

# 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.

|             |  |           |  |
|-------------|--|-----------|--|
| <b>1/00</b> | <b>Sampling; Preparing specimens for investigation</b>   | 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 <a href="#">E02D 1/04</a> ; collecting or conveying radioactive samples <a href="#">G01T 7/00</a> , e.g. <a href="#">G01T 7/02</a> , <a href="#">G01T 7/08</a> )}                        | 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 <a href="#">B01L 3/02</a> ; sampling of ground water <a href="#">E02D 1/06</a> ; metering by volume of fluids or fluent solid material <a href="#">G01F 11/00</a> , <a href="#">G01F 13/00</a> )} | 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<br>( <a href="#">G01N 1/2035</a> ) <a href="#">G01N 1/12</a> , <a href="#">G01N 1/14</a> take precedence)   | 2001/2285 | . . . {Details of probe structures}   |
| 1/18      | . . . with provision for splitting samples into portions ( <a href="#">G01N 1/12</a> , <a href="#">G01N 1/14</a> take precedence; fraction-collection apparatus for chromatography <a href="#">B01D 15/08</a> ) | 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<br>( <a href="#">G01N 1/2035</a> ) <a href="#">G01N 1/12</a> , <a href="#">G01N 1/14</a> 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 ( <a href="#">G01N 1/22</a> - <a href="#">G01N 1/2294</a> 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. <a href="#">G01N 33/50</a> , <a href="#">C12Q</a> } ( <a href="#">mounting specimens on microscopic slides G02B 21/34</a> ; means for supporting the objects or the materials to be analysed in electron microscopes <a href="#">H01J 37/20</a> (; laboratory gas handling apparatus <a href="#">B01L 5/00</a> )} |
| 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 ( <a href="#">G01N 1/30</a> takes precedence)}   |
| 2001/2092 | . . . . {Cross-cut sampling}  | 2001/282  | . . . {with mapping; Identification of areas; Spatial correlated pattern}   |
| 1/22      | . . in the gaseous state ( <a href="#">(specially adapted for biological material G01N 33/497; measuring breath flow A61B 5/087)</a> )  | 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 ( <a href="#">microtomes G01N 1/06</a> ; <a href="#">pulverising in general B02C</a> ; <a href="#">mixing in general B01F</a> )}  |
| 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 ( <a href="#">(processes or apparatus for extracting or separating nucleic acids from biological samples C12N 15/1003)</a> )  |
| 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 ( <a href="#">G01N 3/18 takes precedence</a> )  |
| 2001/368    | . . . {Mounting multiple samples in one block, e.g. TMA [Tissue Microarrays]}  | 3/16  | . . applied through gearing ( <a href="#">G01N 3/18 takes precedence</a> )  |
| 1/38        | . . Diluting, dispersing or mixing samples   | 3/165 | . . . {generated by rotation, i.e. centrifugal force (for testing structures or apparatus <a href="#">G01M 99/004</a> )}  |
| 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 ( <a href="#">G01N 3/26</a> , <a href="#">G01N 3/28 take precedence</a> )   |
| 2001/383    | . . . {collecting and diluting in a flow of liquid}  | 3/22  | . by applying steady torsional forces ( <a href="#">G01N 3/26</a> , <a href="#">G01N 3/28 take precedence</a> )   |
| 2001/385    | . . . {diluting by adsorbing a fraction of the sample}   | 3/24  | . by applying steady shearing forces ( <a href="#">G01N 3/26</a> , <a href="#">G01N 3/28 take precedence</a> )  |
| 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 ( <a href="#">G01N 3/54 takes precedence</a> )                                   |
| 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 ( <a href="#">G01N 3/54 takes precedence</a> )                                     |
| 2001/4083   | . . . . {sedimentation}  | 3/50  | . . by measuring rolling friction, e.g. by rocking pendulum ( <a href="#">G01N 3/54 takes precedence</a> )  |
| 2001/4088   | . . . . {filtration}   | 3/52  | . . by measuring extent of rebound of a striking body ( <a href="#">G01N 3/54 takes precedence</a> )  |
| 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}   |
| <b>3/00</b> | <b>Investigating strength properties of solid materials by application of mechanical stress</b>                            | 3/565 | . . {of granular or particulate material}   |
|             | <b>NOTE</b>  | 3/567 | . . {by submitting the specimen to the action of a fluid or of a fluidised material, e.g. cavitation, jet abrasion ( <a href="#">G01N 3/565 takes precedence</a> )}   |
|             | 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 <a href="#">G01M 99/002</a> )} |
| 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 ( <a href="#">G01N 3/28 takes precedence</a> )                          |       |   |
| 3/10        | . . generated by pneumatic or hydraulic pressure ( <a href="#">G01N 3/18 takes precedence</a> )                            |       |   |

|             |   |              |   |
|-------------|---|--------------|---|
| 3/62        | <ul style="list-style-type: none"> <li>Manufacturing, calibrating, or repairing devices used in investigations covered by the preceding subgroups</li> </ul>  | 9/12         | <ul style="list-style-type: none"> <li>by observing the depth of immersion of the bodies, e.g. hydrometers</li> </ul>   |
| <b>5/00</b> | <b>Analysing materials by weighing, e.g. weighing small particles separated from a gas or liquid</b> ( <a href="#">G01N 9/00</a> takes precedence <a href="#">; weighing per se G01G</a> )  | 9/14         | <ul style="list-style-type: none"> <li>the body being built into a container</li> </ul>   |
| 5/02        | <ul style="list-style-type: none"> <li>by absorbing or adsorbing components of a material and determining change of weight of the adsorbent, e.g. determining moisture content <a href="#">{(absorption bulbs B01D 53/00)}</a></li> </ul> | 9/16         | <ul style="list-style-type: none"> <li>the body being pivoted</li> </ul>  |
| 5/025       | <ul style="list-style-type: none"> <li><a href="#">{for determining moisture content}</a></li> </ul>  | 9/18         | <ul style="list-style-type: none"> <li>Special adaptations for indicating, recording, or control</li> </ul>   |
| 5/04        | <ul style="list-style-type: none"> <li>by removing a component, e.g. by evaporation, and weighing the remainder</li> </ul>  | 9/20         | <ul style="list-style-type: none"> <li>by balancing the weight of the bodies</li> </ul>   |
| 5/045       | <ul style="list-style-type: none"> <li><a href="#">{for determining moisture content}</a></li> </ul>  | 9/22         | <ul style="list-style-type: none"> <li>with continuous circulation of the fluid</li> </ul>  |
| <b>7/00</b> | <b>Analysing materials by measuring the pressure or volume of a gas or vapour</b>   | 9/24         | <ul style="list-style-type: none"> <li>by observing the transmission of wave or particle radiation through the material</li> </ul>  |
| 7/02        | <ul style="list-style-type: none"> <li>by absorption, adsorption, or combustion of components and measurement of the change in pressure or volume of the remainder <a href="#">{(absorption bulbs B01D 53/00)}</a></li> </ul>             | 9/26         | <ul style="list-style-type: none"> <li>by measuring pressure differences</li> </ul>   |
| 7/04        | <ul style="list-style-type: none"> <li>by absorption or adsorption alone</li> </ul>   | 2009/263     | <ul style="list-style-type: none"> <li><a href="#">{using vertically-movable pressure transducer}</a></li> </ul>  |
| 7/06        | <ul style="list-style-type: none"> <li>by combustion alone</li> </ul>   | 9/266        | <ul style="list-style-type: none"> <li><a href="#">{for determining gas density}</a></li> </ul>   |
| 7/08        | <ul style="list-style-type: none"> <li>by combustion followed by absorption or adsorption of the combustion products</li> </ul>   | 9/28         | <ul style="list-style-type: none"> <li>by measuring the blowing pressure of gas bubbles escaping from nozzles at different depths in a liquid</li> </ul>  |
| 7/10        | <ul style="list-style-type: none"> <li>by allowing diffusion of components through a porous wall and measuring a pressure or volume difference</li> </ul>   | 9/30         | <ul style="list-style-type: none"> <li>by using centrifugal effects</li> </ul>  |
| 7/12        | <ul style="list-style-type: none"> <li>the diffusion being followed by combustion or catalytic oxidation</li> </ul>   | 9/32         | <ul style="list-style-type: none"> <li>by using flow properties of fluids, e.g. flow through tubes or apertures</li> </ul>  |
| 7/14        | <ul style="list-style-type: none"> <li>by allowing the material to emit a gas or vapour, e.g. water vapour, and measuring a pressure or volume difference <a href="#">{(determining urea G01N 33/48742)}</a></li> </ul>                   | 9/34         | <ul style="list-style-type: none"> <li>by using elements moving through the fluid, e.g. vane</li> </ul>   |
| 7/16        | <ul style="list-style-type: none"> <li>by heating the material</li> </ul>   | 9/36         | <ul style="list-style-type: none"> <li>Analysing materials by measuring the density or specific gravity, e.g. determining quantity of moisture <a href="#">(methods of measurement in general G01N 9/02 - G01N 9/32)</a></li> </ul> |
| 7/18        | <ul style="list-style-type: none"> <li>by allowing the material to react</li> </ul>   | <b>11/00</b> | <b>Investigating flow properties of materials, e.g. viscosity, plasticity; Analysing materials by determining flow properties</b>   |
| 7/20        | <ul style="list-style-type: none"> <li>the reaction being fermentation</li> </ul>   | 2011/0006    | <ul style="list-style-type: none"> <li><a href="#">{Calibrating, controlling or cleaning viscometers}</a></li> </ul>  |
| 7/22        | <ul style="list-style-type: none"> <li>of dough</li> </ul>  | 2011/0013    | <ul style="list-style-type: none"> <li><a href="#">{Temperature compensation}</a></li> </ul>  |
| <b>9/00</b> | <b>Investigating density or specific gravity of materials; Analysing materials by determining density or specific gravity</b>   | 2011/002     | <ul style="list-style-type: none"> <li><a href="#">{Controlling sample temperature; Thermal cycling during measurement}</a></li> </ul>  |
| 9/002       | <ul style="list-style-type: none"> <li><a href="#">{using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis (G01N 9/34 takes precedence)}</a></li> </ul>                     | 2011/0026    | <ul style="list-style-type: none"> <li><a href="#">{Investigating specific flow properties of non-Newtonian fluids}</a></li> </ul>  |
| 2009/004    | <ul style="list-style-type: none"> <li><a href="#">{comparing frequencies of two elements}</a></li> </ul>   | 2011/0033    | <ul style="list-style-type: none"> <li><a href="#">{Yield stress; Residual stress at zero shear rate}</a></li> </ul>  |
| 2009/006    | <ul style="list-style-type: none"> <li><a href="#">{vibrating tube, tuning fork}</a></li> </ul>   | 2011/004     | <ul style="list-style-type: none"> <li><a href="#">{Stress relaxation time}</a></li> </ul>  |
| 2009/008    | <ul style="list-style-type: none"> <li><a href="#">{Schlatter vibrating vane type}</a></li> </ul>   | 2011/0046    | <ul style="list-style-type: none"> <li><a href="#">{In situ measurement during mixing process}</a></li> </ul>   |
| 9/02        | <ul style="list-style-type: none"> <li>by measuring weight of a known volume</li> </ul>   | 2011/0053    | <ul style="list-style-type: none"> <li><a href="#">{using ergometry; measuring power consumption}</a></li> </ul>  |
| 2009/022    | <ul style="list-style-type: none"> <li><a href="#">{of solids}</a></li> </ul>   | 2011/006     | <ul style="list-style-type: none"> <li><a href="#">{Determining flow properties indirectly by measuring other parameters of the system}</a></li> </ul>  |
| 2009/024    | <ul style="list-style-type: none"> <li><a href="#">{the volume being determined directly, e.g. by size of container}</a></li> </ul>   | 2011/0066    | <ul style="list-style-type: none"> <li><a href="#">{electrical properties}</a></li> </ul>   |
| 2009/026    | <ul style="list-style-type: none"> <li><a href="#">{the volume being determined by amount of fluid displaced}</a></li> </ul>  | 2011/0073    | <ul style="list-style-type: none"> <li><a href="#">{acoustic properties}</a></li> </ul>   |
| 2009/028    | <ul style="list-style-type: none"> <li><a href="#">{a gas being used as displacement fluid}</a></li> </ul>  | 2011/008     | <ul style="list-style-type: none"> <li><a href="#">{optical properties}</a></li> </ul>  |
| 9/04        | <ul style="list-style-type: none"> <li>of fluids</li> </ul>   | 2011/0086    | <ul style="list-style-type: none"> <li><a href="#">{magnetic properties}</a></li> </ul>   |
| 9/06        | <ul style="list-style-type: none"> <li>with continuous circulation through a pivotally supported member</li> </ul>  | 2011/0093    | <ul style="list-style-type: none"> <li><a href="#">{thermal properties}</a></li> </ul>  |
| 9/08        | <ul style="list-style-type: none"> <li>by measuring buoyant force of solid materials by weighing both in air and in a liquid</li> </ul>   | 11/02        | <ul style="list-style-type: none"> <li>by measuring flow of the material</li> </ul>   |
| 9/10        | <ul style="list-style-type: none"> <li>by observing bodies wholly or partially immersed in fluid materials</li> </ul>   | 11/04        | <ul style="list-style-type: none"> <li>through a restricted passage, e.g. tube, aperture</li> </ul>   |
|             |   | 11/06        | <ul style="list-style-type: none"> <li>by timing the outflow of a known quantity</li> </ul>   |
|             |   | 11/08        | <ul style="list-style-type: none"> <li>by measuring pressure required to produce a known flow</li> </ul>  |
|             |   | 11/10        | <ul style="list-style-type: none"> <li>by moving a body within the material</li> </ul>  |
|             |   | 11/105       | <ul style="list-style-type: none"> <li><a href="#">{by detecting the balance position of a float moving in a duct conveying the fluid under test}</a></li> </ul>  |
|             |   | 11/12        | <ul style="list-style-type: none"> <li>by measuring rising or falling speed of the body; by measuring penetration of wedged gauges <a href="#">(G01N 11/16 takes precedence)</a></li> </ul>   |
|             |   | 11/14        | <ul style="list-style-type: none"> <li>by using rotary bodies, e.g. vane <a href="#">(G01N 11/16 takes precedence)</a></li> </ul>   |
|             |   | 11/142       | <ul style="list-style-type: none"> <li><a href="#">{Sample held between two members substantially perpendicular to axis of rotation, e.g. parallel plate viscometer}</a></li> </ul>   |
|             |   | 2011/145     | <ul style="list-style-type: none"> <li><a href="#">{both members rotating}</a></li> </ul>   |

- 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. onconductivity or capacity ([using nanoscale size effects, other than for sizing or counting, by translocation through nanopores G01N 33/48721; involving the use of Coulter counters G01N 15/12](#))}
- 2015/1037 . . {Associating coulter-counter and optical flow cytometer [OFC]}
- 2015/1043 . . {Measuring mass of individual particles}
- 2015/105 . . {Other than optical measurement of deformation of individual particles ([optical measurement G01N 2015/1495](#))}
- 15/1056 . . {Microstructural devices for other than electro-optical measurement ([for electro-optical measurement G01N 15/1484](#))}
- 2015/1062 . . {counting the particles by other than electro-optical means ([by electro-optical means G01N 2015/1486](#))}
- 2015/1068 . . {Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers}
- 2015/1075 . . {Determining speed or velocity of a particle}
- 2015/1081 . . {Sorting the particles}
- 2015/1087 . . {Particle size}
- 2015/1093 . . {Particle shape}
- 15/12 . . Coulter-counters
- 15/1209 . . . {Details}
- 15/1218 . . . . {concerning the aperture}
- 15/1227 . . . . {Circuits}
- 2015/1236 . . . . {Flow forming}
- 15/1245 . . . {Devices using more than one aperture}
- 2015/1254 . . . {Electrodes}
- 2015/1263 . . . . {Scanning electrodes}
- 2015/1272 . . . {Cleaning}
- 2015/1281 . . . {Detecting blocking debris}
- 2015/129 . . . {measuring the ratio of AC/DC impedances}
- 15/14 . . Electro-optical investigation, e.g. flow cytometers
- 2015/1402 . . . {Data analysis by thresholding or gating operations performed on the acquired signals or stored data}
- 15/1404 . . . {Fluid conditioning in flow cytometers, e.g. flow cells; Supply; Control of flow}
- 2015/1406 . . . . {Control of droplet point}
- 2015/1409 . . . . {Control of supply of sheaths fluid, e.g. sample injection control}
- 2015/1411 . . . . . {Features of 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 [G06K 9/46](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#)
- image enhancement in general [G06T 5/00](#)
- image analysis in general [G06T 7/00](#)

