. . . . .	{slurry packing}
2030/567	. . . . .	{coating}
30/58	. . . . .	the sorbent moving as a whole
2030/582	. . . . .	{micellar electrokinetic capillary chromatography [MECC]}
2030/585	. . . . .	{Parallel current chromatography}
2030/587	. . . . .	{Continuous annular chromatography}
30/60	. . . . .	Construction of the column
30/6004	. . . . .	{end pieces}
2030/6008	. . . . .	{capillary restrictors}
2030/6013	. . . . .	{interfaces to detectors}
30/6017	. . . . .	{Fluid distributors}
30/6021	. . . . .	{Adjustable pistons}
30/6026	. . . . .	{Fluid seals}
30/603	. . . . .	{retaining the stationary phase, e.g. Frits}
30/6034	. . . . .	{joining multiple columns}
30/6039	. . . . .	{in series}
30/6043	. . . . .	{in parallel}
30/6047	. . . . .	{with supporting means; Holders}
30/6052	. . . . .	{body}
30/606	. . . . .	{with fluid access or exit ports}
30/6065	. . . . .	{with varying cross section}
30/6069	. . . . .	{with compartments or bed substructure}
30/6073	. . . . .	{in open tubular form}
30/6078	. . . . .	{Capillaries}

30/6082	. . . . {transparent to radiation}	2030/746	. . . . {detecting along the line of flow, e.g. axial}
30/6086	. . . . {form designed to optimise dispersion}	30/76	. . . Acoustical detectors {(measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves G01H)}
30/6091	. . . {Cartridges}	2030/765	. . . . {for measuring mechanical vibrations}
30/6095	. . . {Micromachined or nanomachined, e.g. micro- or nanosize}	2030/77	. . . {detecting radioactive properties}
NOTE		30/78	. . . using more than one detector
Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass B82B relating to "nanostructures"		30/80	. . . Fraction collectors
30/62	. . Detectors specially adapted therefor	30/82	. . . Automatic means therefor
2030/621	. . . {signal-to-noise ratio}	30/84	. . Preparation of the fraction to be distributed
2030/623	. . . . {by modulation of sample feed or detector response}	2030/8405	. . . {using pyrolysis}
2030/625	. . . . {by measuring reference material, e.g. carrier without sample}	2030/8411	. . . {Intermediate storage of effluent, including condensation on surface}
2030/626	. . . {calibration, baseline}	2030/8417	. . . . {the store moving as a whole, e.g. moving wire}
2030/628	. . . {Multiplexing, i.e. several columns sharing a single detector}	2030/8423	. . . {using permeable separator tubes}
30/64	. . . Electrical detectors	2030/8429	. . . {adding modifying material}
2030/642	. . . . {photoionisation detectors}	2030/8435	. . . . {for chemical reaction}
2030/645	. . . . {electrical conductivity detectors}	2030/8441	. . . . {to modify physical properties}
2030/647	. . . . {surface ionisation}	2030/8447	. . . {Nebulising, aerosol formation or ionisation}
30/66	. . . . Thermal conductivity detectors	2030/8452	. . . . {Generation of electrically charged aerosols or ions}
30/68	. . . . Flame ionisation detectors	2030/8458	. . . . . {of ions or clusters of individual ions}
2030/685	. . . . {flame photometry}	2030/8464	. . . . {Uncharged atoms or aerosols}
30/70	. . . . Electron capture detectors	2030/847	. . . . {by pneumatic means}
30/72	. . . Mass spectrometers {(mass spectrometers per se H01J 49/00)}	2030/8476	. . . . {by thermal means}
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)}	2030/8482	. . . . {by electrical or glow discharge}
30/7213	. . . . . {splitting of the gaseous effluent}	2030/8488	. . . . {by electric field}
30/722	. . . . . {through a gas permeable barrier (membranes, porous layers)}	2030/8494	. . . . {Desolvation chambers}
2030/7226	. . . . . {OWTC, short capillaries or transfer line used as column}	30/86	. . Signal analysis
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)}	30/8603	. . . {with integration or differentiation}
30/724	. . . . . {Nebulising, aerosol formation or ionisation (spraying or atomising in general B05B)}	30/8606	. . . . {Integration}
30/7246	. . . . . . {by pneumatic means}	30/861	. . . . {Differentiation}
30/7253	. . . . . . {by thermal means, e.g. thermospray}	30/8613	. . . . {Dividing or multiplying by a constant}
30/726	. . . . . . {by electrical or glow discharge}	30/8617	. . . . {Filtering, e.g. Fourier filtering}
30/7266	. . . . . . {by electric field, e.g. electrospray}	2030/862	. . . . {Other mathematical operations for data preprocessing}
30/7273	. . . . . {Desolvation chambers}	30/8624	. . . {Detection of slopes or peaks; baseline correction}
30/728	. . . . {Intermediate storage of effluent, including condensation on surface}	30/8627	. . . . {Slopes}
30/7286	. . . . . {the store moving as a whole, e.g. moving wire}	30/8631	. . . . {Peaks}
30/7293	. . . . {Velocity or momentum separators}	30/8634	. . . . . {Peak quality criteria}
30/74	. . . Optical detectors {(measurement of intensity, velocity, spectral content, polarisation, or phase of infrared, visible or ultraviolet light G01J)}	30/8637	. . . . . {Peak shape}
2030/743	. . . . {FTIR}	30/8641	. . . . {Baseline}
		30/8644	. . . . {Data segmentation, e.g. time windows}
		2030/8648	. . . . {Feature extraction not otherwise provided for}
		30/8651	. . . {Recording, data acquisition, archiving and storage}
		30/8655	. . . . {Details of data formats}
		30/8658	. . . {Optimising operation parameters}
		30/8662	. . . . {Expert systems; optimising a large number of parameters}
		30/8665	. . . {for calibrating the measuring apparatus}
		30/8668	. . . . {using retention times}
		30/8672	. . . . {not depending on an individual instrument, e.g. retention time indexes or calibration transfer}
		30/8675	. . . {Evaluation, i.e. decoding of the signal into analytical information (for analysis of specific compounds see also G01N 30/88 and subgroups of G01N 33/00 ; chemical libraries per se C40B)}

30/8679	. . . . {Target compound analysis, i.e. whereby a limited number of peaks is analysed}	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}	31/227	. . {for nitrates or nitrites}
2030/8868	. . . . {elemental analysis, e.g. isotope dilution analysis}	31/228	. . {for peroxides}
2030/8872	. . . . {impurities}	31/229	. . {for investigating time/temperature history}
2030/8877	. . . . {optical isomers}	33/00	Investigating or analysing materials by specific methods not covered by groups G01N 1/00 - G01N 31/00
2030/8881	. . . {Modular construction, specially adapted therefor}	NOTE	
2030/8886	. . . {Analysis of industrial production processes}	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.	
2030/889	. . . {monitoring the quality of the stationary phase; column performance}	{This Note corresponds to IPC Note (1) relating to G01N 33/52 - G01N 33/98 .}	
2030/8895	. . . {Independent juxtaposition of embodiments; Reviews}	33/0001	. {by organoleptic means}
30/89	. Inverse chromatography	2033/0003	. {Composite materials}
30/90	. Plate chromatography, e.g. thin layer or paper chromatography	33/0004	. {Gaseous mixtures, e.g. polluted air (gaseous biological material G01N 33/497 ; exhaust gas of internal combustion engines G01M 15/102)}
2030/903	. . {centrifugal chromatography}	33/0006	. . {Calibrating gas analysers}
2030/906	. . {pressurised fluid phase}	33/0008	. . . {Details concerning storage of calibration data, e.g. in EEPROM}
30/91	. . Application of the sample	33/0009	. . {General constructional details of gas analysers, e.g. portable test equipment (G01N 1/22 takes precedence)}
30/92	. . Construction of the plate	33/0011	. . . {Sample conditioning (in general G01N 1/28)}
30/93	. . . Application of the sorbent layer		
30/94	. . Development		
2030/945	. . . {Application of reagents to undeveloped plate}		
30/95	. . Detectors specially adapted therefor; Signal analysis		
30/96	. using ion-exchange (G01N 30/02 , G01N 30/90 take precedence)		
2030/965	. . {suppressor columns}		
31/00	Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup; Apparatus specially adapted for such methods		
31/002	. {Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method}		
31/005	. {investigating the presence of an element by oxidation (G01N 31/12 takes precedence)}		

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
33/005	. . . . . {for H ₂ }	2033/105	. . . {Pasta}
33/0052	. . . . . {for gaseous halogens}	33/12	. . Meat; fish
33/0054	. . . . . {for ammonia}	33/14	. . Beverages
33/0055	. . . . . {for radionuclides}	33/143	. . . {containing sugar}
33/0057	. . . . . {for warfare agents or explosives (properties of explosives G01N 33/227)}	33/146	. . . {containing alcohol}
33/0059	. . . . . {avoiding interference of a gas with the gas to be measured}	33/15	. Medicinal preparations {; Physical properties thereof, e.g. dissolubility (drug screening with animal cells G01N 33/5008)}
33/006	. . . . . {avoiding interference of water vapour with the gas to be measured}	33/18	. Water
33/0062	. . . {concerning the measuring method, e.g. intermittent, or the display, e.g. digital}	33/1806	. . {biological or chemical oxygen demand (BOD or COD)}
33/0063	. . . . {using a threshold to release an alarm or displaying means (alarm arrangements G08B, e.g. fire alarm actuated by the presence of smoke or gases G08B 17/10, for other abnormal conditions G08B 21/00)}	33/1813	. . {specific cations in water, e.g. heavy metals (electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22)}
33/0065	. . . . . {using more than one threshold}	33/182	. . {specific anions in water (electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22)}
33/0067	. . . . {by measuring the rate of variation of the concentration}	33/1826	. . {organic contamination in water}
2033/0068	. . . . {using a computer specifically programmed}	33/1833	. . . {Oil in water (water in oil G01N 33/2847)}
33/007	. . . {Arrangements to check the analyser (calibrating G01N 33/0006)}	2033/184	. . . {herbicides, pesticides, fungicides, insecticides, or the like}
2033/0072	. . . . {by generating a test gas}	33/1846	. . . {Total carbon analysis}
33/0073	. . . {Control unit therefor}	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. combusive properties thereof (detecting explosives in air [G01N 33/0057](#))}
- 33/24 . . Earth materials ([G01N 33/42](#) takes precedence)
- 33/241 . . . {for hydrocarbon content (drilling mud [G01N 33/2823](#); drilling per se [E21B](#); prospecting [G01V](#))}
- 2033/243 . . . {for determining biological parameters concerning composting, biodegradability or bioavailability}
- 2033/245 . . . {for agricultural purposes}
- 33/246 . . . {for water content (for control of watering [A01G 25/167](#))}
- 2033/248 . . . {related to manure as a biological product, i.e. excluding artificial fertilizers}
- 33/26 . . Oils; viscous liquids; paints; inks ([G01N 33/22](#) takes precedence)
- 33/28 . . . Oils {, i.e. hydrocarbon liquids}({gaseous fuels [G01N 33/225](#); } edible oils or edible fats [G01N 33/03](#))
- 33/2805 {investigating the resistance to heat or oxidation (to the weather, to corrosion, or to light [G01N 17/00](#))}
- 33/2811 {by measuring cloud point or pour point of oils}
- 33/2817 {using a test engine (testing of engines [G01M 15/00](#))}
- 33/2823 {raw oil, drilling fluid or polyphasic mixtures (hydrocarbon content of earth materials [G01N 33/241](#); prospecting [G01V](#); drilling per se [E21B](#))}
- 33/2829 {mixtures of fuels, e.g. determining the RON-number}
- 33/2835 {specific substances contained in the oil or fuel}
- 33/2841 {gas in oil, e.g. hydrogen in insulating oil}
- 33/2847 {Water in oil (basic sediment and water [G01N 33/2823](#); oil in water [G01N 33/1833](#))}
- 33/2852 {alcohol/fuel mixtures}
- 33/2858 {metal particles}
- 33/2864 {lead content}
- 33/287 {Sulfur content}
- 33/2876 {Total acid number}
- 33/2882 {Markers (marking of fuels [C10L 1/003](#))}
- 33/2888 {Lubricating oil characteristics, e.g. deterioration (lubricating properties [G01N 33/30](#))}
- 33/2894 {for metal working or machining}
- 33/30 . . . for lubricating properties
- 33/32 . . Paints; inks {(investigating resistance to the weather, to corrosion, to light [G01N 17/00](#))}
- 33/34 . . Paper
- 33/343 . . . {paper pulp}
- 33/346 . . . {paper sheets}
- 33/36 . . Textiles
- 33/362 . . . {material before processing, e.g. bulk cotton or wool}
- 33/365 . . . {filiform textiles, e.g. yarns (for measuring diameter [G01B](#))}
- 33/367 . . . {Fabric or woven textiles (optical analysis of moving sheets [G01N 21/86](#))}
- 33/38 . . Concrete; ceramics; glass; bricks
- 33/381 . . . {precious stones; pearls}
- 33/383 . . . {Concrete, cement}
- 33/385 . . . {Crystals}
- 33/386 . . . {Glass}
- 33/388 . . . {Ceramics}
- 33/40 . . Grinding-materials
- 33/42 . . Road-making materials ([G01N 33/38](#) takes precedence)
- 33/44 . . Resins; rubber; leather
- 33/442 . . . {Resins, plastics}
- 33/445 . . . {Rubber}
- 33/447 . . . {Leather}
- 33/46 . . Wood
- 33/48 . . Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- 33/483 . . . Physical analysis of biological material
- 33/4833 {of solid biological material, e.g. tissue samples, cell cultures (tissue in vivo [A61B 5/00](#); cell suspensions [G01N 33/48735](#))}
- 33/4836 {using multielectrode arrays}
- 33/487 of liquid biological material
- 33/48707 {by electrical means ([G01N 33/49](#), [G01N 33/493](#) take precedence)}
- 33/48714 {for determining substances foreign to the organism, e.g. drugs or heavy metals (drugs by chemical analysis [G01N 33/94](#))}
- 33/48721 {Investigating individual macromolecules, e.g. by translocation through nanopores (Coulter counters in general [G01N 15/12](#); fabrication methods for nanoscale apertures [B81B 1/00](#); sequencing of nucleic acids [C12Q 1/68](#))}
- 33/48728 {Investigating individual cells, e.g. by patch clamp, voltage clamp (investigating individual particles in general [G01N 15/10](#))}
- 33/48735 {Investigating suspensions of cells, e.g. measuring microbe concentration (by chemical means [C12Q 1/04](#); colony counters [C12M 1/34](#); concentration of particle suspensions in general [G01N 15/06](#))}
- 33/48742 {Determining urea by measuring the volume of a gas (in general [G01N 7/14](#) - [G01N 7/18](#))}