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

**NOTE**

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

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#)
- image enhancement [G06T 5/00](#)
- image analysis [G06T 7/00](#)

- 15/147 . . . . . {the analysis being performed on a sample stream}
- 2015/1472 . . . . {with colour}
- 15/1475 . . . . {using image analysis for extracting features of the particle}
- 2015/1477 . . . {Multiparameters}
- 2015/1479 . . . . {Using diffuse illumination or excitation}
- 2015/1481 . . . {Optical analysis of particle in droplet}
- 15/1484 . . . {microstructural devices}
- 2015/1486 . . . {Counting the particles}
- 2015/1488 . . . {Methods for deciding}
- 2015/149 . . . {Sorting the particles}
- 2015/1493 . . . {Particle size}
- 2015/1495 . . . . {Deformation of particles}
- 2015/1497 . . . {Particle shape}

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

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

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

- 19/02 . Measuring coefficient of friction between materials  
{(testing of tyres [G01M 17/02](#); determinations of friction coefficient used in vehicle braking or traction control systems [B60T 8/172](#))}
- 19/04 . Measuring adhesive force between materials, e.g. of sealing tape, of coating
- 19/06 . Investigating by removing material, e.g. spark-testing
- 19/08 . Detecting presence of flaws or irregularities
- 19/10 . Measuring moisture content, e.g. by measuring change in length of hygroscopic filament; Hygrometers

**21/00 Investigating or analysing materials by the use of optical means, i.e. using sub-millimetre waves, infrared, visible or ultraviolet light**  
([G01N 3/00](#) - [G01N 19/00](#) take precedence)**NOTE**

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

- 21/01 . Arrangements or apparatus for facilitating the optical investigation
- 2021/0106 . . {General arrangement of respective parts}
- 2021/0112 . . . {Apparatus in one mechanical, optical or electronic block}
- 2021/0118 . . . {Apparatus with remote processing}
- 2021/0125 . . . . {with stored program or instructions}
- 2021/0131 . . . . . {being externally stored}
- 2021/0137 . . . . {with PC or the like}
- 2021/0143 . . . . {with internal and external computer}
- 2021/015 . . . {Apparatus with interchangeable optical heads or interchangeable block of optics and detector}
- 2021/0156 . . . . {with optics only in separate head, e.g. connection by optical fibres}
- 2021/0162 . . {using microprocessors for control of a sequence of operations, e.g. test, powering, switching, processing}
- 2021/0168 . . . {for the measurement cycle}
- 2021/0175 . . . {for selecting operating means}
- 2021/0181 . . {Memory or computer-assisted visual determination}

|           |           |  |           |         |  |
|-----------|-----------|--|-----------|---------|--|
| 2021/0187 | . . .     | {Mechanical sequence of operations}  | 2021/152  | . . .   | {Scraping; Brushing; Moving band}  |
| 2021/0193 | . . .     | {the sample being taken from a stream or flow to the measurement cell}   | 2021/154  | . . .   | {Ultrasonic cleaning}  |
| 21/03     | . .       | Cuvette constructions  | 2021/155  | . . .   | {Monitoring cleanness of window, lens, or other parts}   |
| 21/0303   | . . .     | {Optical path conditioning in cuvettes, e.g. windows; adapted optical elements or systems; path modifying or adjustment ( <a href="#">G01N 21/031</a> - <a href="#">G01N 21/15</a> take precedence)} | 2021/157  | . . . . | {Monitoring by optical means}  |
| 2021/0307 | . . . .   | {Insert part in cell}  | 2021/158  | . . .   | {Eliminating condensation}   |
| 21/031    | . . .     | {Multipass arrangements}   | 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 <a href="#">G01N 21/63</a> ) |
| 2021/0314 | . . . .   | {Double pass, autocollimated path}   | 21/1702   | . .     | {with opto-acoustic detection, e.g. for gases or analysing solids}   |
| 21/0317   | . . .     | {High pressure cuvettes; ( <a href="#">G01N 21/0332</a> - <a href="#">G01N 21/15</a> take precedence)}   | 2021/1704 | . . .   | {in gases}   |
| 2021/0321 | . . .     | {One time use cells, e.g. integrally moulded}  | 2021/1706 | . . .   | {in solids}  |
| 2021/0325 | . . .     | {Cells for testing reactions, e.g. containing reagents}  | 2021/1708 | . . .   | {with piezotransducers (probes for investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves <a href="#">G01N 29/24</a> )}  |
| 2021/0328 | . . . .   | {Arrangement of two or more cells having different functions for the measurement of reactions}   | 21/171    | . .     | {with calorimetric detection, e.g. with thermal lens detection}  |
| 21/0332   | . . .     | {with temperature control ( <a href="#">control of temperature G05D 23/00</a> ; cryostats <a href="#">F17C 3/08</a> )}   | 2021/1712 | . . .   | {Thermal lens, mirage effect}  |
| 2021/0335 | . . . .   | {Refrigeration of cells; Cold stages}  | 2021/1714 | . . .   | {Photothermal radiometry with measurement of emission}   |
| 2021/0339 | . . .     | {Holders for solids, powders}  | 21/1717   | . .     | {with a modulation of one or more physical properties of the sample during the optical investigation, e.g. electro-reflectance}  |
| 2021/0342 | . . .     | {Solid sample being immersed, e.g. equiindex fluid}  | 2021/1719 | . . .   | {Carrier modulation in semiconductors}   |
| 2021/0346 | . . .     | {Capillary cells; Microcells}  | 2021/1721 | . . .   | {Electromodulation}  |
| 2021/035  | . . . .   | {Supports for sample drops}  | 2021/1723 | . . .   | {Fluid modulation}   |
| 2021/0353 | . . . . . | {Conveyor of successive sample drops}  | 2021/1725 | . . .   | {Modulation of properties by light, e.g. photorefectance}  |
| 2021/0357 | . . .     | {Sets of cuvettes}   | 2021/1727 | . . .   | {Magnetomodulation}  |
| 2021/036  | . . .     | {transformable, modifiable}  | 2021/1729 | . . .   | {Piezomodulation}  |
| 2021/0364 | . . .     | {flexible, compressible}   | 2021/1731 | . . .   | {Temperature modulation}   |
| 2021/0367 | . . .     | {Supports of cells, e.g. pivotable}  | 2021/1734 | . .     | {Sequential different kinds of measurements; Combining two or more methods}  |
| 2021/0371 | . . . .   | {Supports combined with sample intake}   | 2021/1736 | . . .   | {with two or more light sources}   |
| 2021/0375 | . . . .   | {Slidable cells}   | 2021/1738 | . .     | {Optionally different kinds of measurements; Method being valid for different kinds of measurement}  |
| 2021/0378 | . . .     | {Shapes}   | 2021/174  | . . .   | {either absorption-reflection or emission-fluorescence}  |
| 2021/0382 | . . . .   | {Frustoconical, tapered cell}  | 2021/1742 | . . .   | {either absorption or reflection}  |
| 2021/0385 | . . .     | {Diffusing membrane; Semipermeable membrane}   | 2021/1744 | . . .   | {either absorption or scatter}   |
| 2021/0389 | . . .     | {Windows}  | 2021/1746 | . .     | {Method using tracers}   |
| 2021/0392 | . . . .   | {Nonplanar windows}  | 2021/1748 | . .     | {Comparative step being essential in the method}   |
| 2021/0396 | . . . .   | {Oblique incidence}  | 2021/1751 | . . .   | {Constructive features therefore, e.g. using two measurement cells}  |
| 21/05     | . . .     | Flow-through cuvettes ( <a href="#">G01N 21/09</a> takes precedence; handling fluid samples <a href="#">G01N 1/10</a> )  | 2021/1753 | . . . . | {and using two light sources}  |
| 2021/052  | . . . .   | {Tubular type; cavity type; multireflective}   | 2021/1755 | . . . . | {and using two apparatus or two probes}  |
| 2021/054  | . . . .   | {Bubble trap; Debubbling}  | 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 <a href="#">G01J 1/44</a> )}  |
| 2021/056  | . . . .   | {Laminated construction}   | 2021/1759 | . . .   | {Jittering, dithering, optical path modulation}  |
| 2021/058  | . . . .   | {Flat flow cell}   | 2021/1761 | . .     | {A physical transformation being implied in the method, e.g. a phase change}   |
| 21/07     | . . .     | Centrifugal type cuvettes ( <a href="#">G01N 21/09</a> takes precedence)   | 2021/1763 | . . .   | {Gas to liquid phase change}   |
| 21/09     | . . .     | adapted to resist hostile environments or corrosive or abrasive materials  | 2021/1765 | . .     | {Method using an image detector and processing of image signal}  |
| 21/11     | . .       | Filling or emptying of cuvettes  | 2021/1768 | . . .   | {using photographic film}  |
| 2021/115  | . . .     | {Washing; Purging}   | 2021/177  | . . .   | {Detector of the video camera type}  |
| 21/13     | . .       | Moving of cuvettes or solid samples to or from the investigating station {(handling materials for automatic analysis <a href="#">G01N 35/00</a> )}   |           |         |  |
| 2021/135  | . . .     | {Sample holder displaceable (in automatised apparatus <a href="#">G01N 35/02</a> )}  |           |         |  |
| 21/15     | . .       | Preventing contamination of the components of the optical system or obstruction of the light path  |           |         |  |
| 2021/151  | . . .     | {Gas blown}  |           |         |  |

|           |   |           |  |
|-----------|---|-----------|--|
| 2021/1772 | . . . . {Array detector}  | 21/31     | . . . Investigating relative effect of material at wavelengths characteristic of specific elements or molecules, e.g. atomic absorption spectrometry ( <a href="#">G01N 21/72 takes precedence</a> ) |
| 2021/1774 | . . . . {Line array detector}   | 21/3103   | . . . . {Atomic absorption analysis}   |
| 2021/1776 | . . . . {Colour camera}   | 2021/3107 | . . . . {Cold vapor, e.g. determination of Hg}   |
| 2021/1778 | . . . . {IIT [intensified image tube]}  | 2021/3111 | . . . . {using Zeeman split}   |
| 2021/178  | . . {Methods for obtaining spatial resolution of the property being measured}   | 2021/3114 | . . . . {Multi-element AAS arrangements}   |
| 2021/1782 | . . . {In-depth resolution}   | 2021/3118 | . . . . {Commutating sources, e.g. line source/ broad source, chopping for comparison of broad/narrow regimes}   |
| 2021/1785 | . . . {Three dimensional}   | 2021/3122 | . . . . {using a broad source with a monochromator}  |
| 2021/1787 | . . . . {Tomographic, i.e. computerised reconstruction from projective measurements}  | 2021/3125 | . . . . {Measuring the absorption by excited molecules}  |
| 2021/1789 | . . {Time resolved}   | 2021/3129 | . . . . {Determining multicomponents by multiwavelength light}   |
| 2021/1791 | . . . {stroboscopic; pulse gated; time range gated}   | 2021/3133 | . . . . {with selection of wavelengths before the sample}  |
| 2021/1793 | . . {Remote sensing}  | 2021/3137 | . . . . {with selection of wavelengths after the sample}   |
| 2021/1795 | . . . {Atmospheric mapping of gases}  | 21/314    | . . . . {with comparison of measurements at specific and non-specific wavelengths ( <a href="#">dual wavelength spectrometry G01J 3/427</a> )}   |
| 2021/1797 | . . . {in landscape, e.g. crops}  | 2021/3144 | . . . . {for oxymetry}   |
| 21/19     | . . Dichroism   | 2021/3148 | . . . . {using three or more wavelengths}  |
| 21/21     | . . Polarisation-affecting properties ( <a href="#">G01N 21/19 takes precedence</a> )   | 21/3151   | . . . . {using two sources of radiation of different wavelengths ( <a href="#">G01N 21/33 - G01N 21/39 take precedence</a> )}  |
| 21/211    | . . . {Ellipsometry ( <a href="#">optical thickness measurement G01B 11/06</a> )}   | 2021/3155 | . . . . {Measuring in two spectral ranges, e.g. UV and visible}  |
| 2021/212  | . . . . {Arrangement with total internal reflection}  | 2021/3159 | . . . . {Special features of multiplexing circuits}  |
| 2021/213  | . . . . {Spectrometric ellipsometry}  | 2021/3162 | . . . . {with offset adjustment between filters}   |
| 2021/214  | . . . . {Variance incidence arrangement}  | 2021/3166 | . . . . {using separate detectors and filters}   |
| 2021/215  | . . . . {Brewster incidence arrangement}  | 2021/317  | . . . . {Special constructive features}  |
| 2021/216  | . . . {using circular polarised light}  | 2021/3174 | . . . . {Filter wheel}   |
| 2021/217  | . . . {Measuring depolarisation or comparing polarised and depolarised parts of light}  | 2021/3177 | . . . . {Use of spatially separated filters in simultaneous way}   |
| 2021/218  | . . . {Measuring properties of electrooptical or magneto-optical media}   | 2021/3181 | . . . . {using LEDs}   |
| 21/23     | . . . Bi-refringence  | 2021/3185 | . . . . {typically monochromatic or band-limited}  |
| 21/25     | . . Colour; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands  | 2021/3188 | . . . . {band-limited}   |
| 21/251    | . . . {Colorimeters; Construction thereof}  | 2021/3192 | . . . . {Absorption edge variation is measured}  |
| 21/253    | . . . . {for batch operation, i.e. multisample apparatus ( <a href="#">analytical automats G01N 35/00</a> )}  | 2021/3196 | . . . . {Correlating located peaks in spectrum with reference data, e.g. fingerprint data}   |
| 21/255    | . . . {Details, e.g. use of specially adapted sources, lighting or optical systems}   | 21/33     | . . . . using ultra-violet light ( <a href="#">G01N 21/39 takes precedence</a> )   |
| 21/256    | . . . {Arrangements using two alternating lights and one detector}  | 2021/335  | . . . . {Vacuum UV}  |
| 2021/258  | . . . {Surface plasmon spectroscopy, e.g. micro- or nanoparticles in suspension}  | 21/35     | . . . . using infra-red light ( <a href="#">G01N 21/39 takes precedence</a> )  |
| 21/27     | . . . using photo-electric detection ( <a href="#">G01N 21/31 takes precedence</a> ); circuits for computing concentration ( <a href="#">logarithmic circuits G06G 7/24; photometric circuits in general G01J</a> ) | 21/3504   | . . . . for analysing gases, e.g. multi-gas analysis   |
| 21/272    | . . . . {for following a reaction, e.g. for determining photometrically a reaction rate (photometric kinetic analysis)}   | 2021/3509 | . . . . {Correlation method, e.g. one beam alternating in correlator/sample field}   |
| 21/274    | . . . . {Calibration, base line adjustment, drift correction}   | 2021/3513 | . . . . {Open path with an instrumental source}  |
| 21/276    | . . . . {with alternation of sample and standard in optical path}   | 21/3518   | . . . . Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques  |
| 21/278    | . . . . {Constitution of standards}   |           |  |
| 21/29     | . . . using visual detection ( <a href="#">G01N 21/31 takes precedence</a> )  |           |  |
| 21/293    | . . . . {with colour charts, graduated scales or turrets}   |           |  |
| 2021/296  | . . . . {Visually measuring scintillation effect}   |           |  |

**NOTE**

This group also covers devices without instrumental sources, e.g. radiometric-type devices using ambient infra-red light.