33/4875	. . . . {Details of handling test elements, e.g. dispensing or storage, not specific to a particular test method (test-elements per se B01L , automatic analysers G01N 35/00 , in-vivo analysis on the human body for medical diagnosis A61B)}	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}	33/5002	. . . . {Partitioning blood components}
33/48764	. . . . . {Test tape taken off a spool}	33/5005	. . . . {involving human or animal cells (immunoassay G01N 33/56966 ; immunoassays of protozoa G01N 33/56905 ; protozoa in screening assays C12Q 1/025)}
33/48771	. . . . . {Coding of information, e.g. calibration data, lot number}	33/5008	. . . . . {for testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics}
33/48778	. . . . . {Containers specially adapted therefor, e.g. for dry storage}	33/5011	. . . . . {for testing antineoplastic activity}
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}	33/5014	. . . . . {for testing toxicity}
33/48792	. . . . . {Data management, e.g. communication with processing unit (for in vivo diagnostics A61B 5/0002 ; transmission systems for measured values G08C)}	33/5017	. . . . . {for testing neoplastic activity}
33/49	. . . . . Blood {(chemical methods for determining blood cell populations G01N 33/5094 ; chemical analysis of blood groups or blood types G01N 33/80)}	33/502	. . . . . {for testing non-proliferative effects}
33/4905	. . . . . {Determining clotting time of blood (by chemical methods G01N 33/86 , C12Q 1/54)}	33/5023	. . . . . {on expression patterns}
33/491	. . . . . {by separating the blood components (G01N 15/05 takes precedence)}	33/5026	. . . . . {on cell morphology}
33/4915	. . . . . {using flow cells (flow cytometry G01N 15/14)}	33/5029	. . . . . {on cell motility}
33/492	. . . . . {Determining multiple analytes}	33/5032	. . . . . {on intercellular interactions}
33/4925	. . . . . {measuring blood gas content, e.g. O ₂ , CO ₂ , HCO ₃ }	33/5035	. . . . . {on sub-cellular localization}
33/493	. . . . . urine	33/5038	. . . . . {involving detection of metabolites per se }
33/497	. . . . . of gaseous biological material, e.g. breath	33/5041	. . . . . {involving analysis of members of signalling pathways}
33/4972	. . . . . {Determining alcohol content (for vehicle safety devices B60K 28/06)}	33/5044	. . . . . {involving specific cell types}
2033/4975	. . . . . {other than oxygen, carbon dioxide or alcohol, e.g. organic vapours}	33/5047	. . . . . {Cells of the immune system}
2033/4977	. . . . . {metabolic gass from microbes, cell cultures, plant tissues and the like}	33/505	. . . . . {involving T-cells}
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)	33/5052	. . . . . {involving B-cells}
		33/5055	. . . . . {involving macrophages}
		33/5058	. . . . . {Neurological cells}
		33/5061	. . . . . {Muscle cells}
		33/5064	. . . . . {Endothelial cells}
		33/5067	. . . . . {Liver cells}
		33/507	. . . . . {Pancreatic cells}
		33/5073	. . . . . {Stem cells}
		33/5076	. . . . . {involving cell organelles, e.g. Golgi complex, endoplasmic reticulum}
		33/5079	. . . . . {Mitochondria}
		33/5082	. . . . . {Supracellular entities, e.g. tissue, organisms}
		33/5085	. . . . . {of invertebrates}
		33/5088	. . . . . {of vertebrates}
		33/5091	. . . . . {for testing the pathological state of an organism}
		33/5094	. . . . . {for blood cell populations (red blood cells G01N 33/80)}
		33/5097	. . . . . {involving plant cells (immunoassays of plant cells G01N 33/56961)}
		33/52	. . . . . Use of compounds or compositions for colorimetric, spectrophotometric or fluorometric investigation, e.g. use of reagent paper {and including single- and multilayer analytical elements (immunological elements G01N 33/54386 ; involving labelled immunochemicals G01N 33/58 ; for haemoglobin or occult blood G01N 33/72)}

NOTES

1. In this group, the following expression is used with the meaning indicated: "involving", when used in relation to a material, includes the testing for the material as well as employing the material as a determinant or reactant in a test for a different material.
2. In groups [G01N 33/52](#) – [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

- 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}	33/728	. . . . {Bilirubin; including biliverdin}
33/6806	. . . . {Determination of free amino acids}	33/74	. . . involving hormones {or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors}
33/6809	. . . . {involving fluorescent derivatizing reagents reacting non-specifically with all amino acids}	33/743	. . . . {Steroid hormones}
33/6812	. . . . {Assays for specific amino acids}	33/746	. . . . {Erythropoietin}
33/6815	. . . . {containing sulfur, e.g. cysteine, cystine, methionine, homocysteine}	33/76	. . . Human chorionic gonadotropin {including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors}
33/6818	. . . . {Sequencing of polypeptides}	33/78	. . . . Thyroid gland hormones {, e.g. T3, T4, TBH, TBG or their receptors}
33/6821	. . . . {involving C-terminal degradation}	33/80	. . . involving blood groups or blood types {or red blood cells (white blood cells G01N 33/56972)}
33/6824	. . . . {involving N-terminal degradation, e.g. Edman degradation}	33/82	. . . involving vitamins {or their receptors}
33/6827	. . . . {Total protein determination, e.g. albumin in urine}	33/84	. . . involving inorganic compounds or pH
33/683	. . . . {involving metal ions}	33/86	. . . involving blood coagulating time {or factors, or their receptors}
33/6833	. . . . {Copper, e.g. Folin-, Lowry-, biuret methods}	33/88	. . . involving prostaglandins {or their receptors}
33/6836	. . . . {Silver staining}	33/90	. . . involving iron binding capacity of blood
33/6839	. . . . {involving dyes, e.g. Coomassie blue, bromocresol green}	33/92	. . . involving lipids, e.g. cholesterol {, lipoproteins, or their receptors (steroid hormones G01N 33/743)}
33/6842	. . . . {Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins}	33/94	. . . involving narcotics {or drugs or pharmaceuticals, neurotransmitters or associated receptors}
33/6845	. . . . {Methods of identifying protein-protein interactions in protein mixtures}	33/9406	. . . . {Neurotransmitters}
33/6848	. . . . {Methods of protein analysis involving mass spectrometry}	33/9413	. . . . {Dopamine}
33/6851	. . . . {Methods of protein analysis involving laser desorption ionisation mass spectrometry}	33/942	. . . . {Serotonin, i.e. 5-hydroxy-tryptamine}
33/6854	. . . . {Immunoglobulins}	33/9426	. . . . {GABA, i.e. gamma-amino-butyrate}
33/6857	. . . . {Antibody fragments}	33/9433	. . . . {(Nor)adrenaline}
33/686	. . . . {Anti-idiotype}	33/944	. . . . {Acetylcholine}
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}	33/9446	. . . . {Antibacterials}
33/6866	. . . . {Interferon}	33/9453	. . . . {Cardioregulators, e.g. antihypotensives, antiarrhythmics}
33/6869	. . . . {Interleukin}	33/946	. . . . {CNS-stimulants, e.g. cocaine, amphetamines}
33/6872	. . . . {Intracellular protein regulatory factors and their receptors, e.g. including ion channels}	33/9466	. . . . {Antidepressants}
33/6875	. . . . {Nucleoproteins}	33/9473	. . . . {Anticonvulsants, e.g. phenobarbitol, phenytoin}
33/6878	. . . . {in epitope analysis}	33/948	. . . . {Sedatives, e.g. cannabinoids, barbiturates (opiates G01N 33/9486)}
33/6881	. . . . {from skin}	33/9486	. . . . {Analgesics, e.g. opiates, aspirine}
33/6884	. . . . {from lung}	33/9493	. . . . {Immunosuppressants}
33/6887	. . . . {from muscle, cartilage or connective tissue}	33/96	. . . involving blood or serum control standard
33/689	. . . . {related to pregnancy or the gonads}	33/98	. . . involving alcohol, e.g. ethanol in breath
33/6893	. . . . {related to diseases not provided for elsewhere}	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
33/6896	. . . . {Neurological disorders, e.g. Alzheimer's disease}	35/00009	. {provided with a sample supporting tape, e.g. with absorbent zones}
33/70	. . . involving creatine or creatinine	2035/00019	. . {cassette structures}
33/72	. . . involving blood pigments, e.g. haemoglobin, bilirubin {or other porphyrins; involving occult blood}	35/00029	. {provided with flat sample substrates, e.g. slides (G01N 35/028 takes precedence)}
33/721	. . . . {Haemoglobin}	2035/00039	. . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}
33/723	. . . . {Glycosylated haemoglobin}	2035/00049	. . . {for loading/unloading a carousel}
33/725	. . . . {using peroxidative activity}	2035/00059	. . . {vacuum chucks}
33/726	. . . . {Devices}	35/00069	. {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}