|           |           |   |           |           |  |
|-----------|-----------|---|-----------|-----------|--|
| 2021/3522 | . . . . . | {balancing by two filters on two detectors}   | 2021/4193 | . . . .   | {using a PSD}  |
| 2021/3527 | . . . . . | {and using one filter cell as attenuator}   | 21/43     | . . .     | by measuring critical angle  |
| 2021/3531 | . . . . . | {without instrumental source, i.e. radiometric}   | 21/431    | . . . .   | {Dip refractometers, e.g. using optical fibres}  |
| 2021/3536 | . . . . . | {using modulation of pressure or density}   | 2021/432  | . . . . . | {comprising optical fibres}  |
| 2021/354  | . . . . . | {Hygrometry of gases}   | 2021/433  | . . . . . | {with an unclad part on the fibre}   |
| 2021/3545 | . . . . . | {Disposition for compensating effect of interfering gases}  | 2021/434  | . . . .   | {Dipping block in contact with sample, e.g. prism}   |
| 2021/355  | . . . . . | {by using a third optical path, e.g. interference cuvette}  | 2021/435  | . . . . . | {Sensing drops on the contact surface}   |
| 21/3554   | . . . . . | for determining moisture content  | 2021/436  | . . . . . | {Sensing resonant reflection}  |
| 21/3559   | . . . . . | in sheets, e.g. in paper  | 2021/437  | . . . . . | {with investigation of angle}  |
| 21/3563   | . . . . . | for analysing solids; Preparation of samples therefor   | 2021/438  | . . . . . | {with investigation of wavelength}   |
| 2021/3568 | . . . . . | {applied to semiconductors, e.g. Silicon}   | 21/45     | . . .     | using interferometric methods; using Schlieren methods   |
| 2021/3572 | . . . . . | {Preparation of samples, e.g. salt matrices}  | 2021/451  | . . . . . | {for determining the optical absorption}   |
| 21/3577   | . . . . . | for analysing liquids, e.g. polluted water  | 21/453    | . . . .   | {Holographic interferometry (for dimensional measurements <a href="#">G01B 9/021 - G01B 9/029</a> )}   |
| 21/3581   | . . . . . | using far infra-red light; using Terahertz radiation  | 21/455    | . . . . . | {Schlieren methods, e.g. for gradient index determination; Shadowgraph}  |
| 21/3586   | . . . . . | by Terahertz time domain spectroscopy [THz-TDS]   | 2021/456  | . . . . . | {Moire deflectometry}  |
| 21/359    | . . . . . | using near infra-red light  | 2021/458  | . . . . . | {using interferential sensor, e.g. sensor fibre, possibly on optical waveguide}  |
| 2021/3595 | . . . . . | {using FTIR}  | 21/47     | . .       | Scattering, i.e. diffuse reflection ( <a href="#">G01N 21/25, G01N 21/41</a> take precedence <a href="#">G01N 21/55</a> takes precedence)  |
| 21/37     | . . . . . | using pneumatic detection ( <a href="#">opto-acoustic detection G01N 21/1702</a> )}                               | 2021/4702 | . . .     | {Global scatter; Total scatter, excluding reflections}   |
| 21/39     | . . . . . | using tunable lasers  | 2021/4704 | . . .     | {Angular selective}  |
| 2021/391  | . . . . . | {Intracavity sample}  | 2021/4707 | . . . . . | {Forward scatter; Low angle scatter}   |
| 2021/392  | . . . . . | {Measuring reradiation, e.g. fluorescence, backscatter}   | 2021/4709 | . . . . . | {Backscatter}  |
| 2021/393  | . . . . . | {and using a spectral variation of the interaction of the laser beam and the sample}                              | 2021/4711 | . . . . . | {Multiangle measurement}   |
| 2021/394  | . . . . . | {DIAL method}   | 2021/4714 | . . . . . | {Continuous plural angles}   |
| 2021/395  | . . . . . | {using a topographic target}  | 2021/4716 | . . . . . | {Using a ring of sensors, or a combination of diaphragm and sensors; Annular sensor}   |
| 2021/396  | . . . . . | {Type of laser source}  | 2021/4719 | . . . . . | {using a optical fibre array}  |
| 2021/397  | . . . . . | {Dye laser}   | 2021/4721 | . . . . . | {using a PSD}  |
| 2021/398  | . . . . . | {CO <sub>2</sub> laser}   | 2021/4723 | . . . . . | {Scanning scatter angles}  |
| 2021/399  | . . . . . | {Diode laser}   | 2021/4726 | . . . . . | {Detecting scatter at 90°}   |
| 21/41     | . .       | Refractivity; Phase-affecting properties, e.g. optical path length ( <a href="#">G01N 21/21</a> takes precedence) | 2021/4728 | . . . . . | {Optical definition of scattering volume}  |
| 2021/4106 | . . .     | {Atmospheric distortion; Turbulence}  | 2021/473  | . . .     | {Compensating for unwanted scatter, e.g. reliefs, marks}   |
| 2021/4113 | . . . . . | {Atmospheric dispersion}  | 2021/4733 | . . .     | {Discriminating different types of scatterers}   |
| 21/412    | . . .     | {Index profiling of optical fibres}   | 2021/4735 | . . .     | {Solid samples, e.g. paper, glass}   |
| 2021/4126 | . . .     | {Index of thin films}   | 21/4738   | . . .     | {Diffuse reflection (precedence is given to <a href="#">G01N 21/55</a> - <a href="#">G01N 21/57</a> if specular component is taken into consideration), e.g. also for testing fluids, fibrous materials} |
| 21/4133   | . . .     | {Refractometers, e.g. differential}   | 21/474    | . . . .   | {Details of optical heads therefor, e.g. using optical fibres}   |
| 2021/414  | . . . . . | {Correcting temperature effect in refractometers}   | 2021/4742 | . . . . . | {comprising optical fibres}  |
| 2021/4146 | . . . . . | {Differential cell arrangements}  | 2021/4745 | . . . . . | {Fused bundle, i.e. for backscatter}   |
| 2021/4153 | . . . . . | {Measuring the deflection of light in refractometers}   | 2021/4747 | . . . . . | {Concentric bundles}   |
| 2021/416  | . . .     | {Visualising flow by index measurement}   | 2021/475  | . . . . . | {Bifurcated bundle}  |
| 2021/4166 | . . .     | {Methods effecting a waveguide mode enhancement through the property being measured}                              | 2021/4752 | . . . . . | {Geometry}   |
| 2021/4173 | . . .     | {Phase distribution}  | 2021/4754 | . . . . . | {Diffuse illumination}   |
| 2021/418  | . . . . . | {Frequency/phase diagrams}  | 2021/4757 | . . . . . | {Geometry 0/45° or 45/0°}  |
| 2021/4186 | . . . . . | {Phase modulation imaging}  | 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}  |

|           |           |   |           |           |  |
|-----------|-----------|---|-----------|-----------|--|
| 2021/4769 | . . . . . | {Fluid samples, e.g. slurries, granulates; Compressible powdery of fibrous samples}   | 2021/5919 | . . . . . | {Determining total density of a zone}  |
| 2021/4771 | . . . . . | {Matte surfaces with reflecting particles}  | 2021/5923 | . . . . . | {Determining zones of density; quantitating spots}   |
| 2021/4773 | . . . . . | {Partly or totally translucent samples}   | 2021/5926 | . . . . . | {Isodensitometers}   |
| 2021/4776 | . . . . . | {Miscellaneous in diffuse reflection devices}   | 2021/593  | . . . . . | {Correcting from the background density}   |
| 2021/4778 | . . . . . | {Correcting variations in front distance}   | 2021/5934 | . . . . . | {Averaging on a zone}  |
| 2021/478  | . . . . . | {Correcting in testing analytical test strips}  | 2021/5938 | . . . . . | {Features of monitor, display}   |
| 2021/4783 | . . . . . | {Examining under varying incidence; Angularly adjustable head}  | 2021/5942 | . . . . . | {for dot area ratio in printing applications}  |
| 21/4785   | . . .     | {Standardising light scatter apparatus; Standards therefor}   | 2021/5946 | . . . . . | {for binary signal}  |
| 21/4788   | . . .     | {Diffraction (for sizing particles <a href="#">G01N 15/0205</a> )}  | 2021/5949 | . . . . . | {Correcting nonlinearity of signal, e.g. in measurement of photomedium}  |
| 2021/479  | . . . . . | {Speckle}   | 2021/5953 | . . . . . | {for detecting a spatial spectrum}   |
| 2021/4792 | . . .     | {Polarisation of scatter light}   | 2021/5957 | . . . . . | {using an image detector type detector, e.g. CCD}  |
| 21/4795   | . . .     | {spatially resolved investigating of object in scattering medium ( <a href="#">in vivo A61B</a> )}                                | 2021/5961 | . . . . . | {using arrays of sources and detectors}  |
| 2021/4797 | . . . . . | {time resolved, e.g. analysis of ballistic photons}   | 2021/5965 | . . . . . | {using selected detectors in an array}   |
| 21/49     | . . .     | within a body or fluid  | 2021/5969 | . . . . . | {Scanning of a tube, a cuvette, a volume of sample}  |
| 2021/495  | . . . . . | {the fluid being adsorbed, e.g. in porous medium}   | 2021/5973 | . . . . . | {where the cuvette or tube is moved}   |
| 21/51     | . . . . . | inside a container, e.g. in an ampoule ( <a href="#">G01N 21/53</a> takes precedence)   | 2021/5976 | . . . . . | {Image projected and scanning projected image}   |
| 2021/513  | . . . . . | {Cuvettes for scattering measurements}  | 2021/598  | . . . . . | {Features of mounting, adjusting}  |
| 2021/516  | . . . . . | {Multiple excitation of scattering medium, e.g. by retro-reflected or multiply reflected excitation rays}                         | 2021/5984 | . . . . . | {height adjustable}  |
| 21/53     | . . . . . | within a flowing fluid, e.g. smoke  | 2021/5988 | . . . . . | {Fluid mounting or the like, e.g. vortex}  |
| 21/532    | . . . . . | {with measurement of scattering and transmission}   | 2021/5992 | . . . . . | {Double pass}  |
| 21/534    | . . . . . | {by measuring transmission alone, i.e. determining opacity}   | 2021/5996 | . . . . . | {Positioning the head}   |
| 2021/536  | . . . . . | {Measurement device mounted at stack}   | 21/61     | . . .     | Non-dispersive gas analysers ( <a href="#">G01N 21/3504</a> takes precedence)  |
| 21/538    | . . . . . | {for determining atmospheric attenuation and visibility}  | 21/62     | . . .     | Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light                                |
| 21/55     | . .       | Specular reflectivity   | 2021/625  | . . .     | {Excitation by energised particles such as metastable molecules}   |
| 2021/551  | . . .     | {Retroreflectance}  | 21/63     | . .       | optically excited  |
| 21/552    | . . .     | Attenuated total reflection   | 21/631    | . . .     | {using photolysis and investigating photolysed fragments}  |
| 21/553    | . . . . . | {and using surface plasmons ( <a href="#">fluorescence excitation G01N 21/648</a> ; <a href="#">enhanced Raman G01N 21/658</a> )} | 2021/632  | . . . . . | {Predissociation, e.g. for fluorescence of transient excited radicals}   |
| 21/554    | . . . . . | {detecting the surface plasmon resonance of nanostructured metals, e.g. localised surface plasmon resonance}                      | 2021/633  | . . .     | {Photoinduced grating used for analysis}   |
| 2021/555  | . . .     | {Measuring total reflection power, i.e. scattering and specular}  | 2021/634  | . . .     | {Photochromic material analysis}   |
| 2021/556  | . . .     | {Measuring separately scattering and specular}  | 2021/635  | . . .     | {Photosynthetic material analysis, e.g. chlorophyll}   |
| 2021/557  | . . .     | {Detecting specular reflective parts on sample}   | 21/636    | . . .     | {using an arrangement of pump beam and probe beam; using the measurement of optical non-linear properties; ( <a href="#">non-linear optics per se G02F 1/35</a> )} |
| 2021/558  | . . .     | {Measuring reflectivity and transmission}   | 2021/637  | . . . . . | {Lasing effect used for analysis}  |
| 2021/559  | . . .     | {Determining variation of specular reflection within diffusively reflecting sample}   | 2021/638  | . . . . . | {Brillouin effect, e.g. stimulated Brillouin effect}   |
| 21/57     | . . .     | Measuring gloss   | 21/64     | . . .     | Fluorescence; Phosphorescence  |
| 2021/575  | . . . . . | {Photogoniometering}  | 21/6402   | . . . . . | {Atomic fluorescence; Laser induced fluorescence}  |
| 21/59     | . .       | Transmissivity ( <a href="#">G01N 21/25</a> takes precedence)   | 21/6404   | . . . . . | {Atomic fluorescence}  |
| 2021/5903 | . . .     | {using surface plasmon resonance [SPR], e.g. extraordinary optical transmission [EOT]}  | 2021/6406 | . . . . . | {multi-element}  |
| 21/5907   | . . .     | {Densitometers}   | 21/6408   | . . . . . | {with measurement of decay time, time resolved fluorescence}   |
| 21/5911   | . . . . . | {of the scanning type ( <a href="#">scanning per se G02B</a> )}   | 2021/641  | . . . . . | {Phosphorimetry, gated}  |
| 2021/5915 | . . . . . | {Processing scan data in densitometry}  | 2021/6413 | . . . . . | {Distinction short and delayed fluorescence or phosphorescence}  |
|           |           |   | 2021/6415 | . . . . . | {with two excitations, e.g. strong pump/probe flash}   |
|           |           |   | 2021/6417 | . . . . . | {Spectrofluorimetric devices}  |
|           |           |   | 2021/6419 | . . . . . | {Excitation at two or more wavelengths}  |

|           |           |   |           |           |   |
|-----------|-----------|---|-----------|-----------|---|
| 2021/6421 | . . . . . | {Measuring at two or more wavelengths}  | 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" ( <a href="#">in vivo A61B 5/00; immunoassay G01N 33/53</a> )} | 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 ( <a href="#">nebulizers per se B05B</a> )}  |
| 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 ( <a href="#">systems in which material is burnt in a flame or plasma G01N 21/72, G01N 21/73</a> ) |
| 21/6456   | . . . . . | {Spatial resolved fluorescence measurements; Imaging}   | 2021/751  | . .       | {Comparing reactive/non reactive substances}  |
| 21/6458   | . . . . . | {Fluorescence microscopy ( <a href="#">fluorescence microscopes per se G02B 21/0076 and G02B 21/16</a> )}   | 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 ( <a href="#">using measurement of total internal reflection or attenuated total reflection G01N 21/552; optical fibres or waveguides per se G02B</a> )}               |
| 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 ( <a href="#">G01N 21/6428 takes precedence</a> )}   | 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]}   | 21/7743   | . . . . . | {the reagent-coated grating coupling light in or out of the waveguide}  |
| 2021/655  | . . . . . | {Stimulated Raman}  | 21/7746   | . . . . . | {the waveguide coupled to a cavity resonator}   |
| 2021/656  | . . . . . | {Raman microprobe}  |           |           |   |
| 21/658    | . . . . . | {enhancement Raman, e.g. surface plasmons}  |           |           |   |
| 21/66     | . .       | electrically excited, e.g. electroluminescence  |           |           |   |