2035/00079	. . {Evaporation covers for slides}	35/00584	. {Control arrangements for automatic analysers}
2035/00089	. . {Magazines}	35/00594	. . {Quality control, including calibration or testing of components of the analyser}
2035/00099	. . {Characterised by type of test elements}	35/00603	. . . {Reinspection of samples}
2035/00108	. . . {Test strips, e.g. paper}	35/00613	. . . {Quality control}
2035/00118	. . . . {for multiple tests}	35/00623	. . . . {of instruments}
2035/00128	. . . . {with pressing or squeezing devices}	2035/00633	. . . . . {logging process history of individual samples}
2035/00138	. . . {Slides}	2035/00643	. . . . . {detecting malfunctions in conveying systems}
2035/00148	. . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}	2035/00653	. . . . . {statistical methods comparing labs or apparatuses}
2035/00158	. . . {Elements containing microarrays, i.e. "biochip"}	35/00663	. . . . . {of consumables}
2035/00168	. . {Manufacturing or preparing test elements}	2035/00673	. . . . . {of reagents}
2035/00178	. {Special arrangements of analysers}	2035/00683	. . . . . {of detectors}
2035/00188	. . {the analyte being in the solid state}	35/00693	. . . {Calibration}
2035/00198	. . . {Dissolution analysers}	2035/00702	. . . . {Curve-fitting; Parameter matching; Calibration constants}
2035/00207	. . {Handling bulk quantities of analyte}	35/00712	. . . {Automatic status testing, e.g. at start-up or periodic}
2035/00217	. . . {involving measurement of weight}	35/00722	. . {Communications; Identification}
2035/00227	. . . {Monitoring a process (online)}	35/00732	. . . {Identification of carriers, materials or components in automatic analysers}
2035/00237	. . {Handling microquantities of analyte, e.g. microvalves, capillary networks}	2035/00742	. . . . {Type of codes}
2035/00247	. . . {Microvalves}	2035/00752	. . . . . {bar codes}
2035/00257	. . . . {Capillary stop flow circuits}	2035/00762	. . . . . {magnetic code}
2035/00267	. . . . {Melttable plugs}	2035/00772	. . . . . {mechanical or optical code other than bar code}
2035/00277	. . {Special precautions to avoid contamination (e.g. enclosures, glove-boxes, sealed sample carriers, disposal of contaminated material)}	2035/00782	. . . . . {reprogrammable code}
2035/00287	. . . {movable lid/cover for sample or reaction tubes}	2035/00792	. . . . {Type of components bearing the codes, other than sample carriers}
2035/00297	. . . {Antistatic arrangements}	2035/00801	. . . . . {Holders for sample carriers, e.g. trays, carroussel, racks}
2035/00306	. . {Housings, cabinets, control panels (details)}	2035/00811	. . . . . {consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells}
2035/00316	. . . {Detecting door closure}	2035/00821	. . . . . {nature of coded information}
2035/00326	. . {Analysers with modular structure}	2035/00831	. . . . . {identification of the sample, e.g. patient identity, place of sampling}
2035/00336	. . . {Analysers adapted for operation in microgravity, i.e. spaceflight}	2035/00841	. . . . . {results of the analyses}
2035/00346	. {Heating or cooling arrangements}	2035/00851	. . . . . {process control parameters}
2035/00356	. . {Holding samples at elevated temperature (incubation)}	2035/00861	. . . . . {printing and sticking of identifiers}
2035/00366	. . . {Several different temperatures used}	35/00871	. . . {Communications between instruments or with remote terminals}
2035/00376	. . . {Conductive heating, e.g. heated plates}	2035/00881	. . . . . {network configurations}
2035/00386	. . . {using fluid heat transfer medium}	2035/00891	. . . {Displaying information to the operator}
2035/00396	. . . . {where the fluid is a liquid}	2035/009	. . . . {alarms, e.g. audible}
2035/00405	. . . {Microwaves}	2035/0091	. . . . {GUI [graphical user interfaces]}
2035/00415	. . . {Other radiation}	35/0092	. . {Scheduling}
2035/00425	. . {Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature}	2035/0093	. . . {random access not determined by physical position}
2035/00435	. . {Refrigerated reagent storage}	2035/0094	. . . {optimisation; experiment design}
2035/00445	. . {Other cooling arrangements}	35/0095	. . . {introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS]}
2035/00455	. . {Controlling humidity in analyser}	2035/0096	. . . {post analysis management of samples, e.g. marking, removing, storing}
2035/00465	. {Separating and mixing arrangements}	2035/0097	. . {monitoring reactions as a function of time}
2035/00475	. . {Filters}	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)}
2035/00485	. . . {combined with sample carriers}	35/0099	. {comprising robots or similar manipulators (robots per se B25J)}
2035/00495	. . {Centrifuges}		
2035/00504	. . . {combined with carousels}		
2035/00514	. . {Stationary mixing elements}		
2035/00524	. . {Mixing by agitating sample carrier}		
2035/00534	. . {Mixing by a special element, e.g. stirrer}		
2035/00544	. . . {using fluid flow}		
2035/00554	. . . {using ultrasound}		
2035/00564	. . {Handling or washing solid phase elements, e.g. beads}		
2035/00574	. . . {Means for distributing beads}		

35/02	. . . . . {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)}	2035/0463	. . . . . {in incubators}
35/021	. . . {having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes}	2035/0465	. . . . . {Loading or unloading the conveyor}
2035/023	. . . . {forming cuvettes <u>in situ</u> , e.g. from plastic strip}	2035/0467	. . . . . {Switching points ("aiguillages")}
35/025	. . . {having a carousel or turntable for reaction cells or cuvettes}	2035/0468	. . . . . {converging, e.g. selecting carriers from multiple incoming streams}
35/026	. . . {having blocks or racks of reaction cells or cuvettes}	2035/047	. . . . . {diverging, e.g. sending carriers to different analysers}
35/028	. . . {having reaction cells in the form of microtitration plates}	2035/0472	. . . . . {for selective recirculation of carriers}
35/04	. . Details of the conveyor system (G01N 35/021 - G01N 35/028 take precedence)}	2035/0474	. . . . {Details of actuating means for conveyors or pipettes}
2035/0401	. . . . {Sample carriers, cuvettes or reaction vessels}	2035/0475	. . . . . {electric, e.g. stepper motor, solenoid}
2035/0403	. . . . . {Sample carriers with closing or sealing means}	2035/0477	. . . . . {Magnetic}
2035/0405	. . . . . {manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers}	2035/0479	. . . . . {hydraulic or pneumatic}
2035/0406	. . . . . {Individual bottles or tubes}	2035/0481	. . . . . {Pneumatic tube conveyors; Tube mails; "Rohrpost"}
2035/0408	. . . . . {connected in a flexible chain}	2035/0482	. . . . . {Transmission}
2035/041	. . . . . {lifting items out of a rack for access}	2035/0484	. . . . . {Belt or chain}
2035/0412	. . . . . {Block or rack elements with a single row of samples}	2035/0486	. . . . . {Gearing, cams}
2035/0413	. . . . . {moving in one dimension}	2035/0487	. . . . . {Helix or lead screw}
2035/0415	. . . . . {moving in two dimensions in a horizontal plane}	2035/0489	. . . . . {Self-propelled units}
2035/0417	. . . . . {forming an endless chain in a vertical plane}	2035/0491	. . . . . {Position sensing, encoding; closed-loop control}
2035/0418	. . . . . {Plate elements with several rows of samples}	2035/0493	. . . . . {Locating samples; identifying different tube sizes}
2035/042	. . . . . {moved independently, e.g. by fork manipulator}	2035/0494	. . . . . {Detecting or compensating positioning errors}
2035/0422	. . . . . {carried on a linear conveyor}	2035/0496	. . . . {Other details}
2035/0424	. . . . . {Two or more linear conveyors}	2035/0498	. . . . . {Drawers used as storage or dispensing means for vessels or cuvettes}
2035/0425	. . . . . {Stacks, magazines or elevators for plates}	35/08	. . . . . {using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis}
2035/0427	. . . . . {nestable or stockable}	35/085	. . . {Flow Injection Analysis}
2035/0429	. . . . . {Sample carriers adapted for special purposes}	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)}
2035/0431	. . . . . {characterised by material of construction}	35/1002	. . . {Reagent dispensers}
2035/0432	. . . . . {integrated with measuring devices}	35/1004	. . . {Cleaning sample transfer devices}
2035/0434	. . . . . {in the form of a syringe or pipette tip}	2035/1006	. . . . {Rinsing only the inside of the tip}
2035/0436	. . . . . {with pre-packaged reagents, i.e. test-packs}	35/1009	. . . {Characterised by arrangements for controlling the aspiration or dispense of liquids}
2035/0437	. . . . . {Cleaning cuvettes or reaction vessels}	35/1011	. . . . {Control of the position or alignment of the transfer device}
2035/0439	. . . {Rotary sample carriers, i.e. carousels}	2035/1013	. . . . . {Confirming presence of tip}
2035/0441	. . . . . {for samples}	35/1016	. . . . {Control of the volume dispensed or introduced}
2035/0443	. . . . . {for reagents}	2035/1018	. . . . . {Detecting inhomogeneities, e.g. foam, bubbles, clots}
2035/0444	. . . . . {for cuvettes or reaction vessels}	2035/102	. . . . . {Preventing or detecting loss of fluid by dripping}
2035/0446	. . . . . {Combinations of the above}	2035/1023	. . . . . {using a valve in the tip or nozzle}
2035/0448	. . . . . {composed of interchangeable ring elements}	2035/1025	. . . . {Fluid level sensing}
2035/0449	. . . . . {using centrifugal transport of liquid}	2035/1027	. . . {General features of the devices}
2035/0451	. . . . . {composed of interchangeable sectors}	2035/103	. . . . {using disposable tips}
2035/0453	. . . . . {Multiple carousels working in parallel}	2035/1032	. . . . {Dilution or aliquotting}
2035/0455	. . . . . {Coaxial carousels}	2035/1034	. . . . {Transferring microquantities of liquid}
2035/0456	. . . . . {Spiral tracks}	2035/1037	. . . . . {Using surface tension, e.g. pins or wires}
2035/0458	. . . . . {Multiple concentric rows of wells}	2035/1039	. . . . . {Micropipettes, e.g. microcapillary tubes}
2035/046	. . . . {General conveyor features}	2035/1041	. . . . . {Ink-jet like dispensers}
2035/0462	. . . . . {Buffers [FIFO] or stacks [LIFO] for holding carriers between operations}	2035/1044	. . . . . {Using pneumatic means}
		2035/1046	. . . . . {Levitated, suspended drops}
		2035/1048	. . . . {using the transfer device for another function}

2035/1051	. . . . {for transporting containers, e.g. retained by friction}	2201/025	. . Mechanical control of operations
2035/1053	. . . . {for separating part of the liquid, e.g. filters, extraction phase}	2201/0253	. . . Switches mounted at the casing
2035/1055	. . . . {for immobilising reagents, e.g. dried reagents}	2201/0256	. . . Sensor for insertion of sample, cuvette, test strip
2035/1058	. . . . {for mixing}	2201/04	. Batch operation; multisample devices
2035/106	. . . . . {by sucking and blowing}	2201/0407	. . with multiple optical units, e.g. one per sample
2035/1062	. . . . {for testing the liquid while it is in the transfer device}	2201/0415	. . Carrusel, sequential
35/1065	. . {Multiple transfer devices}	2201/0423	. . . with rotating optics
35/1067	. . {for transfer to or from containers having different spacing}	2201/043	. . . . optics constituted by optical fibre multiplex selector
2035/1069	. . . . {by adjusting the spacing between multiple probes of a single transferring head}	2201/0438	. . Linear motion, sequential
35/1072	. . . {with provision for selective pipetting of individual channels}	2201/0446	. . Multicell plate, sequential
35/1074	. . . {arranged in a two-dimensional array}	2201/0453	. . Multicell sequential and multitest, e.g. multiwavelength
2035/1076	. . . {plurality or independently movable heads}	2201/0461	. . Simultaneous, e.g. video imaging
35/1079	. . {with means for piercing stoppers or septums}	2201/0469	. . One cell, sequential, e.g. successive samples
35/1081	. . {characterised by the means for relatively moving the transfer device and the containers in an horizontal plane (G01N 35/1011 takes precedence)}	2201/0476	. . Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding
35/1083	. . . {with one horizontal degree of freedom}	2201/0484	. . Computer controlled
2035/1086	. . . . {Cylindrical, e.g. variable angle}	2201/0492	. . Automatised microscope
2035/1088	. . . . . {Coaxial with a carousel}	2201/06	. Illumination; Optics
35/109	. . . {with two horizontal degrees of freedom}	2201/061	. . Sources
2035/1093	. . . . {Cylindrical, e.g. variable radius and angle}	2201/06106	. . . Plural sources used for calibration
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)}	2201/06113	. . . Coherent sources; lasers
35/1097	. . . {characterised by the valves (valves in general F16K)}	2201/0612	. . . . Laser diodes
37/00	Details not covered by any other group of this subclass	2201/06126	. . . Large diffuse sources
37/005	. {Measurement methods not based on established scientific theories}	2201/06133	. . . . Light tables
2201/00	Features of devices classified in G01N 21/00	2201/0614	. . . . Diffusing light tube with sample within
2201/02	. Mechanical	2201/06146	. . . Multisources for homogeneisation, as well sequential as simultaneous operation
2201/021	. . Special mounting in general	2201/06153	. . . . the sources being LED's
2201/0212	. . . Liquid borne; swimming apparatus	2201/0616	. . . Ambient light is used
2201/0214	. . . Airborne	2201/06166	. . . Line selective sources
2201/0216	. . . Vehicle borne	2201/06173	. . . . IR sources from heated molecular species
2201/0218	. . . Submersible, submarine	2201/0618	. . . . Halogene sources
2201/022	. . Casings	2201/06186	. . . Resistance heated; wire sources; lamelle sources
2201/0221	. . . Portable; cableless; compact; hand-held	2201/06193	. . . Secondary <u>in-situ</u> sources, e.g. fluorescent particles
2201/0222	. . . Pocket size	2201/062	. . LED's
2201/0224	. . . Pivoting casing	2201/0621	. . . Supply
2201/0225	. . . Part of casing being slidable, telescopic	2201/0622	. . . Use of a compensation LED
2201/0227	. . . Sealable enclosure	2201/0623	. . . Use of a reference LED
2201/0228	. . . Moulded parts	2201/0624	. . . Compensating variation in output of LED source
2201/023	. . Controlling conditions in casing	2201/0625	. . . Modulated LED
2201/0231	. . . Thermostating	2201/0626	. . . Use of several LED's for spatial resolution
2201/0233	. . . Gas purge	2201/0627	. . . Use of several LED's for spectral resolution
2201/0235	. . . . with gas filters in casing	2201/0628	. . . Organic LED [OLED]
2201/0236	. . . Explosion proof	2201/063	. . Illuminating optical parts
2201/0238	. . . Moisture monitoring or controlling	2201/0631	. . . Homogeneising elements
2201/024	. . Modular construction	2201/0632	. . . . homogeneising by integrating sphere
2201/0245	. . . with insertable-removable part	2201/0633	. . . Directed, collimated illumination
		2201/0634	. . . Diffuse illumination
		2201/0635	. . . Structured illumination, e.g. with grating
		2201/0636	. . . Reflectors
		2201/0637	. . . . Elliptic
		2201/0638	. . . Refractive parts
		2201/0639	. . . . Sphere lens
		2201/064	. . Stray light conditioning
		2201/0642	. . . Light traps; baffles
		2201/0644	. . . . Simple baffled tube construction