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

|           |           |  |
|-----------|-----------|--|
| 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 ( <a href="#">G01N 21/8806</a> and <a href="#">G01N 21/93</a> - <a href="#">G01N 21/95692</a> take precedence; optical measurement of dimensions <a href="#">G01B 11/00</a> ; optical scanning <a href="#">G02B 26/10</a> ; image transformation <a href="#">G06T 3/00</a> ; computerised image enhancement <a href="#">G06T 5/00</a> ; image processing <a href="#">per se</a> for flaw detection <a href="#">G06T 7/0002</a> )} |
| 2021/8854 | . . . .   | {Grading and classifying of flaws}   |
| 2021/8858 | . . . . . | {Flaw counting}  |
| 2021/8861 | . . . . . | {Determining coordinates of flaws}   |
| 2021/8864 | . . . . . | {Mapping zones of defects}   |
| 2021/8867 | . . . . . | {using sequentially two or more inspection runs, e.g. coarse and fine, or detecting then analysing}  |
| 2021/887  | . . . . . | {the measurements made in two or more directions, angles, positions}   |
| 2021/8874 | . . . . . | {Taking dimensions of defect into account}   |
| 2021/8877 | . . . . . | {Proximity analysis, local statistics}   |
| 2021/888  | . . . . . | {Marking defects}  |
| 2021/8883 | . . . .   | {involving the calculation of gauges, generating models}   |
| 2021/8887 | . . . . . | {based on image processing techniques}   |
| 2021/889  | . . . . . | {providing a bare video image, i.e. without visual measurement aids}   |
| 2021/8893 | . . . . . | {providing a video image and a processed signal for helping visual decision}   |
| 2021/8896 | . . . . . | {Circuits specially adapted for system specific signal conditioning}   |
| 21/89     | . . .     | in moving material, e.g. running paper or textiles ( <a href="#">G01N 21/90</a> , <a href="#">G01N 21/91</a> , <a href="#">G01N 21/94</a> take precedence)   |
| 21/8901   | . . . .   | {Optical details; Scanning details ( <a href="#">per se</a> <a href="#">G02B</a> )}  |
| 2021/8902 | . . . . . | {Anamorphic spot}  |
| 21/8903   | . . . . . | {using a multiple detector array}  |
| 2021/8904 | . . . . . | {Sheetwide light conductor on detecting side, e.g. fluorescing light rod}  |
| 2021/8905 | . . . . . | {Directional selective optics, e.g. slits, spatial filters}  |
| 2021/8907 | . . . . . | {Cylindrical optics}   |
| 2021/8908 | . . . . . | {Strip illuminator, e.g. light tube}   |
| 2021/8909 | . . . . . | {Scan signal processing specially adapted for inspection of running sheets}  |
| 2021/891  | . . . . . | {Edge discrimination, e.g. by signal filtering}  |
| 2021/8911 | . . . . . | {Setting scan-width signals}   |
| 2021/8912 | . . . . . | {Processing using lane subdivision}  |
| 21/8914   | . . . . . | {characterised by the material examined}   |
| 21/8915   | . . . . . | {non-woven textile material}   |
| 21/8916   | . . . . . | {for testing photographic material}  |
| 2021/8917 | . . . . . | {Paper, also 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}   |
| 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 ( <a href="#">for other objects</a> <a href="#">G01N 21/958</a> )}   |
| 2021/8962 | . . . . . | {for detecting separately opaque flaws and refracting flaws}   |
| 2021/8965 | . . . . . | {using slant illumination, using internally reflected light}   |
| 2021/8967 | . . . . . | {Discriminating defects on opposite sides or at different depths of sheet or rod}  |
| 21/898    | . . . . . | Irregularities in textured or patterned surfaces, e.g. textiles, wood  |
| 21/8983   | . . . . . | {for testing textile webs, i.e. woven material}  |
| 21/8986   | . . . . . | {Wood}   |
| 21/90     | . . .     | in a container or its contents ( <a href="#">G01N 21/91</a> takes precedence)  |
| 21/9009   | . . . .   | {Non-optical constructional details affecting optical inspection, e.g. cleaning mechanisms for optical parts, vibration reduction}   |
| 21/9018   | . . . . . | {Dirt detection in containers}   |
| 21/9027   | . . . . . | {in containers after filling}  |
| 21/9036   | . . . . . | {using arrays of emitters or receivers}  |
| 21/9045   | . . . . . | {Inspection of ornamented or stippled container walls}   |
| 21/9054   | . . . . . | {Inspection of sealing surface and container finish}   |
| 2021/9063 | . . . . . | {Hot-end container inspection}   |
| 21/9072   | . . . . . | {with illumination or detection from inside the container}   |
| 21/9081   | . . . . . | {Inspection especially designed for plastic containers, e.g. preforms}   |
| 21/909    | . . . . . | {in opaque containers or opaque container parts, e.g. cans, tins, caps, labels}  |
| 21/91     | . . .     | using penetration of dyes, e.g. fluorescent ink  |
| 21/93     | . . .     | Detection standards; Calibrating {baseline adjustment, drift correction}   |
| 2021/933  | . . . . . | {Adjusting baseline or gain (also for web inspection)}   |
| 2021/936  | . . . . . | {Adjusting threshold, e.g. by way of moving average}   |
| 21/94     | . . .     | Investigating contamination, e.g. dust ( <a href="#">G01N 21/85</a> takes precedence)  |
| 2021/945  | . . . .   | {Liquid or solid deposits of macroscopic size on surfaces, e.g. drops, films, or clustered contaminants ( <a href="#">dust particles and microscopic contaminants in</a> <a href="#">G01N 21/94</a> )}   |
| 21/95     | . . .     | characterised by the material or shape of the object to be examined ( <a href="#">G01N 21/89</a> - <a href="#">G01N 21/91</a> , <a href="#">G01N 21/94</a> take precedence)  |
| 21/9501   | . . . .   | {Semiconductor wafers ( <a href="#">manufacturing processes</a> <a href="#">per se</a> of semiconductor devices implementing a measuring step <a href="#">H01L 22/10</a> )}  |
| 21/9503   | . . . . . | {Wafer edge inspection}  |
| 21/9505   | . . . . . | {Wafer internal defects, e.g. microcracks}   |
| 21/9506   | . . . . . | {Optical discs}  |
| 21/9508   | . . . . . | {Capsules; Tablets}  |

- 21/951 . . . . {Balls}
- 2021/9511 . . . . {Optical elements other than lenses, e.g. mirrors (testing of optical apparatus in [G01M 11/00](#))}
- 2021/9513 . . . . {Liquid crystal panels}
- 21/9515 . . . . {Objects of complex shape, e.g. examined with use of a surface follower device (measuring contours and curvatures [G01B 11/24](#))}
- 2021/9516 . . . . . {whereby geometrical features are being masked}
- 2021/9518 . . . . . {using a surface follower, e.g. robot}
- 21/952 . . . . Inspecting the exterior surface of cylindrical bodies or wires ([G01N 21/956](#) takes precedence)
- 21/954 . . . . Inspecting the inner surface of hollow bodies, e.g. bores
- 2021/9542 . . . . . {using a probe}
- 2021/9544 . . . . . {with emitter and receiver on the probe}
- 2021/9546 . . . . . {with remote light transmitting, e.g. optical fibres}
- 2021/9548 . . . . . {Scanning the interior of a cylinder}
- 21/956 . . . . Inspecting patterns on the surface of objects (contactless testing of electronic circuits [G01R 31/308](#); testing currency [G07D](#) {manufacturing processes per se of semiconductor devices implementing a measuring step [H01L 22/10](#)})
- 21/95607 . . . . . {using a comparative method}
- 2021/95615 . . . . . {with stored comparison signal}
- 21/95623 . . . . . {using a spatial filtering method (per se [G02B](#))}
- 2021/9563 . . . . . {and suppressing pattern images}
- 2021/95638 . . . . . {for PCB's}
- 2021/95646 . . . . . {Soldering}
- 2021/95653 . . . . . {Through-holes}
- 2021/95661 . . . . . {for leads, e.g. position, curvature}
- 2021/95669 . . . . . {for solder coating, coverage}
- 2021/95676 . . . . . {Masks, reticles, shadow masks}
- 21/95684 . . . . . {Patterns showing highly reflecting parts, e.g. metallic elements}
- 21/95692 . . . . . {Patterns showing hole parts, e.g. honeycomb filtering structures}
- 21/958 . . . . Inspecting transparent materials {or objects, e.g. windscreens (for conveyed flat sheet or rod [G01N 21/896](#))}
- 2021/9583 . . . . . {Lenses}
- 2021/9586 . . . . . {Windscreens}
- 22/00 Investigating or analysing materials by the use of microwaves or radio waves, i.e. electromagnetic waves with a wavelength of one millimetre or more ([G01N 3/00](#) - [G01N 17/00](#), [G01N 24/00](#) take precedence)**
  - 22/005 . {and using Stark effect modulation}
  - 22/02 . Investigating the presence of flaws
  - 22/04 . Investigating moisture content
- 23/00 Investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays or neutrons, not covered by groups [G01N 3/00](#) – [G01N 17/00](#), [G01N 21/00](#) or [G01N 22/00](#)**
  - 23/005 . {by using neutrons ([G01N 23/02](#) - [G01N 23/227](#) take precedence)}
  - 23/02 . by transmitting the radiation through the material
  - 23/025 . . {using neutrons}
  - 23/04 . . and forming images of the material
  - 23/041 . . . Phase-contrast imaging, e.g. using grating interferometers
  - 23/043 . . . {using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images}
  - 23/044 . . . using laminography or tomosynthesis
  - 23/046 . . . using tomography, e.g. computed tomography [CT]
  - 23/05 . . . using neutrons
  - 23/06 . . and measuring the absorption
  - 23/083 . . . the radiation being X-rays
  - 23/085 . . . . X-ray absorption fine structure [XAFS], e.g. extended XAFS [EXAFS]
  - 23/087 . . . . using polyenergetic X-rays
  - 23/09 . . . the radiation being neutrons
  - 23/095 . . . Gamma-ray resonance absorption, e.g. using the Mössbauer effect
  - 23/10 . . . the material being confined in a container, e.g. in a luggage X-ray scanners
  - 23/12 . . . the material being a flowing fluid or a flowing granular solid
  - 23/125 . . . . {with immersed detecting head}
  - 23/16 . . . the material being a moving sheet or film
  - 23/18 . . . Investigating the presence of flaws defects or foreign matter
  - 23/185 . . . . {in tyres}
  - 23/20 . by using diffraction of the radiation by the materials, e.g. for investigating crystal structure; by using scattering of the radiation by the materials, e.g. for investigating non-crystalline materials; by using reflection of the radiation by the materials
  - 23/20008 . . Constructional details of analysers, e.g. characterised by X-ray source, detector or optical system; Accessories therefor; Preparing specimens therefor ([monochromators for X-rays using crystals](#) [G21K 1/06](#))
  - 23/20016 . . . Goniometers
  - 23/20025 . . . Sample holders or supports therefor
  - 23/20033 . . . . provided with temperature control or heating means
  - 23/20041 . . . . for high pressure testing, e.g. anvil cells
  - 23/2005 . . . Preparation of powder samples therefor
  - 23/20058 . . Measuring diffraction of electrons, e.g. low energy electron diffraction [LEED] method or reflection high energy electron diffraction [RHEED] method
  - 23/20066 . . Measuring inelastic scatter of gamma rays, e.g. Compton effect
  - 23/20075 . . {by measuring interferences of X-rays, e.g. Borrmann effect}
  - 23/20083 . . {by using a combination of at least two measurements at least one being a transmission measurement and one a scatter measurement}
  - 23/20091 . . Measuring the energy-dispersion spectrum [EDS] of diffracted radiation
  - 23/201 . . by measuring small-angle scattering
  - 23/202 . . . using neutrons
  - 23/203 . . Measuring back scattering
  - 23/204 . . . using neutrons
  - 23/205 . . using diffraction cameras
  - 23/2055 . . Analysing diffraction patterns

- 23/207 . . Diffractometry using detectors, e.g. using a probe in a central position and one or more displaceable detectors in circumferential positions
- 23/2073 . . . {using neutron detectors ([neutron spectrometry G01T 3/00](#))}
- 23/2076 . . . {for spectrometry, i.e. using an analysing crystal, e.g. for measuring X-ray fluorescence spectrum of a sample with wavelength-dispersion, i.e. WDXFS}
- 23/22 . . by measuring secondary emission from the material
- NOTE**
- Devices per se are classified in the relevant places, e.g. [H01J 37/00](#), [H01J 49/00](#)
- 23/2202 . . Preparing specimens therefor
- 23/2204 . . Specimen supports therefor; Sample conveying means therefore
- 23/2206 . . Combination of two or more measurements, at least one measurement being that of secondary emission, e.g. combination of secondary electron [SE] measurement and back-scattered electron [BSE] measurement
- 23/2208 . . . all measurements being of a secondary emission, e.g. combination of SE measurement and characteristic X-ray measurement
- 23/2209 . . using wavelength dispersive spectroscopy [WDS]
- 23/221 . . by activation analysis
- 23/222 . . . using neutron activation analysis [NAA]
- 23/223 . . by irradiating the sample with X-rays or gamma-rays and by measuring X-ray fluorescence
- 23/225 . . using electron or ion
- 23/2251 . . . using incident electron beams, e.g. scanning electron microscopy [SEM]
- 23/2252 . . . . Measuring emitted X-rays, e.g. electron probe microanalysis [EPMA]
- 23/2254 . . . . Measuring cathodoluminescence
- 23/2255 . . . using incident ion beams, e.g. proton beams
- 23/2257 . . . . Measuring excited X-rays, i.e. particle-induced X-ray emission [PIXE]
- 23/2258 . . . . Measuring secondary ion emission, e.g. secondary ion mass spectrometry [SIMS] ([mass-to-charge ratio analysis aspects of SIMS for material analysis G01N 27/62](#))
- 23/227 . . Measuring photoelectric effect, e.g. photoelectron emission microscopy [PEEM]
- 23/2273 . . . Measuring photoelectron spectrum, e.g. electron spectroscopy for chemical analysis [ESCA] or X-ray photoelectron spectroscopy [XPS]
- 23/2276 . . . using the Auger effect, e.g. Auger electron spectroscopy [AES]
- 24/00 Investigating or analyzing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects**
- 24/002 . {Using resonance on molecular beams ([atomic clocks G04F 5/14](#); [beam masers H01S 1/06](#))}
- 24/004 . {Using acoustical resonance, i.e. phonon interactions}
- 24/006 . {using optical pumping ([magnetometers using optical pumping G01R 33/26](#), [optical pumping of lasers H01S 3/091](#))}
- 24/008 . {by using resonance effects in zero field, e.g. in microwave, submillimetric region ([by measuring absorption of microwaves by the material G01N 22/00](#))}
- 24/08 . by using nuclear magnetic resonance ([G01N 24/12 takes precedence](#))
- 24/081 . . {Making measurements of geologic samples, e.g. measurements of moisture, pH, porosity, permeability, tortuosity or viscosity}
- 24/082 . . {Measurement of solid, liquid or gas content}
- 24/084 . . {Detection of potentially hazardous samples, e.g. toxic samples, explosives, drugs, firearms, weapons}
- 24/085 . . {Analysis of materials for the purpose of controlling industrial production systems}
- 24/087 . . {Structure determination of a chemical compound, e.g. of a biomolecule such as a protein}
- 24/088 . . {Assessment or manipulation of a chemical or biochemical reaction, e.g. verification whether a chemical reaction occurred or whether a ligand binds to a receptor in drug screening or assessing reaction kinetics}
- 24/10 . by using electron paramagnetic resonance ([G01N 24/12 takes precedence](#))
- 24/12 . by using double resonance
- 24/14 . by using cyclotron resonance
- 25/00 Investigating or analyzing materials by the use of thermal means ([G01N 3/00](#) - [G01N 23/00](#) take precedence)**
- 25/005 . {by investigating specific heat}
- 25/02 . by investigating changes of state or changes of phase; by investigating sintering ({[investigating or analysing oils or hydrocarbon fluids by measuring cloud point or pour point G01N 33/2811](#)})
- 25/04 . . of melting point; of freezing point; of softening point
- 25/06 . . . Analysis by measuring change of freezing point
- 25/08 . . of boiling point
- 25/085 . . . {Investigating nucleation}
- 25/10 . . . Analysis by measuring change of boiling point
- 25/12 . . of critical point; of other phase change
- 25/14 . by using distillation, extraction, sublimation, condensation, freezing, or crystallisation ([G01N 25/02 takes precedence](#))
- 25/142 . . {by condensation}
- 25/145 . . {Accessories, e.g. cooling devices ([in general B01L, F25D](#))}
- 25/147 . . {by crystallisation}
- 25/16 . by investigating thermal coefficient of expansion
- 25/18 . by investigating thermal conductivity ([by calorimetry G01N 25/20](#); [by measuring change of resistance of an electrically-heated body G01N 27/18](#))
- 25/20 . by investigating the development of heat, i.e. calorimetry, e.g. by measuring specific heat, by measuring thermal conductivity ([calorimeters per se G01K](#))
- 25/22 . . on combustion or catalytic oxidation, e.g. of components of gas mixtures
- 25/24 . . . using combustion tubes, e.g. for microanalysis
- 25/26 . . . using combustion with oxygen under pressure, e.g. in bomb calorimeter

|         |  |        |   |
|---------|--|--------|---|
| 25/28   | . . . the rise in temperature of the gases resulting from combustion being measured directly   | 27/00  | <b>Investigating or analysing materials by the use of electric, electrochemical, or magnetic means</b> ( <a href="#">G01N 3/00</a> – <a href="#">G01N 25/00</a> take precedence; measurement or testing of electric or magnetic variables or of electric or magnetic properties of materials <a href="#">G01R</a> ) |
| 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 ( <a href="#">bimetallic elements per se G12B 1/02</a> )   | 27/007 | . {by investigating the electric dipolar moment ( <a href="#">measuring piezo-electric properties G01R 29/22</a> )}   |
| 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 ( <a href="#">electrochemical impedance spectroscopy for measuring corrosion G01N 17/02</a> )}   |
| 25/44   | . . . the heat developed being transferred to a fixed quantity of fluid  | 27/028 | . . {Circuits therefor ( <a href="#">measuring impedance per se G01R 27/02</a> )}   |
| 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 ( <a href="#">measuring resistance per se G01R 27/00</a> , e.g. <a href="#">G01R 27/22</a> )}   |
| 25/482  | . . . . . {concerning the temperature responsive elements ( <a href="#">measuring temperature or quantity of heat, thermally-sensitive elements G01K</a> ; <a href="#">thermoelectric devices H01L 35/00</a> , <a href="#">H01L 37/00</a> )} | 27/046 | . . . . {provided with temperature compensation}  |
| 25/4826 | . . . . . {concerning the heating or cooling arrangements ( <a href="#">heating apparatus for chemical or physical laboratory apparatus in general B01L 7/00</a> )}  | 27/048 | . . . {for determining moisture content of the material}  |
| 25/4833 | . . . . . {specially adapted for temperature scanning}   | 27/06  | . . . of a liquid ( <a href="#">involving electrolysis G01N 27/26</a> )   |
| 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 ( <a href="#">moisture content of the tested material G01N 27/048</a> )}   |
| 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 ( <a href="#">temperature control per se G05D 23/00</a> )}   |
| 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 ( <a href="#">capacitor type sensors G01N 27/227</a> ; <a href="#">field-effect transistor type sensors G01N 27/414</a> )}  |
| 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](#))
- 27/185 . . . . . {using a catharometer}
- 27/20 . . . . Investigating the presence of flaws
- 27/205 . . . . . {in insulating materials}
- 27/22 . . . by investigating capacitance
- 27/221 . . . . {by investigating the dielectric properties (using microwaves [G01N 22/00](#); measuring loss factors or dielectric constants [per se G01R 27/26](#))}
- 2027/222 . . . . . {for analysing gases}
- 27/223 . . . . {for determining moisture content, e.g. humidity (rain detectors on vehicle windows [B60S 1/0825](#))}
- 27/225 . . . . . {by using hygroscopic materials}
- 27/226 . . . . {Construction of measuring vessels; Electrodes therefor}
- 27/227 . . . . {Sensors changing capacitance upon adsorption or absorption of fluid components, e.g. electrolyte-insulator-semiconductor sensors, MOS capacitors ([G01N 27/225 takes precedence](#))}
- 27/228 . . . . {Circuits therefor (measuring capacitance [per se G01R 27/26](#))}
- 27/24 . . . . Investigating the presence of flaws
- 27/26 . . . by investigating electrochemical variables; by using electrolysis or electrophoresis
- 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
- 27/28 . . . Electrolytic cell components
- 27/283 . . . . {Means for supporting or introducing electrochemical probes}
- 27/286 . . . . . {Power or signal connectors associated therewith}
- 27/30 . . . . Electrodes, e.g. test electrodes; Half-cells ([G01N 27/414 takes precedence](#))
- 27/301 . . . . . {Reference electrodes}
- 27/302 . . . . . {pH sensitive, e.g. quinhydrone, antimony or hydrogen electrodes (ion selective electrodes [G01N 27/333](#), glass electrodes [G01N 27/36](#))}
- 27/304 . . . . . {Gas permeable electrodes}
- 27/305 . . . . . {optically transparent or photoresponsive electrodes}
- 27/307 . . . . . {Disposable laminated or multilayered electrodes ([G01N 27/3272 takes precedence](#))}
- 27/308 . . . . . {at least partially made of carbon}
- 27/31 . . . . . Half-cells with permeable membranes, e.g. semi-porous or perm-selective membranes
- 27/32 . . . . . Calomel electrodes
- 27/327 . . . . . Biochemical electrodes {, e.g. electrical or mechanical details for [in vitro](#) measurements}
- 27/3271 . . . . . {Amperometric enzyme electrodes for analytes in body fluids, e.g. glucose in blood (amperometry [per se G01N 27/49](#); aspects concerning the enzyme reagent [C12Q 1/001](#))}
- 27/3272 . . . . . {Test elements therefor, i.e. disposable laminated substrates with electrodes, reagent and channels (optical biosensors [G01N 33/52](#))}
- 27/3273 . . . . . {Devices therefor, e.g. test element readers, circuitry (details not specific to biochemical electrodes [G01N 33/4875](#))}
- 27/3274 . . . . . {Corrective measures, e.g. error detection, compensation for temperature or hematocrit, calibration (coding of calibration information [G01N 33/48771](#))}
- 27/3275 . . . . . {Sensing specific biomolecules, e.g. nucleic acid strands, based on an electrode surface reaction}
- 27/3276 . . . . . {being a hybridisation with immobilised receptors (using a FET type sensor [G01N 27/4145](#); concerning the hybridisation [C12Q 1/68](#))}
- 27/3277 . . . . . {being a redox reaction, e.g. detection by cyclic voltammetry (voltammetry [per se G01N 27/42](#), [G01N 27/48](#))}
- 27/3278 . . . . . {involving nanosized elements, e.g. nanogaps or nanoparticles (nanopores [G01N 33/48721](#); magnetic beads [G01N 27/745](#))}
- 27/333 . . . . Ion-selective electrodes or membranes (glass electrodes [G01N 27/36](#))
- 27/3335 . . . . . {the membrane containing at least one organic component ([G01N 27/3271 takes precedence](#); aspects concerning the enzyme reagent in enzyme electrodes [C12Q 1/001](#))}
- 27/34 . . . . Dropping-mercury electrodes
- 27/36 . . . . Glass electrodes
- 27/38 . . . . Cleaning of electrodes
- 27/40 . . . . Semi-permeable membranes or partitions
- 27/401 . . . . Salt-bridge leaks; Liquid junctions
- 27/403 . . . Cells and electrode assemblies
- 27/4035 . . . . {Combination of a single ion-sensing electrode and a single reference electrode ([G01N 27/406 and G01N 27/413 take precedence](#))}
- 27/404 . . . . Cells with anode, cathode and cell electrolyte on the same side of a permeable membrane which separates them from the sample fluid {, e.g. Clark-type oxygen sensors}
- 27/4045 . . . . . {for gases other than oxygen}
- 27/406 . . . . Cells and probes with solid electrolytes
- 27/4062 . . . . . {Electrical connectors associated therewith}
- 27/4065 . . . . . {Circuit arrangements specially adapted therefor}
- 27/4067 . . . . . {Means for heating or controlling the temperature of the solid electrolyte}
- 27/407 . . . . . for investigating or analysing gases {([G01N 27/411 takes precedence](#))}
- 27/4071 . . . . . {using sensor elements of laminated structure}
- 27/4072 . . . . . {characterized by the diffusion barrier}
- 27/4073 . . . . . {Composition or fabrication of the solid electrolyte}
- 27/4074 . . . . . {for detection of gases other than oxygen}

- 27/4075 . . . . . {Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts}
- 27/4076 . . . . . {Reference electrodes or reference mixtures}
- 27/4077 . . . . . {Means for protecting the electrolyte or the electrodes}
- 27/4078 . . . . . {Means for sealing the sensor element in a housing}
- 27/409 . . . . . Oxygen concentration cells
- 27/41 . . . . . Oxygen pumping cells
- 27/411 . . . . . for investigating or analysing of liquid metals
- 27/4111 . . . . . {using sensor elements of laminated structure}
- 27/4112 . . . . . {Composition or fabrication of the solid electrolyte}
- 27/4114 . . . . . {for detection of gases other than oxygen}
- 27/4115 . . . . . {Composition or fabrication of the electrodes and coatings thereon, e.g. catalysts}
- 27/4117 . . . . . {Reference electrodes or reference mixtures}
- 27/4118 . . . . . {Means for protecting the electrolyte or the electrodes}
- 27/413 . . . . . Concentration cells using liquid electrolytes {measuring currents or voltages in voltaic cells}
- 27/414 . . . . . Ion-sensitive or chemical field-effect transistors, i.e. ISFETS or CHEMFETS
- 27/4141 . . . . . {specially adapted for gases}
- 27/4143 . . . . . {Air gap between gate and channel, i.e. suspended gate [SG] FETs ([work function measurement per se G01N 27/002](#))}
- 27/4145 . . . . . {specially adapted for biomolecules, e.g. gate electrode with immobilised receptors}
- 27/4146 . . . . . {involving nanosized elements, e.g. nanotubes, nanowires}
- 27/4148 . . . . . {Integrated circuits therefor, e.g. fabricated by CMOS processing ([CMOS processing per se H01L 21/82](#))}
- 27/416 . . . . . Systems ([G01N 27/27 takes precedence](#))
- 27/4161 . . . . . {measuring the voltage and using a constant current supply, e.g. chronopotentiometry}
- 27/4162 . . . . . {investigating the composition of gases, by the influence exerted on ionic conductivity in a liquid ([conductometry in general G01N 27/06](#); [amperometric gas sensors G01N 27/404](#))}
- 27/4163 . . . . . {checking the operation of, or calibrating, the measuring apparatus ([G01N 27/3274](#), [G01N 27/4175](#) and [G01N 33/0006](#) take precedence)}
- 27/4165 . . . . . {for pH meters}
- 27/4166 . . . . . {measuring a particular property of an electrolyte}
- 27/4167 . . . . . {pH (electrodes therefor [G01N 27/302](#), [G01N 27/36](#))}
- 27/4168 . . . . . {Oxidation-reduction potential, e.g. for chlorination of water ([water analysis G01N 33/18](#))}
- 27/417 . . . . . using cells {, i.e. more than one cell} and probes with solid electrolytes
- 27/4175 . . . . . {Calibrating or checking the analyser}
- 27/419 . . . . . Measuring voltages or currents with a combination of oxygen pumping cells and oxygen concentration cells
- 27/42 . . . . . Measuring deposition or liberation of materials from an electrolyte; Coulometry, i.e. measuring coulomb-equivalent of material in an electrolyte
- 27/423 . . . . . {Coulometry}
- 27/426 . . . . . {by weighing}
- 27/44 . . . . . using electrolysis to generate a reagent, e.g. for titration
- 27/447 . . . . . using electrophoresis
- 27/44704 . . . . . {Details; Accessories}
- 27/44708 . . . . . {Cooling}
- 27/44713 . . . . . {Particularly adapted electric power supply}
- 27/44717 . . . . . {Arrangements for investigating the separated zones, e.g. localising zones}
- 27/44721 . . . . . {by optical means}
- 27/44726 . . . . . {using specific dyes, markers or binding molecules}
- 27/4473 . . . . . {by electric means}
- 27/44734 . . . . . {by thermal means}
- 27/44739 . . . . . {Collecting the separated zones, e.g. blotting to a membrane or punching of gel spots}
- 27/44743 . . . . . {Introducing samples}
- 27/44747 . . . . . {Composition of gel or of carrier mixture}
- 27/44752 . . . . . {Controlling the zeta potential, e.g. by wall coatings}
- 27/44756 . . . . . {Apparatus specially adapted therefor}
- 27/4476 . . . . . {of the density gradient type}
- 27/44765 . . . . . {of the counter-flow type}
- 27/44769 . . . . . {Continuous electrophoresis, i.e. the sample being continuously introduced, e.g. free flow electrophoresis [FFE]}
- 27/44773 . . . . . {Multi-stage electrophoresis, e.g. two-dimensional electrophoresis}
- 27/44778 . . . . . {on a common gel carrier, i.e. 2D gel electrophoresis}
- 27/44782 . . . . . {of a plurality of samples}
- 27/44786 . . . . . {of the magneto-electrophoresis type}
- 27/44791 . . . . . {Microapparatus ([sample containers with integrated microfluidic structures B01L 3/5027](#))}
- 27/44795 . . . . . {Isoelectric focusing}
- 27/453 . . . . . Cells therefor
- 27/48 . . . . . using polarography, i.e. measuring changes in current under a slowly-varying voltage
- 27/49 . . . . . Systems involving the determination of the current at a single specific value, or small range of values, of applied voltage for producing selective measurement of one or more particular ionic species
- 27/60 . . . . . by investigating electrostatic variables {, e.g. electrographic flaw testing ([G01N 27/007 takes precedence](#))}
- 27/605 . . . . . {for determining moisture content, e.g. humidity}
- 27/61 . . . . . Investigating the presence of flaws

- 27/62 . by investigating the ionisation of gases, e.g. aerosols; by investigating electric discharges, e.g. emission of cathode
- WARNING**
- Group [G01N 27/62](#) is impacted by reclassification into group [G01N 27/623](#).
- Groups [G01N 27/62](#) and [G01N 27/623](#) should be considered in order to perform a complete search.
- 27/622 . . Ion mobility spectrometry
- WARNING**
- Group [G01N 27/622](#) is impacted by reclassification into group [G01N 27/623](#).
- Groups [G01N 27/622](#) and [G01N 27/623](#) should be considered in order to perform a complete search.
- 27/623 . . . combined with mass spectrometry
- WARNING**
- Group [G01N 27/623](#) is incomplete pending reclassification of documents from groups [G01N 27/62](#) and [G01N 27/622](#).
- Groups [G01N 27/62](#), [G01N 27/622](#), and [G01N 27/623](#) should be considered in order to perform a complete search.
- 27/624 . . . Differential mobility spectrometry [DMS]; Field asymmetric-waveform ion mobility spectrometry [FAIMS]
- 27/626 . . using heat to ionise a gas
- 27/628 . . . {and a beam of energy, e.g. laser enhanced ionisation}
- 27/64 . . using wave or particle radiation to ionise a gas, e.g. in an ionisation chamber
- 27/66 . . . and measuring current or voltage
- 27/68 . . using electric discharge to ionise a gas
- 27/70 . . . and measuring current or voltage
- 27/72 . by investigating magnetic variables
- 27/725 . . {by using magneto-acoustical effects or the Barkhausen effect}
- 27/74 . . of fluids ([G01N 24/00](#) takes precedence)
- 27/745 . . . {for detecting magnetic beads used in biochemical assays (concerning the assays [G01N 33/54326](#); sensors therefor [G01R 33/1269](#); automatic analysers therefor [G01N 35/0098](#))}
- 27/76 . . . by investigating susceptibility
- 27/80 . . for investigating mechanical hardness, e.g. by investigating saturation or remanence of ferromagnetic material
- 27/82 . . for investigating the presence of flaws
- 27/825 . . . {by using magnetic attraction force ([G01N 27/84](#) takes precedence)}
- 27/83 . . . by investigating stray magnetic fields
- 27/84 . . . . by applying magnetic powder or magnetic ink
- 27/85 . . . . using magnetographic methods
- 27/87 . . . . using probes
- 27/90 . . . using eddy currents
- 27/9006 . . . . {Details, e.g. in the structure or functioning of sensors}
- 27/9013 . . . . Arrangements for scanning
- 27/902 . . . . . {by moving the sensors}
- 27/9026 . . . . . {by moving the material}
- 27/904 . . . . with two or more sensors
- 27/9046 . . . . {by analysing electrical signals}
- 27/9053 . . . . . {Compensating for probe to workpiece spacing}
- 27/906 . . . . . {Compensating for velocity}
- 27/9066 . . . . . {by measuring the propagation time, or delaying the signals}
- 27/9073 . . . . . {Recording measured data}
- 27/908 . . . . . {synchronously with scanning}
- 27/9086 . . . . . {Calibrating of recording device}
- 27/9093 . . . . Arrangements for supporting the sensor; Combinations of eddy-current sensors and auxiliary arrangements for marking or for rejecting
- 27/92 . by investigating breakdown voltage ([G01N 27/60](#), [G01N 27/62](#) take precedence)
- 29/00 Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object ([G01N 3/00](#), [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#) take precedence)**
- 29/02 . Analysing fluids (using acoustic emission techniques [G01N 29/14](#) {; constructional or flow details for analysing fluids [G01N 29/222](#); optoacoustic fluid cells [G01N 29/2425](#)})
- 29/022 . . {Fluid sensors based on microsensors, e.g. quartz crystal-microbalance [QCM], surface acoustic wave [SAW] devices, tuning forks, cantilevers, flexural plate wave [FPW] devices (microdevices per se [B81B](#))}
- 29/024 . . by measuring propagation velocity or propagation time of acoustic waves
- 29/028 . . by measuring mechanical or acoustic impedance
- 29/032 . . by measuring attenuation of acoustic waves
- 29/036 . . by measuring frequency or resonance of acoustic waves
- 29/04 . Analysing solids (using acoustic emission techniques [G01N 29/14](#))
- 29/041 . . {on the surface of the material, e.g. using Lamb, Rayleigh or shear waves}
- 29/043 . . {in the interior, e.g. by shear waves}
- 29/045 . . {by imparting shocks to the workpiece and detecting the vibrations or the acoustic waves caused by the shocks (measuring resonant frequency [G01H 13/00](#); measuring strength properties by application of mechanical stress [G01N 3/00](#))}
- 29/046 . . . {using the echo of particles imparting on a surface; using acoustic emission of particles (investigating concentration of particle suspensions [G01N 15/06](#); devices for measuring flow of solids in suspension [G01F 1/74](#))}
- 29/048 . . {Marking the faulty objects}