2201/0646	. . .	Light seals	2201/108	. .	Miscellaneous
2201/0648	. . .	Shutters	2201/1082	. . .	Descanning
2201/065	. .	Integrating spheres	2201/1085	. . .	Using optical fibre array and scanner
2201/0655	. . .	Hemispheres	2201/1087	. . .	Focussed scan beam, e.g. laser
2201/066	. .	Modifiable path; multiple paths in one sample	2201/11	. .	Monitoring and controlling the scan
2201/0662	. . .	Comparing measurements on two or more paths in one sample	2201/112	. . .	Grating pulse time encoder
2201/0664	. . .	Using two ways, i.e. two devices in same path in one sample	2201/115	. . .	Optical equalisation of scan intensity
2201/0666	. . .	Selectable paths; insertable multiple sources	2201/117	. . .	Indexed, memorised or programmed scan
2201/0668	. . .	Multiple paths; optimisable path length	2201/12	. .	Circuits of general importance; Signal processing
2201/067	. .	Electro-optic, magneto-optic, acousto-optic elements	2201/121	. .	Correction signals
2201/0675	. . .	SLM	2201/1211	. . .	for temperature
2201/068	. .	Optics, miscellaneous	2201/1212	. . . .	and switch-off from upwarming
2201/0683	. . .	Brewster plate; polarisation controlling elements	2201/1214	. . .	for humidity
2201/0686	. . .	Cold filter; IR filter	2201/1215	. . .	for interfering gases
2201/069	. .	Supply of sources	2201/1217	. . .	for index of solution, carrying fluids
2201/0691	. . .	Modulated (not pulsed supply)	2201/1218	. . .	for pressure variations
2201/0692	. . .	Regulated sources; stabilised supply	2201/122	. .	Kinetic analysis; determining reaction rate
2201/0693	. . .	Battery powered circuitry	2201/1222	. . .	Endpoint determination; reaction time determination
2201/0694	. . .	Microprocessor controlled supply	2201/1224	. . .	Polymerisation
2201/0695	. . .	Supply to maintain constant beam intensity	2201/1226	. . .	Relaxation methods, e.g. temperature jump, field jump
2201/0696	. . .	Pulsed	2201/1228	. . .	Reading time being controlled, e.g. by microprocessor
2201/0697	. . . .	Pulsed lasers	2201/123	. .	Conversion circuit
2201/0698	. . . .	Using reference pulsed source	2201/1232	. . .	Log representation, e.g. for low transmittance
2201/0699	. . . .	Randomly pulsed source	2201/1235	. . .	Measuring or displaying selectably absorbance or density
2201/08	. .	Optical fibres; light guides	2201/1237	. . .	Measuring extrema
2201/0806	. .	Light rod	2201/124	. .	Sensitivity
2201/0813	. .	Arrangement of collimator tubes, glass or empty	2201/1241	. . .	Multirange
2201/082	. .	Fibres for a reference path	2201/1242	. . .	Validating, e.g. range invalidation, suspending operation
2201/0826	. .	Fibre array at source, distributing	2201/1244	. . .	Ambient light detector, e.g. for invalidating
2201/0833	. .	Fibre array at detector, resolving	2201/1245	. . .	Averaging several measurements
2201/084	. .	Fibres for remote transmission	2201/1247	. . .	Thresholding
2201/0846	. .	Fibre interface with sample, e.g. for spatial resolution	2201/1248	. . .	Validating from signal shape, slope, peak
2201/0853	. .	Movable fibre optical member, e.g. for scanning or selecting	2201/125	. .	Digital circuitry
2201/086	. .	Modular construction, e.g. disconnectable fibre parts	2201/126	. .	Microprocessor processing
2201/0866	. .	Use of GRIN elements	2201/1263	. . .	Microprocessor is used as variant to separate part circuits
2201/0873	. .	Using optically integrated constructions	2201/1266	. . .	Interface card
2201/088	. .	Using a sensor fibre	2201/127	. .	Calibration; base line adjustment; drift compensation
2201/0886	. . .	and using OTDR	2201/12707	. . .	Pre-test of apparatus, e.g. dark test, sensor test
2201/0893	. .	Using fibres for resolution in time	2201/12715	. . .	Zero adjustment, i.e. to verify calibration
2201/10	. .	Scanning	2201/12723	. . .	Self check capacity; automatic, periodic step of checking
2201/101	. .	Scanning measuring head	2201/1273	. . .	Check triggered by sensing conditions, e.g. ambient changes
2201/102	. .	Video camera	2201/12738	. . .	Selectively initiating check
2201/103	. .	Scanning by mechanical motion of stage	2201/12746	. . .	Calibration values determination
2201/1035	. . .	3D motion	2201/12753	. . . .	and storage
2201/104	. .	Mechano-optical scan, i.e. object and beam moving	2201/12761	. . . .	Precalibration, e.g. for a given series of reagents
2201/1042	. . .	X, Y scan, i.e. object moving in X, beam in Y	2201/12769	. . . .	and adjusting controls, e.g. zero and 100 %
2201/1045	. . .	Spiral scan	2201/12776	. . . .	Automatic scaling up
2201/1047	. . .	with rotating optics and moving stage	2201/12784	. . . .	Base line obtained from computation, histogram
2201/105	. .	Purely optical scan	2201/12792	. . .	Compensating own radiation in apparatus
2201/1053	. . .	System of scan mirrors for composite motion of beam	2201/128	. .	Alternating sample and standard or reference part in one path
2201/1056	. . .	Prism scan, diasporameter			
2201/106	. .	Acousto-optical scan			
2201/107	. .	CRT flying spot scan			

2201/1281	. . . Reflecting part, i.e. for autocollimation	2203/0082	. . . . Indentation characteristics measured during load
2201/1283	. . . Opaque part	2203/0083	. . . Rebound strike or reflected energy
2201/1285	. . . Standard cuvette	2203/0085	. . . Compressibility
2201/1286	. . . . More than one cuvette	2203/0087	. . . Resistance to crushing
2201/1288	. . . Calibration medium periodically inserted in one cell	2203/0089	. . Biorheological properties
2201/129	. . Using chemometrical methods	2203/0091	. . Peeling or tearing
2201/1293	. . . resolving multicomponent spectra	2203/0092	. . Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials
2201/1296	. . . using neural networks	2203/0094	. . . Visco-elasticity
2201/13	. . Standards, constitution	2203/0096	. . Fibre-matrix interaction in composites
2203/00	Investigating strength properties of solid materials by application of mechanical stress	2203/0098	. Tests specified by its name, e.g. Charpy, Brinell, Mullen
2203/0001	. Type of application of the stress	2203/02	. Details not specific for a particular testing method
2203/0003	. . Steady	2203/0202	. . Control of the test
2203/0005	. . Repeated or cyclic	2203/0204	. . . Safety arrangements, e.g. remote control, emergency stop
2203/0007	. . . Low frequencies up to 100 Hz	2203/0206	. . . Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...
2203/0008	. . . High frequencies from 10 000 Hz	2203/0208	. . . Specific programs of loading, e.g. incremental loading or pre-loading
2203/001	. . Impulsive	2203/021	. . . Treatment of the signal; Calibration
2203/0012	. . Constant speed test	2203/0212	. . . Theories, calculations
2203/0014	. Type of force applied	2203/0214	. . . . Calculations a priori without experimental data
2203/0016	. . Tensile or compressive	2203/0216	. . . . Finite elements
2203/0017	. . . Tensile	2203/0218	. . . . Calculations based on experimental data
2203/0019	. . . Compressive	2203/022	. . Environment of the test
2203/0021	. . Torsional	2203/0222	. . . Temperature
2203/0023	. . Bending	2203/0224	. . . . Thermal cycling
2203/0025	. . Shearing	2203/0226	. . . . High temperature; Heating means
2203/0026	. . Combination of several types of applied forces	2203/0228	. . . . Low temperature; Cooling means
2203/0028	. . . Rotation and bending	2203/023	. . . Pressure
2203/003	. Generation of the force	2203/0232	. . . . High pressure
2203/0032	. . using mechanical means	2203/0234	. . . . Low pressure; Vacuum
2203/0033	. . . Weight	2203/0236	. . . Other environments
2203/0035	. . . Spring	2203/0238	. . . . Inert
2203/0037	. . . involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects	2203/024	. . . . Corrosive
2203/0039	. . . Hammer or pendulum	2203/0242	. . . . With circulation of a fluid
2203/0041	. . . Human or animal power	2203/0244	. . . Tests performed " <u>in situ</u> " or after " <u>in situ</u> " use
2203/0042	. . Pneumatic or hydraulic means	2203/0246	. . . . Special simulation of " <u>in situ</u> " conditions, scale models or dummies
2203/0044	. . . Pneumatic means	2203/0248	. . . Tests "on-line" during fabrication
2203/0046	. . . . Vacuum	2203/025	. . Geometry of the test
2203/0048	. . . Hydraulic means	2203/0252	. . . Monoaxial, i.e. the forces being applied along a single axis of the specimen
2203/005	. . Electromagnetic means	2203/0254	. . . Biaxial, the forces being applied along two normal axes of the specimen
2203/0051	. . . Piezoelectric means	2203/0256	. . . Triaxial, i.e. the forces being applied along three normal axes of the specimen
2203/0053	. . Cutting or drilling tools	2203/0258	. . . Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen
2203/0055	. . using mechanical waves, e.g. acoustic	2203/026	. . Specifications of the specimen
2203/0057	. . using stresses due to heating, e.g. conductive heating, radiative heating	2203/0262	. . . Shape of the specimen
2203/0058	. Kind of property studied	2203/0264	. . . . Beam
2203/006	. . Crack, flaws, fracture or rupture	2203/0266	. . . . Cylindrical specimens
2203/0062	. . . Crack or flaws	2203/0268	. . . . Dumb-bell specimens
2203/0064	. . . . Initiation of crack	2203/027	. . . . Specimens with holes or notches
2203/0066	. . . . Propagation of crack	2203/0272	. . . . Cruciform specimens
2203/0067	. . . Fracture or rupture	2203/0274	. . . . Tubular or ring-shaped specimens
2203/0069	. . Fatigue, creep, strain-stress relations or elastic constants		
2203/0071	. . . Creep		
2203/0073	. . . Fatigue		
2203/0075	. . . Strain-stress relations or elastic constants		
2203/0076	. . Hardness, compressibility or resistance to crushing		
2203/0078	. . . using indentation		
2203/008	. . . . Residual indentation measurement		