- 29/06 . . Visualisation of the interior, e.g. acoustic microscopy { (medical or veterinary diagnosis using sonic waves [A61B 8/00](#); representation of acoustic wave distribution [G01H 3/125](#), [G01H 9/002](#); short-range imaging systems using reflection of acoustic waves [G01S 15/8906](#)) }
- 29/0609 . . . {Display arrangements, e.g. colour displays (indicating or recording in connection with measuring in general [G01D](#)) }
- 29/0618 . . . . {synchronised with scanning, e.g. in real-time }
- 29/0627 . . . . . {Cathode-ray tube displays (in general [G01R 13/20](#)) }
- 29/0636 . . . . . {with permanent recording }
- 29/0645 . . . . {Display representation or displayed parameters, e.g. A-, B- or C-Scan }
- 29/0654 . . . {Imaging }
- 29/0663 . . . . {by acoustic holography (acoustical holography per se [G03H 3/00](#)) }
- 29/0672 . . . . {by acoustic tomography (medical tomography [A61B 8/13](#)) }
- 29/0681 . . . . {by acoustic microscopy, e.g. scanning acoustic microscopy }
- 29/069 . . . . {Defect imaging, localisation and sizing using, e.g. time of flight diffraction [TOFD], synthetic aperture focusing technique [SAFT], Amplituden-Laufzeit-Ortskurven [ALOK] technique }
- 29/07 . . by measuring propagation velocity or propagation time of acoustic waves
- 29/075 . . . {by measuring or comparing phase angle (measuring frequencies or phase angles per se [G01R 23/00](#), [G01R 25/00](#)) }
- 29/09 . . by measuring mechanical or acoustic impedance
- 29/11 . . by measuring attenuation of acoustic waves
- 29/12 . . by measuring frequency or resonance of acoustic waves { (measuring frequency or resonant frequency of mechanical vibrations or acoustic waves in general [G01H 1/06](#), [G01H 3/04](#), [G01H 13/00](#); acoustic resonators [G10K 11/04](#); vibration or shock testing of structures [G01M 7/00](#)) }
- 29/14 . . using acoustic emission techniques { (echo of particles [G01N 29/046](#); measuring mechanical vibrations or acoustic waves in solids in general [G01H 1/00](#)) }
- 29/22 . . Details {, e.g. general constructional or apparatus details }
- 29/221 . . {Arrangements for directing or focusing the acoustical waves (electronic orientation or focusing [G01N 29/262](#); sound directing or focusing [G10K 11/26](#); mechanical steering of sound transducers or their beams [G10K 11/35](#)) }
- 29/222 . . {Constructional or flow details for analysing fluids (optoacoustic fluid cells [G01N 29/2425](#)) }
- 29/223 . . {Supports, positioning or alignment in fixed situation (mounting transducers per se [G10K 11/004](#)) }
- 29/225 . . {Supports, positioning or alignment in moving situation }
- 29/226 . . . {Handheld or portable devices }
- 29/227 . . {related to high pressure, tension or stress conditions }
- 29/228 . . {related to high temperature conditions }
- 29/24 . . Probes { (transducers for acoustic waves [B06B](#), [G10K](#); for measuring [G01H](#)) }
- 29/2406 . . . {Electrostatic or capacitive probes, e.g. electret or cMUT-probes }
- 29/2412 . . . {using the magnetostrictive properties of the material to be examined, e.g. electromagnetic acoustic transducers [EMAT]; (investigating the presence of flaws using eddy currents [G01N 27/90](#), magnetostrictive transducers [B06B 1/08](#), measuring magnetostrictive properties [G01R 33/18](#)) }
- 29/2418 . . . {using optoacoustic interaction with the material, e.g. laser radiation, photoacoustics (photoacoustic cells [G01N 21/1702](#); measuring characteristics of vibrations by using radiation-sensitive means [G01H 9/00](#); acousto-optical conversion techniques for short-range imaging [G01S 15/8965](#); sound-producing devices using laser bundle [G10K 15/046](#)) }
- 29/2425 . . . . {optoacoustic fluid cells therefor }
- 29/2431 . . . {using other means for acoustic excitation, e.g. heat, microwaves, electron beams (sound producing devices not otherwise provided for [G10K 15/04](#)) }
- 29/2437 . . . {Piezoelectric probes }
- 29/2443 . . . . {Quartz crystal probes }
- 29/245 . . . . {Ceramic probes, e.g. lead zirconate titanate [PZT] probes }
- 29/2456 . . . {Focusing probes (focusing arrangements [G01N 29/221](#)) }
- 29/2462 . . . {Probes with waveguides, e.g. SAW devices }
- 29/2468 . . . {Probes with delay lines }
- 29/2475 . . . {Embedded probes, i.e. probes incorporated in objects to be inspected }
- 29/2481 . . . {Wireless probes, e.g. with transponders or radio links }
- 29/2487 . . . {Directing probes, e.g. angle probes (directing arrangements [G01N 29/221](#)) }
- 29/2493 . . . {Wheel shaped probes }
- 29/26 . . Arrangements for orientation or scanning {by relative movement of the head and the sensor (mechanical steering of sound transducers or their beams [G10K 11/35](#)) }
- 29/262 . . . {by electronic orientation or focusing, e.g. with phased arrays (phased arrays per se [G10K 11/34](#)) }
- 29/265 . . . by moving the sensor relative to a stationary material
- 29/27 . . . by moving the material relative to a stationary sensor
- 29/275 . . . by moving both the sensor and the material
- 29/28 . . providing acoustic coupling {, e.g. water (impedance matching [G10K 11/02](#)) }
- 29/30 . . Arrangements for calibrating or comparing, e.g. with standard objects
- 29/32 . . Arrangements for suppressing undesired influences, e.g. temperature or pressure variations {, compensating for signal noise }
- 29/323 . . . {compensating for pressure or tension variations }
- 29/326 . . . {compensating for temperature variations }
- 29/34 . . Generating the ultrasonic, sonic or infrasonic waves {, e.g. electronic circuits specially adapted therefor }
- 29/341 . . {with time characteristics }

- 29/343 . . . {pulse waves, e.g. particular sequence of pulses, bursts}
- 29/345 . . . {continuous waves}
- 29/346 . . {with amplitude characteristics, e.g. modulated signal}
- 29/348 . . {with frequency characteristics, e.g. single frequency signals, chirp signals (measuring frequency of mechanical vibrations or acoustic waves in general [G01H 1/06](#), [G01H 3/04](#); measuring frequency or analysing frequency spectra [G01R 23/00](#))}
- 29/36 . Detecting the response signal {, e.g. electronic circuits specially adapted therefor}
- 29/38 . . by time filtering, e.g. using time gates
- 29/40 . . by amplitude filtering, e.g. by applying a threshold {or by gain control}
- 29/42 . . by frequency filtering {or by tuning to resonant frequency}
- 29/44 . Processing the detected response signal {, e.g. electronic circuits specially adapted therefor ([digital signal processing per se G06F 17/00](#))}
- 29/4409 . . {by comparison}
- 29/4418 . . . {with a model, e.g. best-fit, regression analysis}
- 29/4427 . . . {with stored values, e.g. threshold values}
- 29/4436 . . . {with a reference signal ([amplitude comparison G01N 29/48](#))}
- 29/4445 . . {Classification of defects}
- 29/4454 . . {Signal recognition, e.g. specific values or portions, signal events, signatures}
- 29/4463 . . {Signal correction, e.g. distance amplitude correction [DAC], distance gain size [DGS], noise filtering}
- 29/4472 . . {Mathematical theories or simulation}
- 29/4481 . . {Neural networks}
- 29/449 . . {Statistical methods not provided for in [G01N 29/4409](#), e.g. averaging, smoothing and interpolation}
- 29/46 . . by spectral analysis, e.g. Fourier analysis {or wavelet analysis ([spectral signal processing per se G06F 17/14](#))}
- 29/48 . . by amplitude comparison
- 29/50 . . using auto-correlation techniques or cross-correlation techniques
- 29/52 . . using inversion methods other than spectral analysis, e.g. conjugated gradient inversion
- 30/00 Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography {or field flow fractionation} ([G01N 3/00](#), [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#), [G01N 29/00](#) take precedence)**
- NOTE**
- In this group, the following term is used with the meaning indicated:
- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.
- 30/0005 . {Field flow fractionation}
- 2030/001 . . {hydrodynamic fractionation, e.g. CHDF or HDC}
- 2030/0015 . . {characterised by driving force}
- 2030/002 . . . {sedimentation or centrifugal FFF}
- 2030/0025 . . . {cross flow FFF}
- 2030/003 . . . . {Asymmetrical flow}
- 2030/0035 . . . {electrical field}
- 2030/004 . . {characterised by opposing force}
- 2030/0045 . . . {normal, i.e. diffusion or thermal FFF}
- 2030/005 . . . {steric FFF, i.e. diffusion negligible for larger particles; separation due to protrusion depth into carrier flow profile}
- 2030/0055 . . . {hyperlayer, i.e. different particle populations in hyperlayers elevated above wall}
- 2030/006 . . . . {lift hyperlayer, i.e. hydrodynamic lift forces dominate steric effect}
- 2030/0065 . . . {Dielectric FFF, i.e. opposing forces dominate hydrodynamic lift forces and steric effects}
- 2030/007 . . {programming of driving force ([carrier programming G01N 30/02](#))}
- 2030/0075 . {Separation due to differential desorption}
- 2030/008 . . {Thermal desorption}
- 2030/0085 . . {the desorption energy being adapted to sample, e.g. laser tuned to molecular bonds}
- 2030/009 . {Extraction}
- 2030/0095 . {Separation specially adapted for use outside laboratory, e.g. field sampling, portable equipments}
- 30/02 . Column chromatography
- 2030/022 . . {characterised by the kind of separation mechanism}
- 2030/025 . . . {Gas chromatography}
- 2030/027 . . . {Liquid chromatography}
- 30/04 . . Preparation or injection of sample to be analysed
- 2030/042 . . . {Standards}
- 2030/045 . . . . {internal}
- 2030/047 . . . . {external}
- 30/06 . . . Preparation
- 2030/062 . . . . {extracting sample from raw material}
- 2030/065 . . . . {using different phases to separate parts of sample}
- 2030/067 . . . . {by reaction, e.g. derivatising the sample}
- 30/08 . . . . using an enricher
- 2030/085 . . . . . {using absorbing precolumn}
- 30/10 . . . . using a splitter
- 30/12 . . . . by evaporation
- 2030/121 . . . . . {cooling; cold traps}
- 2030/122 . . . . . {cryogenic focusing}
- 2030/123 . . . . . {using more than one trap}
- 2030/125 . . . . . {pyrolysing}
- 2030/126 . . . . . {evaporating sample}
- 2030/127 . . . . . {PTV evaporation}
- 2030/128 . . . . . {Thermal desorption analysis}
- 30/14 . . . . by elimination of some components
- 2030/143 . . . . . {selective absorption}
- 2030/146 . . . . . {using membranes}
- 30/16 . . . Injection ([G01N 30/24 takes precedence](#))
- 2030/162 . . . . {electromigration}
- 2030/165 . . . . {retention gaps}
- 2030/167 . . . . {on-column injection}
- 30/18 . . . . using a septum or microsyringe
- 2030/185 . . . . . {specially adapted to seal the inlet}

|           |         |  |           |         |   |
|-----------|---------|--|-----------|---------|---|
| 30/20     | . . . . | using a sampling valve   | 30/44     | . . . . | using recycling of the fraction to be distributed   |
| 2030/201  | . . . . | {multiport valves, i.e. having more than two ports}                                      | 2030/445  | . . . . | {heart cut}   |
| 2030/202  | . . . . | {rotary valves}  | 30/46     | . . . . | using more than one column {(G01N 30/44 takes precedence)}                                  |
| 2030/204  | . . . . | {Linearly moving valves, e.g. sliding valves}  | 30/461    | . . . . | {with serial coupling of separation columns}  |
| 2030/205  | . . . . | {Diaphragm valves, e.g. deformed member closing the passage}                             | 30/462    | . . . . | {with different eluents or with eluents in different states (G01N 30/463 takes precedence)} |
| 2030/207  | . . . . | {with metering cavity, e.g. sample loop}   | 30/463    | . . . . | {for multidimensional chromatography}   |
| 2030/208  | . . . . | {with more than one cavity}  | 30/465    | . . . . | {with specially adapted interfaces between the columns}                                     |
| 30/22     | . . . . | in high pressure liquid systems  | 30/466    | . . . . | {with separation columns in parallel}   |
| 30/24     | . . .   | Automatic injection systems  | 30/467    | . . . . | {all columns being identical}   |
| 30/26     | . .     | Conditioning of the fluid carrier; Flow patterns   | 30/468    | . . . . | {involving switching between different column configurations}                               |
| 30/28     | . . .   | Control of physical parameters of the fluid carrier                                      | 30/48     | . .     | {Sorbent materials therefor}  |
| 2030/285  | . . . . | {electrically driven carrier}  | 30/482    | . . .   | {Solid sorbents}  |
| 30/30     | . . . . | of temperature   | 2030/484  | . . .   | {Solid sorbents}  |
| 2030/3007 | . . . . | {same temperature for whole column}  | 2030/486  | . . .   | {gels}  |
| 2030/3015 | . . . . | {temperature gradients along column}   | 2030/488  | . . .   | {liquid sorbents}   |
| 2030/3023 | . . . . | {using cryogenic fluids}   | 30/50     | . .     | Conditioning of the sorbent material or stationary liquid                                   |
| 2030/303  | . . . . | {using peltier elements}   | 30/52     | . . .   | Physical parameters   |
| 2030/3038 | . . . . | {temperature control of column exit, e.g. of restrictors}                                | 2030/521  | . . . . | {form}  |
| 2030/3046 | . . . . | {temperature control of column inlet}  | 2030/522  | . . . . | {pressure}  |
| 2030/3053 | . . . . | {using resistive heating}  | 2030/524  | . . . . | {structural properties}   |
| 2030/3061 | . . . . | {column or associated structural member used as heater}                                  | 2030/525  | . . . . | {surface properties, e.g. porosity}   |
| 2030/3069 | . . . . | {electrical resistance used to determine control temperature}                            | 2030/527  | . . . . | {sorbent material in form of a membrane}  |
| 2030/3076 | . . . . | {using specially adapted T(t) profile}   | 2030/528  | . . . . | {Monolithic sorbent material}   |
| 2030/3084 | . . . . | {ovens}  | 30/54     | . . . . | Temperature   |
| 2030/3092 | . . . . | {Heat exchange between incoming and outgoing mobile phase}                               | 30/56     | . . .   | Packing methods or coating methods  |
| 30/32     | . . . . | of pressure or speed (G01N 30/36 takes precedence)                                       | 2030/562  | . . . . | {packing}   |
| 2030/322  | . . . . | {pulse dampers}  | 2030/565  | . . . . | {slurry packing}  |
| 2030/324  | . . . . | {speed, flow rate}   | 2030/567  | . . . . | {coating}   |
| 2030/326  | . . . . | {pumps}  | 30/58     | . . .   | the sorbent moving as a whole   |
| 2030/328  | . . . . | {valves, e.g. check valves of pumps}   | 2030/582  | . . . . | {micellar electrokinetic capillary chromatography [MECC]}                                   |
| 30/34     | . . . . | of fluid composition, e.g. gradient (G01N 30/36 takes precedence)                        | 2030/585  | . . . . | {Parallel current chromatography}   |
| 2030/342  | . . . . | {fluid composition fixed during analysis}  | 2030/587  | . . . . | {Continuous annular chromatography}   |
| 2030/345  | . . . . | {fluid electrical conductivity fixed during analysis}                                    | 30/60     | . .     | Construction of the column  |
| 2030/347  | . . . . | {mixers}   | 30/6004   | . . .   | {end pieces}  |
| 30/36     | . . . . | in high pressure liquid systems  | 2030/6008 | . . . . | {capillary restrictors}   |
| 30/38     | . . .   | Flow patterns  | 2030/6013 | . . . . | {interfaces to detectors}   |
| 2030/381  | . . . . | {centrifugal chromatography}   | 30/6017   | . . . . | {Fluid distributors}  |
| 2030/382  | . . . . | {flow switching in a single column}  | 30/6021   | . . . . | {Adjustable pistons}  |
| 2030/383  | . . . . | {by using auxiliary fluid}   | 30/6026   | . . . . | {Fluid seals}   |
| 2030/385  | . . . . | {by switching valves}  | 30/603    | . . . . | {retaining the stationary phase, e.g. Frits}  |
| 2030/386  | . . . . | {Radial chromatography, i.e. with mobile phase traversing radially the stationary phase} | 30/6034   | . . .   | {joining multiple columns}  |
| 2030/387  | . . . . | {Turbulent flow of mobile phase}   | 30/6039   | . . . . | {in series}   |
| 2030/388  | . . . . | {Elution in two different directions on one stationary phase}                            | 30/6043   | . . . . | {in parallel}   |
| 30/40     | . . . . | using back flushing  | 30/6047   | . . .   | {with supporting means; Holders}  |
| 2030/402  | . . . . | {purging a device}   | 30/6052   | . . .   | {body}  |
| 2030/405  | . . . . | {re-concentrating or inverting previous separation}                                      | 30/606    | . . . . | {with fluid access or exit ports}   |
| 2030/407  | . . . . | {carrying out another separation}  | 30/6065   | . . . . | {with varying cross section}  |
| 30/42     | . . . . | using counter-current  | 30/6069   | . . . . | {with compartments or bed substructure}   |
|           |         |  | 30/6073   | . . . . | {in open tubular form}  |
|           |         |  | 30/6078   | . . . . | {Capillaries}   |
|           |         |  | 30/6082   | . . . . | {transparent to radiation}  |
|           |         |  | 30/6086   | . . . . | {form designed to optimise dispersion}  |
|           |         |  | 30/6091   | . . .   | {Cartridges}  |

|           |   |           |  |
|-----------|---|-----------|--|
| 30/6095   | . . . {Micromachined or nanomachined, e.g. micro- or nanosize}  | 30/76     | . . . Acoustical detectors {(measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves <a href="#">G01H</a> )}   |
|           | <b>NOTE</b>   | 2030/765  | . . . . {for measuring mechanical vibrations}  |
|           | Attention is drawn to the Notes following the titles of class <a href="#">B81</a> and subclass <a href="#">B81B</a> relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass <a href="#">B82B</a> relating to "nanostructures" | 2030/77   | . . . . {detecting radioactive properties}   |
| 30/62     | . . Detectors specially adapted therefor  | 30/78     | . . . using more than one detector   |
| 2030/621  | . . . {signal-to-noise ratio}   | 30/80     | . . Fraction collectors  |
| 2030/623  | . . . . {by modulation of sample feed or detector response}   | 30/82     | . . . Automatic means therefor   |
| 2030/625  | . . . . {by measuring reference material, e.g. carrier without sample}  | 30/84     | . . Preparation of the fraction to be distributed  |
| 2030/626  | . . . {calibration, baseline}   | 2030/8405 | . . . {using pyrolysis}  |
| 2030/628  | . . . {Multiplexing, i.e. several columns sharing a single detector}  | 2030/8411 | . . . {Intermediate storage of effluent, including condensation on surface}  |
| 30/64     | . . . Electrical detectors  | 2030/8417 | . . . . {the store moving as a whole, e.g. moving wire}  |
| 2030/642  | . . . . {photoionisation detectors}   | 2030/8423 | . . . . {using permeable separator tubes}  |
| 2030/645  | . . . . {electrical conductivity detectors}   | 2030/8429 | . . . . {adding modifying material}  |
| 2030/647  | . . . . {surface ionisation}  | 2030/8435 | . . . . {for chemical reaction}  |
| 30/66     | . . . . Thermal conductivity detectors  | 2030/8441 | . . . . {to modify physical properties}  |
| 30/68     | . . . . Flame ionisation detectors  | 2030/8447 | . . . . {Nebulising, aerosol formation or ionisation}  |
| 2030/685  | . . . . {flame photometry}  | 2030/8452 | . . . . {Generation of electrically charged aerosols or ions}  |
| 30/70     | . . . . Electron capture detectors  | 2030/8458 | . . . . . {of ions or clusters of individual ions}   |
| 30/72     | . . . Mass spectrometers {(mass spectrometers per se <a href="#">H01J 49/00</a> )}  | 2030/8464 | . . . . . {Uncharged atoms or aerosols}  |
| 30/7206   | . . . . {interfaced to gas chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see <a href="#">H01J 49/04</a> )}  | 2030/847  | . . . . . {by pneumatic means}   |
| 30/7213   | . . . . . {splitting of the gaseous effluent}   | 2030/8476 | . . . . . {by thermal means}   |
| 30/722    | . . . . . {through a gas permeable barrier (membranes, porous layers)}  | 2030/8482 | . . . . . {by electrical or glow discharge}  |
| 2030/7226 | . . . . . {OWTC, short capillaries or transfer line used as column}   | 2030/8488 | . . . . . {by electric field}  |
| 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 <a href="#">H01J 49/04</a> )}  | 2030/8494 | . . . . . {Desolvation chambers}   |
| 30/724    | . . . . . {Nebulising, aerosol formation or ionisation (spraying or atomising in general <a href="#">B05B</a> )}  | 30/86     | . . Signal analysis  |
| 30/7246   | . . . . . . {by pneumatic means}  | 30/8603   | . . . {with integration or differentiation}  |
| 30/7253   | . . . . . . {by thermal means, e.g. thermospray}  | 30/8606   | . . . . {Integration}  |
| 30/726    | . . . . . . {by electrical or glow discharge}   | 30/861    | . . . . {Differentiation}  |
| 30/7266   | . . . . . . {by electric field, e.g. electrospray}  | 30/8613   | . . . . {Dividing or multiplying by a constant}  |
| 30/7273   | . . . . . {Desolvation chambers}  | 30/8617   | . . . . {Filtering, e.g. Fourier filtering}  |
| 30/728    | . . . . {Intermediate storage of effluent, including condensation on surface}   | 2030/862  | . . . . {Other mathematical operations for data preprocessing}   |
| 30/7286   | . . . . . {the store moving as a whole, e.g. moving wire}   | 30/8624   | . . . {Detection of slopes or peaks; baseline correction}  |
| 30/7293   | . . . . {Velocity or momentum separators}   | 30/8627   | . . . . {Slopes}   |
| 30/74     | . . . Optical detectors {(measurement of intensity, velocity, spectral content, polarisation, or phase of infra-red, visible or ultra-violet light <a href="#">G01J</a> )}  | 30/8631   | . . . . {Peaks}  |
| 2030/743  | . . . . {FTIR}  | 30/8634   | . . . . . {Peak quality criteria}  |
| 2030/746  | . . . . {detecting along the line of flow, e.g. axial}  | 30/8637   | . . . . . {Peak shape}   |
|           |   | 30/8641   | . . . . {Baseline}   |
|           |   | 30/8644   | . . . . {Data segmentation, e.g. time windows}   |
|           |   | 2030/8648 | . . . . {Feature extraction not otherwise provided for}  |
|           |   | 30/8651   | . . . {Recording, data acquisition, archiving and storage}   |
|           |   | 30/8655   | . . . . {Details of data formats}  |
|           |   | 30/8658   | . . . {Optimising operation parameters}  |
|           |   | 30/8662   | . . . . {Expert systems; optimising a large number of parameters}  |
|           |   | 30/8665   | . . . {for calibrating the measuring apparatus}  |
|           |   | 30/8668   | . . . . {using retention times}  |
|           |   | 30/8672   | . . . . {not depending on an individual instrument, e.g. retention time indexes or calibration transfer}   |
|           |   | 30/8675   | . . . {Evaluation, i.e. decoding of the signal into analytical information (for analysis of specific compounds see also <a href="#">G01N 30/88</a> and subgroups of <a href="#">G01N 33/00</a> ; chemical libraries per se <a href="#">C40B</a> )} |

|              |   |  |   |
|--------------|---|--|---|
| 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 ( <a href="#">G01N 31/12 takes precedence</a> )}  |
| 30/8682      | . . . . {Group type analysis, e.g. of components having structural properties in common}  | <b>NOTE</b>  |   |
| 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 <a href="#">G01N 3/00</a> - <a href="#">G01N 3/00</a> - <a href="#">G01N 29/00</a> , if this is of major importance, is dealt with in the group concerned. |   |
| 30/8689      | . . . . {Peak purity of co-eluting compounds}   |  |   |
| 30/8693      | . . . {Models, e.g. prediction of retention times, method development and validation}   |  |   |
| 30/8696      | . . . {Details of Software}   |  |   |
| 30/88        | . . Integrated analysis systems specially adapted therefor, not covered by a single one of the groups <a href="#">G01N 30/04</a> - <a href="#">G01N 30/86</a>         | 31/02  | . . using precipitation {(measuring deposition or liberation of materials from an electrolyte <a href="#">G01N 27/42</a> )}   |
| 2030/8804    | . . . {automated systems}   | 31/10  | . . using catalysis   |
| 2030/8809    | . . . {analysis specially adapted for the sample}   | 31/12  | . . using combustion ( <a href="#">G01N 25/20 takes precedence</a> )  |
| 2030/8813    | . . . . {biological materials}  | 31/16  | . . using titration   |
| 2030/8818    | . . . . . {involving amino acids}   | 31/162   | . . {Determining the equivalent point by means of a discontinuity}  |
| 2030/8822    | . . . . . {involving blood}   | 31/164   | . . . {by electrical or electrochemical means}  |
| 2030/8827    | . . . . . {involving nucleic acids}   | 31/166   | . . {Continuous titration of flowing liquids}   |
| 2030/8831    | . . . . . {involving peptides or proteins}  | 31/168   | . . {Determining water content by using Karl Fischer reagent}   |
| 2030/8836    | . . . . . {involving saccharides}   | 31/18  | . . Burettes specially adapted for titration  |
| 2030/884     | . . . . {organic compounds}   | 31/20  | . . using microanalysis, e.g. drop reaction   |
| 2030/8845    | . . . . . {involving halogenated organic compounds}   | 31/22  | . . using chemical indicators ( <a href="#">G01N 31/02 takes precedence</a> )   |
| 2030/885     | . . . . . {involving polymers}  | 31/221   | . . {for investigating pH value}  |
| 2030/8854    | . . . . . {involving hydrocarbons}  | 31/222   | . . {for investigating moisture content}  |
| 2030/8859    | . . . . {inorganic compounds}   | 31/223   | . . {for investigating presence of specific gases or aerosols ( <a href="#">G01N 31/221</a> , <a href="#">G01N 31/222 take precedence</a> ; actuation of fire alarm by presence of smoke or gases <a href="#">G08B 17/10</a> )} |
| 2030/8863    | . . . . . {Fullerenes}  | 31/224   | . . . {for investigating presence of dangerous gases}   |
| 2030/8868    | . . . . {elemental analysis, e.g. isotope dilution analysis}  | 31/225   | . . . {for oxygen, e.g. including dissolved oxygen}   |
| 2030/8872    | . . . . {impurities}  | 31/226   | . . {for investigating the degree of sterilisation}   |
| 2030/8877    | . . . . {optical isomers}   | 31/227   | . . {for nitrates or nitrites}  |
| 2030/8881    | . . . {Modular construction, specially adapted therefor}  | 31/228   | . . {for peroxides}   |
| 2030/8886    | . . . {Analysis of industrial production processes}   | 31/229   | . . {for investigating time/temperature history}  |
| 2030/889     | . . . {monitoring the quality of the stationary phase; column performance}  | <b>33/00</b>   | <b>Investigating or analysing materials by specific methods not covered by groups <a href="#">G01N 1/00</a> - <a href="#">G01N 31/00</a></b>  |
| 2030/8895    | . . . {Independent juxtaposition of embodiments; Reviews}   | <b>NOTE</b>  |   |
| 30/89        | . Inverse chromatography  | In groups <a href="#">G01N 33/52</a> - <a href="#">G01N 33/98</a> , 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.                 |   |
| 30/90        | . Plate chromatography, e.g. thin layer or paper chromatography   | {This Note corresponds to IPC Note (1) relating to <a href="#">G01N 33/52</a> - <a href="#">G01N 33/98</a> .}  |   |
| 2030/903     | . . {centrifugal chromatography}  | 33/0001  | . {by organoleptic means}   |
| 2030/906     | . . {pressurised fluid phase}   | 2033/0003  | . {Composite materials}   |
| 30/91        | . . Application of the sample   | 33/0004  | . {Gaseous mixtures, e.g. polluted air (gaseous biological material <a href="#">G01N 33/497</a> ; exhaust gas of internal combustion engines <a href="#">G01M 15/102</a> )}   |
| 30/92        | . . Construction of the plate   | 33/0006  | . . {Calibrating gas analysers}   |
| 30/93        | . . . Application of the sorbent layer  | 33/0008  | . . . {Details concerning storage of calibration data, e.g. in EEPROM}  |
| 30/94        | . . Development   | 33/0009  | . . {General constructional details of gas analysers, e.g. portable test equipment ( <a href="#">G01N 1/22 takes precedence</a> )}  |
| 2030/945     | . . . {Application of reagents to undeveloped plate}  | 33/0011  | . . . {Sample conditioning (in general <a href="#">G01N 1/28</a> )}   |
| 30/95        | . . Detectors specially adapted therefor; Signal analysis   |  |   |
| 30/96        | . . using ion-exchange ( <a href="#">G01N 30/02</a> , <a href="#">G01N 30/90 take precedence</a> )  |  |   |
| 2030/965     | . . {suppressor columns}  |  |   |
| <b>31/00</b> | <b>Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup; Apparatus specially adapted for such methods</b> |  |   |
| 31/002       | . {Determining nitrogen by transformation into ammonia, e.g. KJELDAHL method}   |  |   |
| 31/005       | . {investigating the presence of an element by oxidation ( <a href="#">G01N 31/12 takes precedence</a> )}   |  |   |

|           |  |           |  |
|-----------|--|-----------|--|
| 33/0013   | . . . . {by a chemical reaction ( <a href="#">G01N 33/0024 takes precedence</a> )}   | 33/0075   | . . . . {for multiple spatially distributed sensors, e.g. for environmental monitoring ( <a href="#">transmission systems for measured values G08C</a> )}                |
| 33/0014   | . . . . {by eliminating a gas ( <a href="#">G01N 33/0013 and G01N 33/0024 take precedence</a> )}   | 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 ( <a href="#">calibrating gas analysers G01N 33/0006</a> )}  | 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 ( <a href="#">electrochemical electrode arrays G01N 27/27</a> )}  | 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 ( <a href="#">all the other sub-groups of G01N 33/0004 take precedence</a> )}  | 33/0098   | . {Plants or trees ( <a href="#">wood G01N 33/46</a> )}  |
| 33/0037   | . . . . . {for NO <sub>x</sub> }   | 33/02     | . Food   |
| 33/0039   | . . . . . {for O <sub>3</sub> }  | 33/025    | . . {Fruits or vegetables}   |
| 33/004    | . . . . . {for CO, CO <sub>2</sub> }   | 33/03     | . . Edible oils or edible fats   |
| 33/0042   | . . . . . {for SO <sub>2</sub> , SO <sub>3</sub> }   | 33/04     | . . Dairy products   |
| 33/0044   | . . . . . {for H <sub>2</sub> 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 <sub>2</sub> }  | 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 ( <a href="#">properties of explosives G01N 33/227</a> )}  | 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 ( <a href="#">drug screening with animal cells G01N 33/5008</a> )}                           |
| 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 ( <a href="#">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</a> )} | 33/1813   | . . {specific cations in water, e.g. heavy metals ( <a href="#">electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22</a> )}                  |
| 33/0065   | . . . . . {using more than one threshold}  | 33/182    | . . {specific anions in water ( <a href="#">electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22</a> )}                                      |
| 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 ( <a href="#">water in oil G01N 33/2847</a> )}   |
| 33/007    | . . . {Arrangements to check the analyser ( <a href="#">calibrating G01N 33/0006</a> )}  | 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 ( <a href="#">G01N 33/1806 takes precedence</a> )}   |
|           |  | 2033/1873 | . . {ice or snow}  |
|           |  | 33/188    | . . {Determining the state of nitrification ( <a href="#">biological treatment of water by aerobic or anaerobic processes for denitrification of water C02F 3/305</a> )} |
|           |  | 33/1886   | . . {using probes, e.g. submersible probes, buoys}   |
|           |  | 33/1893   | . . {using flow cells}   |