2203/0276	. . . . Spherical specimens	2223/03	. by transmission
2203/0278	. . . . Thin specimens	2223/04	. . and measuring absorption
2203/028	. . . . . One dimensional, e.g. filaments, wires, ropes or cables	2223/041	. . . X-ray absorption fine structure [EXAFS]
2203/0282	. . . . . Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes	2223/043	. . . gamma ray resonance absorption (Mossbauer effect)
2203/0284	. . . Bulk material, e.g. powders	2223/045	. combination of at least 2 measurements (transmission and scatter)
2203/0286	. . . Miniature specimen; Testing on microregions of a specimen	2223/05	. by diffraction, scatter or reflection
2203/0288	. . . Springs	2223/051	. . correcting for scatter
2203/029	. . . . Leaf spring	2223/052	. . reflection
2203/0292	. . . . Coil spring	2223/053	. . back scatter
2203/0294	. . . . Airs-spring, air bag spring or bellows	2223/054	. . small angle scatter
2203/0296	. . . Welds	2223/055	. . scatter raster collimator
2203/0298	. . . Manufacturing or preparing specimens	2223/056	. . diffraction
2203/04	. . Chucks, fixtures, jaws, holders or anvils	2223/0561	. . . diffraction cameras
2203/0405	. . . Features allowing alignment between specimen and chucks	2223/0563	. . . measure of energy-dispersion spectrum of diffracted radiation
2203/0411	. . . using pneumatic or hydraulic pressure	2223/0565	. . . diffraction of electrons, e.g. LEED
2203/0417	. . . using vacuum	2223/0566	. . . analysing diffraction pattern
2203/0423	. . . using screws	2223/0568	. . . spectro-diffractometry
2203/0429	. . . using adhesive bond; Gluing	2223/063	. . inelastic scatter, e.g. Compton effect
2203/0435	. . . modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test	2223/064	. . interference of radiation, e.g. Borrmann effect
2203/0441	. . . with dampers or shock absorbing means	2223/07	. secondary emission
2203/0447	. . . Holders for quick insertion/removal of test pieces	2223/071	. . combination of measurements, at least 1 secondary emission
2203/0452	. . . Cushioning layer between test piece and grip	2223/072	. . combination of measurements, 2 kinds of secondary emission
2203/0458	. . . characterised by their material	2223/073	. . use of a laser
2203/0464	. . . with provisions for testing more than one specimen at the time	2223/074	. . activation analysis
2203/047	. . . . in series	2223/0745	. . . neutron-gamma activation analysis
2203/0476	. . . . in parallel	2223/076	. . X-ray fluorescence
2203/0482	. . . comprising sensing means	2223/0763	. . . Compton background correcting
2203/0488	. . . . Diamond anvil cells	2223/0766	. . . X-ray fluorescence with indicator, tags
2203/0494	. . . . Clamping ring, "whole periphery" clamping	2223/079	. . incident electron beam and measuring excited X-rays
2203/06	. . Indicating or recording means; Sensing means	2223/08	. . incident electron beam and measuring cathode luminescence (U.V.)
2203/0605	. . . Mechanical indicating, recording or sensing means	2223/081	. . incident ion beam, e.g. proton
2203/0611	. . . Hydraulic or pneumatic indicating, recording or sensing means	2223/0813	. . . incident ion beam and measuring X-rays [PIXE]
2203/0617	. . . Electrical or magnetic indicating, recording or sensing means	2223/0816	. . . incident ion beam and measuring secondary ion beam [SIMS]
2203/0623	. . . . using piezoelectric gauges	2223/084	. . photo-electric effect
2203/0629	. . . . using thin films, paintings	2223/085	. . photo-electron spectrum [ESCA, XPS]
2203/0635	. . . . using magnetic properties	2223/086	. . Auger electrons
2203/0641	. . . using optical, X-ray, ultraviolet, infrared or similar detectors	2223/09	. . exo-electron emission
2203/0647	. . . . Image analysis	2223/095	. . tribo-emission
2203/0652	. . . . using contrasting ink, painting, staining	2223/10	. Different kinds of radiation or particles
2203/0658	. . . using acoustic or ultrasonic detectors	2223/1003	. . monochromatic
2203/0664	. . . using witness specimens	2223/1006	. . different radiations, e.g. X and alpha
2203/067	. . . Parameter measured for estimating the property	2223/101	. . electromagnetic radiation
2203/0676	. . . . Force, weight, load, energy, speed or acceleration	2223/1013	. . . gamma
2203/0682	. . . . Spatial dimension, e.g. length, area, angle	2223/1016	. . . X-ray
2203/0688	. . . . Time or frequency	2223/102	. . beta or electrons
2203/0694	. . . . Temperature	2223/104	. . ions
2223/00	Investigating materials by wave or particle radiation	2223/1045	. . . alpha
2223/01	. by radioactivity, nuclear decay	2223/105	. . molecular or atomic beams
		2223/106	. . neutrons
		2223/1063	. . . fast
		2223/1066	. . . thermal
		2223/107	. . protons
		2223/108	. . positrons; electron-positron annihilation

2223/11	. . neutrino	2223/403	. . mapping with false colours
2223/20	. Sources of radiation	2223/404	. . contrast medium
2223/201	. . betatron	2223/405	. . mapping of a material property
2223/202	. . isotopes	2223/406	. . fluoroscopic image
2223/203	. . synchrotron	2223/407	. . stimulable phosphor sheet
2223/204	. . source created from radiated target	2223/408	. . display on monitor
2223/205	. . natural source	2223/409	. . embedding or impregnating the object
2223/206	. . sources operating at different energy levels	2223/41	. . imaging specifically internal structure
2223/30	. Accessories, mechanical or electrical features	2223/411	. . tv imaging from fluorescent screen
2223/301	. . portable apparatus	2223/412	. . use of image converter tube [PMT]
2223/302	. . comparative arrangements	2223/413	. . sensor array [CCD]
2223/303	. . calibrating, standardising	2223/414	. . stereoscopic system
2223/3032	. . . periodic calibration, e.g. with filter wheel	2223/415	. . radiographic film
2223/3035	. . . phantom	2223/416	. . wrap around
2223/3037	. . . standards (constitution)	2223/417	. . recording with co-ordinate markings
2223/304	. . electric circuits, signal processing	2223/418	. . electron microscope
2223/305	. . computer simulations	2223/419	. . computed tomograph
2223/306	. . computer control	2223/42	. . image digitised, -enhanced in an image processor
2223/307	. . cuvettes-sample holders	2223/421	. . digitised image, analysed in real time (recognition algorithms)
2223/3075	. . . correcting for the properties of the container, e.g. empty	2223/422	. . windows within the image
2223/308	. . support of radiation source	2223/423	. . multispectral imaging-multiple energy imaging
2223/309	. . support of sample holder	2223/424	. . energy subtraction image processing (dual energy processing)
2223/31	. . temperature control	2223/425	. . temporal (time difference) subtraction processing
2223/3103	. . . cooling, cryostats	2223/426	. . image comparing, unknown with known substance
2223/3106	. . . heating, furnaces	2223/427	. . stepped imaging (selected area of sample is changed)
2223/311	. . high pressure testing, anvil cells	2223/50	. Detectors
2223/312	. . powder preparation	2223/501	. . array
2223/313	. . filters, rotating filter disc	2223/5015	. . . linear array
2223/314	. . chopper	2223/502	. . ionisation chamber
2223/315	. . monochromators	2223/503	. . auxiliary reference detector
2223/316	. . collimators	2223/504	. . pin-diode
2223/317	. . windows	2223/505	. . scintillation
2223/318	. . protective films	2223/5055	. . . scintillation crystal coupled to PMT
2223/319	. . using opaque penetrant medium	2223/506	. . time-of-flight
2223/32	. . adjustments of elements during operation	2223/507	. . secondary-emission detector
2223/321	. . manipulator for positioning a part	2223/508	. . photo-acoustic
2223/322	. . immersed detecting head	2223/509	. . infrared
2223/323	. . irradiation range monitor, e.g. light beam	2223/60	. Specific applications or type of materials
2223/33	. . scanning, i.e. relative motion for measurement of successive object-parts	2223/601	. . density profile
2223/3301	. . . beam is modified for scan, e.g. moving collimator	2223/602	. . crystal growth
2223/3302	. . . object and detector fixed	2223/603	. . superlattices
2223/3303	. . . object fixed; source and detector move	2223/604	. . monocrystal
2223/3304	. . . helicoidal scan	2223/605	. . phases
2223/3305	. . . detector fixed; source and body moving	2223/606	. . texture
2223/3306	. . . object rotates	2223/607	. . strain
2223/3307	. . . source and detector fixed; object moves	2223/608	. . superconductors
2223/3308	. . . object translates	2223/61	. . thin films, coatings
2223/331	. . rocking curve analysis	2223/611	. . patterned objects; electronic devices
2223/335	. . electronic scanning	2223/6113	. . . printed circuit board [PCB]
2223/34	. . sensing means for gap between source and detector	2223/6116	. . . semiconductor wafer
2223/345	. . mathematical transformations on beams or signals, e.g. Fourier	2223/612	. . biological material
2223/348	. . ellipsoidal collector	2223/6123	. . . bone mineral
2223/351	. . prohibiting charge accumulation on sample substrate	2223/6126	. . . tissue
2223/40	. Imaging	2223/613	. . moisture
2223/401	. . image processing	2223/614	. . road surface
2223/402	. . mapping distribution of elements	2223/615	. . composite materials, multilayer laminates
		2223/616	. . earth materials

2223/617	. . ash in coal	2291/0226	. . . Oils, e.g. engine oils
2223/618	. . food	2291/0228	. . . Aqueous liquids
2223/619	. . wood	2291/023	. . Solids
2223/62	. . powders	2291/0231	. . . Composite or layered materials
2223/621	. . tobacco	2291/0232	. . . Glass, ceramics, concrete or stone
2223/622	. . paper	2291/0234	. . . Metals, e.g. steel
2223/623	. . plastics	2291/0235	. . . Plastics; polymers; soft materials, e.g. rubber
2223/624	. . steel, castings	2291/0237	. . . Thin materials, e.g. paper, membranes, thin films
2223/625	. . nuclear fuels, laser imploded targets	2291/0238	. . . Wood
2223/626	. . radioactive material	2291/024	. . Mixtures
2223/6265	. . . sample with radioactive tracer, tag, label	2291/02408	. . . Solids in gases, e.g. particle suspensions
2223/627	. . tyres	2291/02416	. . . Solids in liquids
2223/628	. . tubes, pipes	2291/02425	. . . Liquids in gases, e.g. sprays
2223/629	. . welds, bonds, sealing compounds	2291/02433	. . . Gases in liquids, e.g. bubbles, foams
2223/63	. . turbine blades	2291/02441	. . . Liquids in porous solids
2223/631	. . large structures, walls	2291/0245	. . . Gases in porous solids
2223/632	. . residual life, life expectancy	2291/02458	. . . Solids in solids, e.g. granules
2223/633	. . thickness, density, surface weight (unit area)	2291/02466	. . . Biological material, e.g. blood
2223/634	. . wear behaviour, roughness	2291/02475	. . . Tissue characterisation
2223/635	. . fluids, granulates	2291/02483	. . . Other human or animal parts, e.g. bones
2223/636	. . fluid sample with radioactive sources	2291/02491	. . . Materials with nonlinear acoustic properties
2223/637	. . liquid	2291/025	. . Change of phase or condition
2223/638	. . gas	2291/0251	. . . Solidification, icing, curing composites, polymerisation
2223/639	. . material in a container	2291/0252	. . . Melting, molten solids
2223/64	. . multiple-sample chamber, multiplicity of materials	2291/0253	. . . Condensation
2223/641	. . particle sizing	2291/0254	. . . Evaporation
2223/642	. . moving sheet, web	2291/0255	. . . (Bio)chemical reactions, e.g. on biosensors
2223/6425	. . . correcting for web flutter	2291/0256	. . . Adsorption, desorption, surface mass change, e.g. on biosensors
2223/643	. . object on conveyor	2291/0257	. . . . with a layer containing at least one organic compound
2223/645	. . quality control	2291/0258	. . . Structural degradation, e.g. fatigue of composites, ageing of oils
2223/646	. . flaws, defects	2291/028	. . Material parameters
2223/6462	. . . microdefects	2291/02809	. . . Concentration of a compound, e.g. measured by a surface mass change
2223/6464	. . . radioactive substance into defect site	2291/02818	. . . Density, viscosity
2223/6466	. . . flaws comparing to predetermined standards	2291/02827	. . . Elastic parameters, strength or force
2223/6468	. . . at different temperatures	2291/02836	. . . Flow rate, liquid level
2223/647	. . leak detection	2291/02845	. . . Humidity, wetness
2223/648	. . voids	2291/02854	. . . Length, thickness
2223/649	. . porosity	2291/02863	. . . Electric or magnetic parameters
2223/65	. . cavitation pits	2291/02872	. . . Pressure
2223/651	. . dust	2291/02881	. . . Temperature
2223/652	. . impurities, foreign matter, trace amounts	2291/0289	. . . Internal structure, e.g. defects, grain size, texture
2223/66	. . multiple steps inspection, e.g. coarse/fine	2291/04	. . Wave modes and trajectories
2291/00	Indexing codes associated with group G01N 29/00	2291/042	. . Wave modes
2291/01	. . Indexing codes associated with the measuring variable	2291/0421	. . . Longitudinal waves
2291/011	. . Velocity or travel time	2291/0422	. . . Shear waves, transverse waves, horizontally polarised waves
2291/012	. . Phase angle	2291/0423	. . . Surface waves, e.g. Rayleigh waves, Love waves
2291/014	. . Resonance or resonant frequency	2291/0425	. . . Parallel to the surface, e.g. creep waves
2291/015	. . Attenuation, scattering	2291/0426	. . . Bulk waves, e.g. quartz crystal microbalance, torsional waves
2291/017	. . Doppler techniques	2291/0427	. . . Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever
2291/018	. . Impedance	2291/0428	. . . Mode conversion
2291/02	. . Indexing codes associated with the analysed material	2291/043	. . Complex trajectories
2291/021	. . Gases		
2291/0212	. . . Binary gases		
2291/0215	. . . Mixtures of three or more gases, e.g. air		
2291/0217	. . . Smoke, combustion gases		
2291/022	. . Liquids		
2291/0222	. . . Binary liquids		
2291/0224	. . . Mixtures of three or more liquids		

2291/044	. . Internal reflections (echoes), e.g. on walls or defects	2333/04	. . . . Varicella-zoster virus
2291/045	. . External reflections, e.g. on reflectors	2333/045	. . . . Cytomegalovirus
2291/048	. . Transmission, i.e. analysed material between transmitter and receiver	2333/05	. . . . Epstein-Barr virus
2291/051	. . Perpendicular incidence, perpendicular propagation	2333/055	. . . . Marek's disease virus
2291/052	. . Perpendicular incidence, angular propagation	2333/06	. . . . Infectious bovine rhinotracheitis virus
2291/055	. . Angular incidence, perpendicular propagation	2333/065	. . . Poxviridae, e.g. avipoxvirus
2291/056	. . Angular incidence, angular propagation	2333/07	. . . . Vaccinia virus; Variola virus
2291/057	. . Angular incidence, parallel to surface propagation	2333/075	. . . Adenoviridae
2291/10	. Number of transducers	2333/08	. . RNA viruses
2291/101	. . one transducer	2333/085	. . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
2291/102	. . one emitter, one receiver	2333/09	. . . . Foot-and-mouth disease virus
2291/103	. . one emitter, two or more receivers	2333/095	. . . . Rhinovirus
2291/104	. . two or more emitters, one receiver	2333/10	. . . . Hepatitis A virus
2291/105	. . two or more emitters, two or more receivers	2333/105	. . . . Poliovirus
2291/106	. . one or more transducer arrays	2333/11	. . . Orthomyxoviridae, e.g. influenza virus
2291/26	. Scanned objects	2333/115	. . . Paramyxoviridae, e.g. parainfluenza virus
2291/262	. . Linear objects	2333/12	. . . . Mumps virus; Measles virus
2291/2623	. . . Rails; Railroads	2333/125	. . . . Newcastle disease virus
2291/2626	. . . Wires, bars, rods	2333/13	. . . . Canine distemper virus
2291/263	. . Surfaces	2333/135	. . . . Respiratory syncytial virus
2291/2632	. . . flat	2333/14	. . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
2291/2634	. . . cylindrical from outside	2333/145	. . . Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokola virus or vesicular stomatitis virus
2291/2636	. . . cylindrical from inside	2333/15	. . . Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus
2291/2638	. . . Complex surfaces	2333/155	. . . . Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
2291/265	. . Spherical objects	2333/16	. . . . HIV-1, HIV-2
2291/267	. . Welds	2333/161	. . . . . gag-pol, e.g. p55, p24/25, p17/18, p.7, p6, p66/68, p51/52, p31/34, p32, p40
2291/2672	. . . Spot welding	2333/162	. . . . . env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site
2291/2675	. . . Seam, butt welding	2333/163	. . . . . Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx
2291/2677	. . . Lapp welding	2333/165	. . . Coronaviridae, e.g. avian infectious bronchitis virus
2291/269	. . Various geometry objects	2333/17	. . . . Porcine transmissible gastroenteritis virus
2291/2691	. . . Bolts, screws, heads	2333/175	. . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus
2291/2692	. . . Tyres	2333/18	. . . Togaviridae; Flaviviridae
2291/2693	. . . Rotor or turbine parts	2333/181	. . . . Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus (rubella virus G01N 2333/19)
2291/2694	. . . Wings or other aircraft parts	2333/183	. . . . Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus) or border disease virus
2291/2695	. . . Bottles, containers	2333/185	. . . . . Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue
2291/2696	. . . Wheels, Gears, Bearings	2333/186	. . . . . Hepatitis C; Hepatitis NANB
2291/2697	. . . Wafer or (micro)electronic parts	2333/188	. . . . . Hepatitis G; Hepatitis NANBNCNDNE
2291/2698	. . . Other discrete objects, e.g. bricks	2333/19	. . . . Rubella virus
2333/00	Assays involving biological materials from specific organisms or of a specific nature	2333/195	. from bacteria
	NOTE		NOTE
	In groups G01N 2333/47 - G01N 2333/994 indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism.		In groups G01N 2333/20 - G01N 2333/365 , where appropriate, after the bacteria terminology, the indication of the order (O),
2333/001	. by chemical synthesis		
2333/003	. . of Peptide-nucleic acids (PNAs)		
2333/005	. from viruses		
2333/01	. . DNA viruses		
2333/015	. . . Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus		
2333/02	. . . Hepadnaviridae, e.g. hepatitis B virus		
2333/025	. . . Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus		
2333/03	. . . Herpetoviridae, e.g. pseudorabies virus		
2333/032	. . . .Pseudorabies virus, i.e. Aujetzký virus		
2333/035	. . . . Herpes simplex virus I or II		

G01N

G01N 2333/195

(continued)

family (F) or genus (G) of the bacteria is given in brackets.

2333/20	. .	from Spirochaetales (O), e.g. Treponema, Leptospira	2333/435	. .	from animals; from humans
2333/205	. .	from Campylobacter (G)	2333/43504	. . .	from invertebrates
2333/21	. .	from Pseudomonadaceae (F)	2333/43508	. . .	from crustaceans
2333/212	. . .	Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter	2333/43513	. . .	from arachnidae
2333/215	. .	from Halobacteriaceae (F)	2333/43517	. . . .	from spiders
2333/22	. .	from Neisseriaceae (F), e.g. Acinetobacter	2333/43521	. . . .	from scorpions
2333/225	. .	from Alcaligenes (G)	2333/43526	. . .	from worms
2333/23	. .	from Brucella (G)	2333/4353	. . . .	from nematodes
2333/235	. .	from Bordetella (G)	2333/43534	. . . . .	from Caenorhabditis
2333/24	. .	from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia	2333/43539	. . . .	from cestodes
2333/245	. . .	Escherichia (G)	2333/43543	. . . . .	from Taenia
2333/25	. . .	Shigella (G)	2333/43547	. . . .	from trematodes
2333/255	. . .	Salmonella (G)	2333/43552	. . .	from insects
2333/26	. . .	Klebsiella (G)	2333/43556	. . . .	from ticks
2333/265	. . .	Enterobacter (G)	2333/4356	. . . .	from wasps
2333/27	. . .	Erwinia (G)	2333/43565	. . . .	from bees
2333/275	. . .	Hafnia (G)	2333/43569	. . . .	from flies
2333/28	. .	from Vibrionaceae (F)	2333/43573	. . . . .	from Drosophila
2333/285	. .	from Pasteurellaceae (F), e.g. Haemophilus influenza	2333/43578	. . . .	from silkworm
2333/29	. .	from Richettsiales (o)	2333/43582	. . . .	from mites
2333/295	. .	from Chlamydiales (o)	2333/43586	. . . .	from fleas
2333/30	. .	from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]	2333/43591	. . . .	from mosquitoes
2333/305	. .	from Micrococcaceae (F)	2333/43595	. . .	from coelenteratae, e.g. medusae
2333/31	. . .	from Staphylococcus (G)	2333/44	. .	from protozoa
2333/315	. .	from Streptococcus (G), e.g. Enterococci	2333/445	. . .	Plasmodium
2333/3153	. . .	Streptokinase	2333/45	. . .	Toxoplasma
2333/3156	. . .	from Streptococcus pneumoniae (Pneumococcus) (Streptokinase G01N 2333/3153)	2333/455	. . .	Eimeria
2333/32	. .	from Bacillus (G)	2333/46	. .	from vertebrates
2333/325	. . .	Bacillus thuringiensis crystal protein (delta-endotoxin)	2333/4603	. . .	from fish
2333/33	. .	from Clostridium (G)	2333/4606	. . .	from amphibians
2333/335	. .	from Lactobacillus (G)	2333/4609	. . .	from reptiles
2333/34	. .	from Corynebacterium (G)	2333/4613	. . . .	Snake venom
2333/345	. .	from Brevibacterium (G)	2333/4616	. . . . .	from Russell's viper
2333/35	. .	from Mycobacteriaceae (F)	2333/462	. . . . .	from Agkistrodon sp., e.g. acutase, ACTE
2333/355	. .	from Nocardia (G)	2333/4623	. . . . .	from Agkistrodon rhodostoma (Malayan pit viper); Arvin (R); Batroboxin; Ancrod
2333/36	. .	from Actinomyces; from Streptomyces (G)	2333/4626	. . . . .	from Agkistrodon contortrix contortrix (copperhead snake); Protac (R)
2333/365	. .	from Actinoplanes (G)	2333/463	. . . . .	from Crocodylus adamanteus (Eastern Diamondback rattlesnake); Crotoxin
2333/37	. .	from fungi	2333/4633	. . . . .	from Echis carinatus; Ecarin
2333/375	. .	from Basidiomycetes	2333/4636	. . . . .	from Bothrops sp.
2333/38	. .	from Aspergillus	2333/464	. . . . .	from Bothrops atrox; Reptilase; Atrixin
2333/385	. .	from Penicillium	2333/4643	. . . . .	from Bothrops jararaca; Botrocin
2333/39	. .	from yeasts	2333/4646	. . . . .	from Oxyuran(eo)us scutellatus (Taipan snake of Elapidae family)
2333/395	. . .	from Saccharomyces	2333/465	. . .	from birds
2333/40	. . .	from Candida	2333/47	. . .	Assays involving proteins of known structure or function as defined in the subgroups
2333/405	. .	from algae	2333/4701	. . . .	Details
2333/41	. .	from lichens	2333/4703	. . . . .	Regulators; Modulating activity
2333/415	. .	from plants	2333/4704	. . . . .	Inhibitors; Suppressors
2333/42	. .	Lectins, e.g. concanavalin, phytohaemagglutinin	2333/4706	. . . . .	stimulating, promoting or activating activity
2333/425	. .	Zeins	2333/4707	. . . . .	Guanosine triphosphatase activating protein, GAP
2333/43	. .	Sweetening agents, e.g. thaumatin, monellin	2333/4709	. . . . .	Amyloid plaque core protein
			2333/471	. . . . .	Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein

2333/4712	. . . . .	Muscle proteins, e.g. myosin, actin, protein	2333/54	. . . . .	Interleukins [IL]
2333/4713	. . . . .	Plasma globulins, lactoglobulin	2333/5403	. . . . .	IL-3
2333/4715	. . . . .	Cytokine-induced proteins	2333/5406	. . . . .	IL-4
2333/4716	. . . . .	Complement proteins, e.g. anaphylatoxin, C3a, C5a	2333/5409	. . . . .	IL-5
2333/4718	. . . . .	Lipocortins	2333/5412	. . . . .	IL-6
2333/4719	. . . . .	G-proteins	2333/5415	. . . . .	Leukaemia inhibitory factor [LIF]
2333/4721	. . . . .	Cationic antimicrobial peptides, e.g. defensins	2333/5418	. . . . .	IL-7
2333/4722	. . . . .	Proteoglycans, e.g. aggrecan	2333/5421	. . . . .	IL-8
2333/4724	. . . . .	Lectins	2333/5425	. . . . .	IL-9
2333/4725	. . . . .	Mucins, e.g. human intestinal mucin	2333/5428	. . . . .	IL-10
2333/4727	. . . . .	Calcium binding proteins, e.g. calmodulin	2333/5431	. . . . .	IL-11
2333/4728	. . . . .	alpha-Glycoproteins	2333/5434	. . . . .	IL-12
2333/473	. . . . .	Recognins, e.g. maliginin	2333/5437	. . . . .	IL-13
2333/4731	. . . . .	Casein	2333/544	. . . . .	IL-14
2333/4733	. . . . .	Acute pancreatitis-associated protein	2333/5443	. . . . .	IL-15
2333/4734	. . . . .	Villin	2333/5446	. . . . .	IL-16
2333/4736	. . . . .	Retinoblastoma protein	2333/545	. . . . .	IL-1
2333/4737	. . . . .	C-reactive protein	2333/55	. . . . .	IL-2
2333/4739	. . . . .	Cyclin; Prad 1	2333/555	. . . . .	Interferons [IFN]
2333/474	. . . . .	Pancreatic thread protein; Reg protein	2333/56	. . . . .	IFN-alpha
2333/4742	. . . . .	Keratin; Cytokeratin	2333/565	. . . . .	IFN-beta
2333/4743	. . . . .	Bactericidal/Permeability-increasing protein BPI	2333/57	. . . . .	IFN-gamma
2333/4745	. . . . .	Insulin-like growth factor binding protein	2333/575	. . . . .	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin G01N 2333/665 , corticotropin G01N 2333/695)
2333/4746	. . . . .	Cancer-associated SCM-recognition factor, CRISPP	2333/5751	. . . . .	Corticotropin releasing factor [CRF] (Urotensin)
2333/4748	. . . . .	p53	2333/5752	. . . . .	Placental lactogen; Chorionic Somatomammotropin
2333/475	. . . . .	Assays involving growth factors	2333/5753	. . . . .	Calcitonin gene related peptide
2333/4753	. . . . .	Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II	2333/5754	. . . . .	Endothelin, vasoactive intestinal contractor [VIC]
2333/4756	. . . . .	Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor	2333/5755	. . . . .	Neuropeptide Y
2333/48	. . . . .	Nerve growth factor [NGF]	2333/5756	. . . . .	Prolactin
2333/485	. . . . .	Epidermal growth factor [EGF] (urogastrone)	2333/5757	. . . . .	Vasoactive intestinal peptide [VIP] or related peptides
2333/49	. . . . .	Platelet-derived growth factor [PDGF]	2333/5758	. . . . .	Gastrin releasing peptide
2333/495	. . . . .	Transforming growth factor [TGF]	2333/5759	. . . . .	Thymosin or related peptides
2333/50	. . . . .	Fibroblast growth factors [FGF]	2333/58	. . . . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatrin; Cardiodilatin
2333/501	. . . . .	acidic FGF [aFGF]	2333/585	. . . . .	Calcitonins
2333/503	. . . . .	basic FGF [bFGF]	2333/59	. . . . .	Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]
2333/505	. . . . .	Erythropoietin [EPO]	2333/595	. . . . .	Gastrins; Cholecystokinins [CCK]
2333/51	. . . . .	Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor	2333/60	. . . . .	Growth-hormone releasing factors (GH-RF) (Somatoliberin)
2333/515	. . . . .	Angiogenesis factors; Angiogenin	2333/605	. . . . .	Glucagons
2333/52	. . . . .	Assays involving cytokines	2333/61	. . . . .	Growth hormones [GH] (Somatotropin)
2333/521	. . . . .	Chemokines	2333/62	. . . . .	Insulins
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	2333/63	. . . . .	Motilins
2333/523	. . . . .	Beta-chemokines, e.g. RANTES, I-309/TCA-3, MIP-1alpha, MIP-1beta/ACT-2/LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1or LDCF-2	2333/635	. . . . .	Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
2333/524	. . . . .	Thrombopoietin, i.e. C-MPL ligand	2333/64	. . . . .	Relaxins
2333/525	. . . . .	Tumor necrosis factor [TNF]	2333/645	. . . . .	Secretins
2333/5255	. . . . .	Lymphotoxin [LT]	2333/65	. . . . .	Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
2333/53	. . . . .	Colony-stimulating factor [CSF]	2333/655	. . . . .	Somatostatins
2333/535	. . . . .	Granulocyte CSF; Granulocyte-macrophage CSF	2333/66	. . . . .	Thymopoietins

- 2333/665 . . Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
- 2333/67 . . . Lipotropins, e.g. beta, gamma lipotropin
- 2333/675 . . . beta-Endorphins
- 2333/68 . . . Melanocyte-stimulating hormone [MSH]
- 2333/685 alpha-Melanotropin
- 2333/69 beta-Melanotropin
- 2333/695 . . . Corticotropin [ACTH]
- 2333/70 . . . Enkephalins
- 2333/705 . . Assays involving receptors, cell surface antigens or cell surface determinants
- 2333/70503 . . . Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3
- 2333/70507 C2D
- 2333/7051 T-cell receptor (TcR)-CD3 complex
- 2333/70514 CD4
- 2333/70517 CD8
- 2333/70521 CD28, CD152
- 2333/70525 ICAM molecules, e.g. CD50, CD54, CD102
- 2333/70528 CD58
- 2333/70532 B7 molecules, e.g. CD80, CD86
- 2333/70535 Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)
- 2333/70539 MHC-molecules, e.g. HLA-molecules
- 2333/70542 CD106
- 2333/70546 . . . Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM
- 2333/7055 Integrin beta1-subunit-containing molecules, e.g. CD29, CD49
- 2333/70553 Integrin beta2-subunit-containing molecules, e.g. CD11, CD18
- 2333/70557 Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61
- 2333/7056 . . . Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM
- 2333/70564 Selectins, e.g. CD62
- 2333/70567 . . . Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors
- 2333/70571 . . . for neuromediators, e.g. serotonin receptor, dopamine receptor
- 2333/70575 . . . NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 ([NGF G01N 2333/48](#), [TNF G01N 2333/525](#))
- 2333/70578 . . . NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 ([NGF-receptor G01N 2333/71](#), [TNF-receptor G01N 2333/7151](#))
- 2333/70582 . . . CD71
- 2333/70585 . . . CD44
- 2333/70589 . . . CD45
- 2333/70592 . . . CD52
- 2333/70596 . . . Molecules with a "CD"-designation not provided for elsewhere in [G01N 2333/705](#)
- 2333/71 . . . for growth factors; for growth regulators
- 2333/715 . . . for cytokines; for lymphokines; for interferons
- 2333/7151 for tumor necrosis factor [TNF]; for lymphotoxin [LT]
- 2333/7153 or colony-stimulating factors [CSF]
- 2333/7155 for interleukins [IL]
- 2333/7156 for interferons [IFN]
- 2333/7158 for chemokines
- 2333/72 . . . for hormones ([for neuromediators G01N 2333/70571](#))
- 2333/723 Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor
- 2333/726 G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH
- 2333/745 . . Assays involving non-enzymic blood coagulation factors
- 2333/7452 . . . Thrombomodulin
- 2333/7454 . . . Tissue factor (tissue thromboplastin, Factor III)
- 2333/7456 . . . Factor V
- 2333/7458 . . . Protein S
- 2333/75 . . . Fibrin; Fibrinogen
- 2333/755 . . . Factors VIII, e.g. factor VIII C [AHF], factor VIII Ag [VWF]
- 2333/76 . . Assays involving albumins other than in routine use for blocking surfaces or for anchoring haptens during immunisation
- 2333/765 . . . Serum albumin, e.g. HSA
- 2333/77 . . . Ovalbumin
- 2333/775 . . . Apolipopptides
- 2333/78 . . . Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin [CIG]
- 2333/785 . . . Alveolar surfactant peptides; Pulmonary surfactant peptides
- 2333/79 . . . Transferrins, e.g. lactoferrins, ovotransferrins
- 2333/795 . . . Porphyrin- or corrin-ring-containing peptides
- 2333/80 . . . Cytochromes
- 2333/805 . . . Haemoglobins; Myoglobins
- 2333/81 . . . Protease inhibitors
- 2333/8103 . . . Exopeptidase (E.C. 3.4.11-19) inhibitors
- 2333/8107 . . . Endopeptidase (E.C. 3.4.21-99) inhibitors
- 2333/811 . . . Serine protease (E.C. 3.4.21) inhibitors
- 2333/8114 Kunitz type inhibitors
- 2333/8117 Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)
- 2333/8121 Serpins
- 2333/8125 Alpha-1-antitrypsin
- 2333/8128 Antithrombin III
- 2333/8132 Plasminogen activator inhibitors
- 2333/8135 Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid
- 2333/8139 . . . Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin
- 2333/8142 . . . Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors
- 2333/8146 . . . Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metallo proteinase, TIMP
- 2333/815 . . . from leeches, e.g. hirudin, eglin
- 2333/82 . . . Translation products from oncogenes
- 2333/825 . . . Metallothioneins
- 2333/90 . . . Enzymes; Proenzymes

NOTE

Enzymes are generally categorised below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

2333/9005	. . Enzymes with nucleic acid structure; e.g. ribozymes	2333/9065	. . . . acting on CH-NH groups of donors (1.5)
2333/901	. . Antibodies with enzymatic activity; e.g. abzymes	2333/90655	. . . . . with NAD or NADP as acceptor (1.5.1) in general
2333/9015	. . Ligases (6)	2333/90661	. . . . . with a definite EC number (1.5.1.-)
2333/902	. . Oxidoreductases (1.)	2333/90666	. . . . . Dihydrofolate reductase [DHFR] (1.5.1.3)
2333/90203	. . . acting on the aldehyde or oxo group of donors (1.2)	2333/90672	. . . . . with oxygen as acceptor (1.5.3) in general
2333/90206	. . . acting on the CH-CH group of donors (1.3)	2333/90677	. . . . . with a definite EC number (1.5.3.-)
2333/90209	. . . acting on NADH or NADPH (1.6), e.g. those with a heme protein as acceptor (1.6.2) (general), Cytochrome-b5 reductase (1.6.2.2) or NADPH-cytochrome P450 reductase (1.6.2.4)	2333/90683	. . . . . Sarcosine oxidase (1.5.3.1)
2333/90212	. . . acting on a sulfur group of donors (1.8)	2333/90688	. . . . . acting on other nitrogen compounds as donors (1.7)
2333/90216	. . . acting on a heme group of donors (1.9)	2333/90694	. . . . . with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)
2333/90219	. . . acting on diphenols and related substances as donors (1.10)	2333/908	. . . acting on hydrogen peroxide as acceptor (1.11)
2333/90222	. . . . with oxygen as acceptor (1.10.3) in general	2333/91	. . Transferases (2.)
2333/90225	. . . . . with a definite EC number (1.10.3.-)	2333/91005	. . . transferring one-carbon groups (2.1)
2333/90229	. . . . . Catechol oxidase, i.e. Tyrosinase (1.10.3.1)	2333/91011	. . . . Methyltransferases (general) (2.1.1.)
2333/90232	. . . . . Laccase (1.10.3.2)	2333/91017	. . . . . with definite EC number (2.1.1.-)
2333/90235	. . . . . Ascorbate oxidase (1.10.3.3)	2333/91022	. . . . . Catecholmethyltransferases (2.1.1.6)
2333/90238	. . . acting on hydrogen as donor (1.12)	2333/91028	. . . . Hydroxymethyl-, formyl-transferases (2.1.2)
2333/90241	. . . acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)	2333/91034	. . . . Carboxyl- and carbamoyl transferases (2.1.3)
2333/90245	. . . acting on paired donors with incorporation of molecular oxygen (1.14)	2333/9104	. . . Aldehyde and ketone transferases (2.2)
2333/90248	. . . . with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen 1.14.13	2333/91045	. . . Acyltransferases (2.3)
2333/90251	. . . . . with a definite EC number (1.14.13.-)	2333/91051	. . . . Acyltransferases other than aminoacyltransferases (general) (2.3.1)
2333/90254	. . . . . Nitric-oxide synthase (NOS; 1.14.13.39)	2333/91057	. . . . . with definite EC number (2.3.1.-)
2333/90258	. . . . with a reduced iron-sulfur protein as one donor (1.14.15) in general	2333/91062	. . . . . Chloramphenicol-acetyltransferases (2.3.1.28)
2333/90261	. . . . . with a definite EC number (1.14.15.-)	2333/91068	. . . . . Chalcone synthases (2.3.1.74)
2333/90264	. . . . . Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)	2333/91074	. . . . Aminoacyltransferases (general) (2.3.2)
2333/90267	. . . . . Cholesterol monooxygenase (cytochrome P 450scc)(1.14.15.6)	2333/9108	. . . . . with definite EC number (2.3.2.-)
2333/9027	. . . . Miscellaneous (1.14.99)	2333/91085	. . . . . Transglutaminases; Factor XIIIq (2.3.2.13)
2333/90274	. . . . . with a definite EC number (1.14.99.-)	2333/91091	. . . Glycosyltransferases (2.4)
2333/90277	. . . . . Steroid 17 alpha-monooxygenase (1.14.99.9)	2333/91097	. . . . Hexosyltransferases (general) (2.4.1)
2333/9028	. . . . . Steroid 21-monooxygenase (1.14.99.10)	2333/91102	. . . . . with definite EC number (2.4.1.-)
2333/90283	. . . acting on superoxide radicals as acceptor (1.15)	2333/91108	. . . . . Levansucrases (2.4.1.10)
2333/90287	. . . oxidising metal ions (1.16)	2333/91114	. . . . . Cellulose synthases (2.4.1.12)
2333/9029	. . . acting on -CH ₂ - groups (1.17)	2333/9112	. . . . . Sucrose synthases (2.4.1.13)
2333/90293	. . . acting on reduced ferredoxin as donor (1.18)	2333/91125	. . . . . Sucrose phosphate synthases (2.4.1.14)
2333/90296	. . . acting on reduced flavodoxin as donor (1.19)	2333/91131	. . . . . Glucan branching enzymes (2.4.1.18)
2333/904	. . . acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1)	2333/91137	. . . . . Cyclomalto dextrin glucano transferases (2.4.1.19)
2333/906	. . . acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)	2333/91142	. . . . Pentosyltransferases (2.4.2)
2333/90605	. . . . acting on the CH-NH ₂ group of donors (1.4)	2333/91148	. . . . transferring other glycosyl groups (2.4.99)
2333/90611	. . . . . with NAD or NADP as acceptor (1.4.1) in general	2333/91154	. . . . transferring alkyl or aryl groups other than methyl groups (2.5)
2333/90616	. . . . . with a definite EC number (1.4.1.-)	2333/9116	. . . transferring alkyl or aryl groups other than methyl groups (2.5)
2333/90622	. . . . . Phenylalanine dehydrogenase (1.4.1.20)	2333/91165	. . . . general (2.5.1)
2333/90627	. . . . . with a cytochrome as acceptor (1.4.2)	2333/91171	. . . . . with definite EC number (2.5.1.-)
2333/90633	. . . . . with oxygen as acceptor (1.4.3) in general	2333/91177	. . . . . Glutathione transferases (2.5.1.18)
2333/90638	. . . . . with a definite EC number (1.4.3.-)	2333/91182	. . . . . Enolpyruvylshikimate-phosphate synthases (2.5.1.19)
2333/90644	. . . . . D-Amino acid oxidase (1.4.3.3)	2333/91188	. . . transferring nitrogenous groups (2.6)
		2333/91194	. . . transferring sulfur containing groups (2.8)
		2333/912	. . . transferring phosphorus containing groups, e.g. kinases (2.7)
		2333/91205	. . . . Phosphotransferases in general
		2333/9121	. . . . . with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases

2333/91215	. . . . .	with a definite EC number (2.7.1.-)	2333/956	. . . . .	Bacillus subtilis or Bacillus licheniformis
2333/9122	. . . . .	Thymidine kinase (2.7.1.21)	2333/958	. . . . .	derived from fungi
2333/91225	. . . . .	with a carboxyl group as acceptor (2.7.2)	2333/96	. . . . .	from yeast
2333/9123	. . . . .	with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases	2333/962	. . . . .	from Aspergillus
2333/91235	. . . . .	with a phosphate group as acceptor (2.7.4)	2333/964	. . . . .	derived from animal tissue
2333/9124	. . . . .	Diphosphotransferases (2.7.6)	2333/96402	. . . . .	from non-mammals
2333/91245	. . . . .	Nucleotidyltransferases (2.7.7)	2333/96405	. . . . .	in general
2333/9125	. . . . .	with a definite EC number (2.7.7.-)	2333/96408	. . . . .	with EC number
2333/91255	. . . . .	DNA-directed RNA polymerase (2.7.7.6)	2333/96411	. . . . .	Serine endopeptidases (3.4.21)
2333/9126	. . . . .	DNA-directed DNA polymerase (2.7.7.7)	2333/96413	. . . . .	Cysteine endopeptidases (3.4.22)
2333/91265	. . . . .	Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)	2333/96416	. . . . .	Aspartic endopeptidases (3.4.23)
2333/9127	. . . . .	DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)	2333/96419	. . . . .	Metalloendopeptidases (3.4.24)
2333/91275	. . . . .	RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)	2333/96422	. . . . .	from snakes
2333/9128	. . . . .	RNA-directed DNA polymerases, e.g. RT (2.7.7.49)	2333/96425	. . . . .	from mammals
2333/91285	. . . . .	RNA uridyltransferases (2.7.7.52)	2333/96427	. . . . .	in general
2333/9129	. . . . .	Transferases for other substituted phosphate groups (2.7.8)	2333/9643	. . . . .	with EC number
2333/91295	. . . . .	with paired acceptors (2.7.9)	2333/96433	. . . . .	Serine endopeptidases (3.4.21)
2333/914	. .	Hydrolases (3)	2333/96436	. . . . .	Granzymes
2333/916	. . .	acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)	2333/96438	. . . . .	Dibasic site splicing serine proteases, e.g. furin
2333/918	. . . .	Carboxylic ester hydrolases (3.1.1)	2333/96441	. . . . .	with definite EC number
2333/92	. . . .	Triglyceride splitting, e.g. by means of lipase	2333/96444	. . . . .	Factor X (3.4.21.6)
2333/922	. . . .	Ribonucleases (RNAses); Deoxyribonucleases (DNAses)	2333/96447	. . . . .	Factor VII (3.4.21.21)
2333/924	. . . .	acting on glycosyl compounds (3.2)	2333/9645	. . . . .	Factor IX (3.4.21.22)
2333/926	. . . .	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/96452	. . . . .	Factor XI (3.4.21.27)
2333/928	. . . .	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase	2333/96455	. . . . .	Kallikrein (3.4.21.34; 3.4.21.35)
2333/93	. . . . .	Fungal source	2333/96458	. . . . .	Factor XII (3.4.21.38)
2333/932	. . . . .	alpha-amylase from plant source	2333/96461	. . . . .	Protein C (3.4.21.69)
2333/934	. . . . .	Glucoamylase	2333/96463	. . . . .	Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups
2333/936	. . . .	acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme	2333/96466	. . . . .	Cysteine endopeptidases (3.4.22)
2333/938	. . . .	acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase	2333/96469	. . . . .	Interleukin 1-beta convertase-like enzymes
2333/94	. . . .	acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase	2333/96472	. . . . .	Aspartic endopeptidases (3.4.23)
2333/942	. . . .	acting on beta-1, 4-glucosidic bonds, e.g. cellulase	2333/96475	. . . . .	with definite EC number
2333/944	. . . .	acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase	2333/96477	. . . . .	Pepsin (3.4.23.1; 3.4.23.2; 3.4.23.3)
2333/946	. . . . .	Dextranase	2333/9648	. . . . .	Chymosin, i.e. rennin (3.4.23.4)
2333/948	. . . .	acting on peptide bonds (3.4)	2333/96483	. . . . .	Renin (3.4.23.15)
2333/95	. . . .	Proteinases, i.e. endopeptidases (3.4.21-3.4.99)	2333/96486	. . . . .	Metalloendopeptidases (3.4.24)
2333/9506	. . . . .	derived from viruses	2333/96488	. . . . .	Phosphoramidon sensitive endothelin converting enzymes
2333/9513	. . . . .	derived from RNA viruses	2333/96491	. . . . .	with definite EC number
2333/952	. . . . .	derived from bacteria	2333/96494	. . . . .	Matrix metalloproteases, e.g. 3.4.24.7
2333/954	. . . . .	bacteria being Bacillus	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**
- 2610/00 Assays involving self-assembled monolayers [SAMs]**
- 2650/00 Assays involving polymers whose constituent monomers bore biological functional groups before polymerization, i.e. vinyl, acryl derivatives of amino acids, sugars**
- 2800/00 Detection or diagnosis of diseases**
- NOTES**
1. The indexing codes [G01N 2800/02](#) - [G01N 2800/44](#) are based on The Merck Manual of Diagnosis and Therapy (17th. Edition, Mark Beers and Robert Berkow).
 2. For diseases caused by microorganism where the microorganism is detected, which subject matter is classified in [G01N 33/569](#) and subgroups, [G01N 33/571](#) or [G01N 33/576](#), the present indexing scheme is not used.
 3. For cancers, which subject matter is classified in [G01N 33/574](#) and subgroups, the present indexing scheme is not used.
 4. When indexing in the following scheme, the organ takes precedence, e.g. inflammation of the skin is indexed with dermatological disorders and not with immunology or allergic disorders, asthma with pulmonary disorders and not with

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(continued)

immunology or allergic disorders. Exception is made for thrombosis which is indexed with haematological disorders.

- 2800/02 . Nutritional disorders
- 2800/04 . Endocrine or metabolic disorders
- 2800/042 . . Disorders of carbohydrate metabolism, e.g. diabetes, glucose metabolism
- 2800/044 . . Hyperlipemia or hypolipemia, e.g. dyslipidaemia, obesity
- 2800/046 . . Thyroid disorders
- 2800/048 . . Pituitary or hypothalamic - pituitary relationships, e.g. vasopressin or ADH related
- 2800/06 . Gastro-intestinal diseases
- 2800/062 . . Gastritis or peptic ulcer disease
- 2800/065 . . Bowel diseases, e.g. Crohn, ulcerative colitis, IBS
- 2800/067 . . Pancreatitis or colitis
- 2800/08 . Hepato-biliary disorders other than hepatitis
- 2800/085 . . Liver diseases, e.g. portal hypertension, fibrosis, cirrhosis, bilirubin
- 2800/10 . Musculoskeletal or connective tissue disorders
- 2800/101 . . Diffuse connective tissue disease, e.g. Sjögren, Wegener's granulomatosis
- 2800/102 . . . Arthritis; Rheumatoid arthritis, i.e. inflammation of peripheral joints
- 2800/104 . . . Lupus erythematosus [SLE]
- 2800/105 . . Osteoarthritis, e.g. cartilage alteration, hypertrophy of bone
- 2800/107 . . Crystal induced conditions; Gout
- 2800/108 . . Osteoporosis
- 2800/12 . Pulmonary diseases
- 2800/122 . . Chronic or obstructive airway disorders, e.g. asthma COPD
- 2800/125 . . Adult respiratory distress syndrome
- 2800/127 . . Bronchitis
- 2800/14 . Disorders of ear, nose or throat
- 2800/16 . Ophthalmology
- 2800/162 . . Conjunctival disorders, e.g. conjunctivitis
- 2800/164 . . Retinal disorders, e.g. retinopathy
- 2800/166 . . Cataract
- 2800/168 . . Glaucoma
- 2800/18 . Dental and oral disorders
- 2800/20 . Dermatological disorders
- 2800/202 . . Dermatitis
- 2800/205 . . Scaling palmar diseases, e.g. psoriasis, pityriasis
- 2800/207 . . Pigmentation disorders
- 2800/22 . Haematology
- 2800/222 . . Platelet disorders
- 2800/224 . . Haemostasis or coagulation
- 2800/226 . . Thrombotic disorders, i.e. thrombo-embolism irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis
- 2800/228 . . Disorders of the spleen, e.g. splenic rupture, splenomegaly
- 2800/24 . Immunology or allergic disorders ([SLE G01N 2800/104](#))
- 2800/245 . . Transplantation related diseases, e.g. graft versus host disease
- 2800/26 . Infectious diseases, e.g. generalised sepsis

NOTE

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

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

- 2800/28 . Neurological disorders
- 2800/2807 . . Headache; Migraine
- 2800/2814 . . Dementia; Cognitive disorders
- 2800/2821 . . . Alzheimer
- 2800/2828 . . . Prion diseases
- 2800/2835 . . Movement disorders, e.g. Parkinson, Huntington, Tourette
- 2800/2842 . . Pain, e.g. neuropathic pain, psychogenic pain
- 2800/285 . . Demyelinating diseases; Multiple sclerosis
- 2800/2857 . . Seizure disorders; Epilepsy
- 2800/2864 . . Sleep disorders
- 2800/2871 . . Cerebrovascular disorders, e.g. stroke, cerebral infarct, cerebral haemorrhage, transient ischemic event
- 2800/2878 . . Muscular dystrophy
- 2800/2885 . . . Duchenne dystrophy
- 2800/2892 . . . Myotonic dystrophy
- 2800/30 . Psychoses; Psychiatry
- 2800/301 . . Anxiety or phobic disorders
- 2800/302 . . Schizophrenia
- 2800/303 . . Eating disorders, e.g. anorexia, bulimia
- 2800/304 . . Mood disorders, e.g. bipolar, depression
- 2800/305 . . Attention deficit disorder; Hyperactivity
- 2800/306 . . Chronic fatigue syndrome
- 2800/307 . . Drug dependency, e.g. alcoholism
- 2800/308 . . Psychosexual disorders, e.g. sexual arousal disorder
- 2800/32 . Cardiovascular disorders
- 2800/321 . . Arterial hypertension
- 2800/322 . . Orthostatic hypertension or syncope
- 2800/323 . . Arteriosclerosis, Stenosis
- 2800/324 . . Coronary artery diseases, e.g. angina pectoris, myocardial infarction
- 2800/325 . . Heart failure or cardiac arrest, e.g. cardiomyopathy, congestive heart failure
- 2800/326 . . Arrhythmias, e.g. ventricular fibrillation, tachycardia, atrioventricular block, torsade de pointes
- 2800/327 . . Endocarditis
- 2800/328 . . Vasculitis, i.e. inflammation of blood vessels
- 2800/329 . . Diseases of the aorta or its branches, e.g. aneurysms, aortic dissection
- 2800/34 . Genitourinary disorders
- 2800/341 . . Urinary incontinence
- 2800/342 . . Prostate diseases, e.g. BPH, prostatitis
- 2800/344 . . Disorders of the penis and the scrotum and erectile dysfunction
- 2800/345 . . Urinary calculi
- 2800/347 . . Renal failures; Glomerular diseases; Tubulointerstitial diseases, e.g. nephritic syndrome, glomerulonephritis; Renovascular diseases, e.g. renal artery occlusion, nephropathy
- 2800/348 . . Urinary tract infections
- 2800/36 . Gynecology or obstetrics
- 2800/361 . . Menstrual abnormalities or abnormal uterine bleeding, e.g. dysmenorrhea
- 2800/362 . . Menopause
- 2800/364 . . Endometriosis, i.e. non-malignant disorder in which functioning endometrial tissue is present outside the uterine cavity

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- 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