- 33/20 . Metals
- WARNING**
- Group [G01N 33/20](#) is impacted by reclassification into groups [G01N 33/202](#), [G01N 33/2022](#), [G01N 33/2028](#), [G01N 33/204](#), [G01N 33/2045](#), [G01N 33/207](#), and [G01N 33/208](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 33/202 . . Constituents thereof
- WARNING**
- Group [G01N 33/202](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/202](#) should be considered in order to perform a complete search.
- 33/2022 . . . Non-metallic constituents
- WARNING**
- Group [G01N 33/2022](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/2022](#) should be considered in order to perform a complete search.
- 33/2025 . . . . Gaseous constituents
- 33/2028 . . . Metallic constituents
- WARNING**
- Group [G01N 33/2028](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/2028](#) should be considered in order to perform a complete search.
- 33/204 . . Structure thereof, e.g. crystal structure
- WARNING**
- Group [G01N 33/204](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/204](#) should be considered in order to perform a complete search.
- 33/2045 . . . Defects
- WARNING**
- Group [G01N 33/2045](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/2045](#) should be considered in order to perform a complete search.
- 33/205 . . in liquid state, e.g. molten metals
- 33/207 . . Welded or soldered joints; Solderability
- WARNING**
- Group [G01N 33/207](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/207](#) should be considered in order to perform a complete search.
- 33/208 . . Coatings, e.g. platings
- WARNING**
- Group [G01N 33/208](#) is incomplete pending reclassification of documents from group [G01N 33/20](#).
- Groups [G01N 33/20](#) and [G01N 33/208](#) should be considered in order to perform a complete search.
- 33/22 . Fuels, explosives {(liquid hydrocarbons [G01N 33/28](#))}
- 33/222 . . {Solid fuels, e.g. coal}
- 33/225 . . {Gaseous fuels, e.g. natural gas}
- 33/227 . . {Explosives, e.g. combustive properties thereof (detecting explosives in air [G01N 33/0057](#))}
- 33/24 . Earth materials ([G01N 33/42](#) takes precedence)
- 33/241 . . {for hydrocarbon content (drilling mud [G01N 33/2823](#); drilling per se [E21B](#); prospecting [G01V](#))}
- 2033/243 . . {for determining biological parameters concerning composting, biodegradability or bioavailability}
- 2033/245 . . {for agricultural purposes}
- 33/246 . . {for water content (for control of watering [A01G 25/167](#))}
- 2033/248 . . {related to manure as a biological product, i.e. excluding artificial fertilizers}
- 33/26 . Oils; viscous liquids; paints; inks ([G01N 33/22](#) takes precedence)
- 33/28 . . Oils {, i.e. hydrocarbon liquids}({gaseous fuels [G01N 33/225](#); } edible oils or edible fats [G01N 33/03](#))
- 33/2805 . . . {investigating the resistance to heat or oxidation (to the weather, to corrosion, or to light [G01N 17/00](#))}
- 33/2811 . . . {by measuring cloud point or pour point of oils}
- 33/2817 . . . {using a test engine (testing of engines [G01M 15/00](#))}
- 33/2823 . . . {raw oil, drilling fluid or polyphasic mixtures (hydrocarbon content of earth materials [G01N 33/241](#); prospecting [G01V](#); drilling per se [E21B](#))}
- 33/2829 . . . {mixtures of fuels, e.g. determining the RON-number}
- 33/2835 . . . {specific substances contained in the oil or fuel}
- 33/2841 . . . . {gas in oil, e.g. hydrogen in insulating oil}
- 33/2847 . . . . {Water in oil (basic sediment and water [G01N 33/2823](#); oil in water [G01N 33/1833](#))}
- 33/2852 . . . . {alcohol/fuel mixtures}
- 33/2858 . . . . {metal particles}
- 33/2864 . . . . {lead content}
- 33/287 . . . . {Sulfur content}

- 33/2876 . . . . {Total acid number}
- 33/2882 . . . . {Markers (marking of fuels [C10L 1/003](#))}
- 33/2888 . . . {Lubricating oil characteristics, e.g. deterioration (lubricating properties [G01N 33/30](#))}
- 33/2894 . . . {for metal working or machining}
- 33/30 . . . for lubricating properties
- 33/32 . . Paints; inks {(investigating resistance to the weather, to corrosion, to light [G01N 17/00](#))}
- 33/34 . Paper
- 33/343 . . {paper pulp}
- 33/346 . . {paper sheets}
- 33/36 . Textiles
- 33/362 . . {material before processing, e.g. bulk cotton or wool}
- 33/365 . . {filiform textiles, e.g. yarns (for measuring diameter [G01B](#))}
- 33/367 . . {Fabric or woven textiles (optical analysis of moving sheets [G01N 21/86](#))}
- 33/38 . Concrete; ceramics; glass; bricks
- 33/381 . . {precious stones; pearls}
- 33/383 . . {Concrete, cement}
- 33/385 . . {Crystals}
- 33/386 . . {Glass}
- 33/388 . . {Ceramics}
- 33/40 . Grinding-materials
- 33/42 . Road-making materials ([G01N 33/38](#) takes precedence)
- 33/44 . Resins; rubber; leather
- 33/442 . . {Resins, plastics}
- 33/445 . . {Rubber}
- 33/447 . . {Leather}
- 33/46 . Wood
- 33/48 . Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- 33/483 . . Physical analysis of biological material
- 33/4833 . . . {of solid biological material, e.g. tissue samples, cell cultures (tissue *in vivo* [A61B 5/00](#); cell suspensions [G01N 33/48735](#))}
- 33/4836 . . . . {using multielectrode arrays}
- 33/487 . . . of liquid biological material
- 33/48707 . . . . {by electrical means ([G01N 33/49](#), [G01N 33/493](#) take precedence)}
- 33/48714 . . . . {for determining substances foreign to the organism, e.g. drugs or heavy metals (drugs by chemical analysis [G01N 33/94](#))}
- 33/48721 . . . . {Investigating individual macromolecules, e.g. by translocation through nanopores (Coulter counters in general [G01N 15/12](#); fabrication methods for nanoscale apertures [B81B 1/00](#); sequencing of nucleic acids [C12Q 1/68](#))}
- 33/48728 . . . . {Investigating individual cells, e.g. by patch clamp, voltage clamp (investigating individual particles in general [G01N 15/10](#))}
- 33/48735 . . . . {Investigating suspensions of cells, e.g. measuring microbe concentration (by chemical means [C12Q 1/04](#); colony counters [C12M 1/34](#); concentration of particle suspensions in general [G01N 15/06](#))}
- 33/48742 . . . . {Determining urea by measuring the volume of a gas (in general [G01N 7/14](#) - [G01N 7/18](#))}
- 33/4875 . . . . {Details of handling test elements, e.g. dispensing or storage, not specific to a particular test method (test-elements *per se* [B01L](#), automatic analysers [G01N 35/00](#), *in-vivo* analysis on the human body for medical diagnosis [A61B](#))}
- 33/48757 . . . . {Test elements dispensed from a stack}
- 33/48764 . . . . {Test tape taken off a spool}
- 33/48771 . . . . {Coding of information, e.g. calibration data, lot number}
- 33/48778 . . . . {Containers specially adapted therefor, e.g. for dry storage}
- 33/48785 . . . . {Electrical and electronic details of measuring devices for physical analysis of liquid biological material not specific to a particular test method, e.g. user interface or power supply}
- 33/48792 . . . . {Data management, e.g. communication with processing unit (for *in vivo* diagnostics [A61B 5/0002](#); transmission systems for measured values [G08C](#))}
- 33/49 . . . . Blood {(chemical methods for determining blood cell populations [G01N 33/5094](#); chemical analysis of blood groups or blood types [G01N 33/80](#))}
- 33/4905 . . . . {Determining clotting time of blood (by chemical methods [G01N 33/86](#), [C12Q 1/54](#))}
- 33/491 . . . . {by separating the blood components ([G01N 15/05](#) takes precedence)}
- 33/4915 . . . . {using flow cells (flow cytometry [G01N 15/14](#))}
- 33/492 . . . . {Determining multiple analytes}
- 33/4925 . . . . {measuring blood gas content, e.g. O<sub>2</sub>, CO<sub>2</sub>, HCO<sub>3</sub>}
- 33/493 . . . . urine
- 33/497 . . . of gaseous biological material, e.g. breath
- 33/4972 . . . . {Determining alcohol content (for vehicle safety devices [B60K 28/06](#))}
- 2033/4975 . . . . {other than oxygen, carbon dioxide or alcohol, e.g. organic vapours}
- 2033/4977 . . . . {metabolic gass from microbes, cell cultures, plant tissues and the like}
- 33/50 . . Chemical analysis of biological material, e.g. blood, urine; Testing involving biospecific ligand binding methods; Immunological testing (measuring or testing processes involving enzymes or microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes [C12Q](#))

## NOTES

1. In this group, the following expression is used with the meaning indicated: "involving", when

- used in relation to a material, includes the testing for the material as well as employing the material as a determinant or reactant in a test for a different material.
2. In groups [G01N 33/52](#) – [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
  3. Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group.
- 33/5002 . . . {Partitioning blood components}
- 33/5005 . . . {involving human or animal cells (immunoassay [G01N 33/56966](#); immunoassays of protozoa [G01N 33/56905](#); protozoa in screening assays [C12Q 1/025](#))}
- 33/5008 . . . . {for testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics}
- 33/5011 . . . . . {for testing antineoplastic activity}
- 33/5014 . . . . . {for testing toxicity}
- 33/5017 . . . . . {for testing neoplastic activity}
- 33/502 . . . . . {for testing non-proliferative effects}
- 33/5023 . . . . . {on expression patterns}
- 33/5026 . . . . . {on cell morphology}
- 33/5029 . . . . . {on cell motility}
- 33/5032 . . . . . {on intercellular interactions}
- 33/5035 . . . . . {on sub-cellular localization}
- 33/5038 . . . . . {involving detection of metabolites per se}
- 33/5041 . . . . . {involving analysis of members of signalling pathways}
- 33/5044 . . . . . {involving specific cell types}
- 33/5047 . . . . . {Cells of the immune system}
- 33/505 . . . . . {involving T-cells}
- 33/5052 . . . . . {involving B-cells}
- 33/5055 . . . . . {involving macrophages}
- 33/5058 . . . . . {Neurological cells}
- 33/5061 . . . . . {Muscle cells}
- 33/5064 . . . . . {Endothelial cells}
- 33/5067 . . . . . {Liver cells}
- 33/507 . . . . . {Pancreatic cells}
- 33/5073 . . . . . {Stem cells}
- 33/5076 . . . . . {involving cell organelles, e.g. Golgi complex, endoplasmic reticulum}
- 33/5079 . . . . . {Mitochondria}
- 33/5082 . . . . . {Supracellular entities, e.g. tissue, organisms}
- 33/5085 . . . . . {of invertebrates}
- 33/5088 . . . . . {of vertebrates}
- 33/5091 . . . . {for testing the pathological state of an organism}
- 33/5094 . . . . {for blood cell populations (red blood cells [G01N 33/80](#))}
- 33/5097 . . . {involving plant cells (immunoassays of plant cells [G01N 33/56961](#); unicellular algae, phytoplankton and photosynthetic bacteria in screening assays [C12Q 1/025](#))}
- 33/52 . . . Use of compounds or compositions for colorimetric, spectrophotometric or fluorometric investigation, e.g. use of reagent paper {and including single- and multilayer analytical elements (immunological elements [G01N 33/54386](#); involving labelled immunochemicals [G01N 33/58](#); for haemoglobin or occult blood [G01N 33/72](#))}
- 33/521 . . . . {Single-layer analytical elements}
- 33/523 . . . . . {the element being adapted for a specific analyte}
- 33/525 . . . . . {Multi-layer analytical elements}
- 33/526 . . . . . {the element being adapted for a specific analyte}
- 33/528 . . . . . {Atypical element structures, e.g. gloves, rods, tampons, toilet paper}
- 33/53 . . . Immunoassay; Biospecific binding assay; Materials therefor
- 33/5302 . . . . {Apparatus specially adapted for immunological test procedures}
- 33/5304 . . . . . {Reaction vessels, e.g. agglutination plates (for solid-phase systems [G01N 33/543](#))}
- 33/5306 . . . . . {Improving reaction conditions, e.g. reduction of non-specific binding, promotion of specific binding}
- 33/5308 . . . . . {for analytes not provided for elsewhere, e.g. nucleic acids, uric acid, worms, mites}
- 33/531 . . . . Production of immunochemical test materials
- 33/532 . . . . . Production of labelled immunochemicals
- 33/533 . . . . . with fluorescent label
- 33/534 . . . . . with radioactive label
- 33/535 . . . . . with enzyme label {or co-enzymes, co-factors, enzyme inhibitors or enzyme substrates}
- 33/536 . . . . with immune complex formed in liquid phase
- 33/537 . . . . . with separation of immune complex from unbound antigen or antibody
- 33/5375 . . . . . {by changing the physical or chemical properties of the medium or immunochemicals, e.g. temperature, density, pH, partitioning}
- 33/538 . . . . . by sorbent column, particles or resin strip {, i.e. sorbent materials}
- 33/539 . . . . . involving precipitating reagent {, e.g. ammonium sulfate}
- 33/541 . . . . . Double or second antibody {, i.e. precipitating antibody}
- 33/542 . . . . . with steric inhibition or signal modification, e.g. fluorescent quenching
- 33/543 . . . . with an insoluble carrier for immobilising immunochemicals
- 33/54306 . . . . . {Solid-phase reaction mechanisms}
- 33/54313 . . . . . {the carrier being characterised by its particulate form}
- 33/5432 . . . . . {Liposomes or microcapsules}
- 33/54326 . . . . . {Magnetic particles}

|          |           |   |
|----------|-----------|---|
| 33/54333 | . . . . . | {Modification of conditions of immunological binding reaction, e.g. use of more than one type of particle, use of chemical agents to improve binding, choice of incubation time or application of magnetic field during binding reaction} |
| 33/5434  | . . . . . | {using magnetic particle immunoreagent carriers which constitute new materials <u>per se</u> }  |
| 33/54346 | . . . . . | {Nanoparticles}   |
| 33/54353 | . . . . . | {with ligand attached to the carrier via a chemical coupling agent ( <a href="#">coatings G01N 33/54393</a> )}  |
| 33/5436  | . . . . . | {with ligand physically entrapped within the solid phase ( <a href="#">liposomes G01N 33/5432</a> ; <a href="#">immunological test elements G01N 33/54386</a> )}  |
| 33/54366 | . . . . . | {Apparatus specially adapted for solid-phase testing}   |
| 33/54373 | . . . . . | {involving physiochemical end-point determination, e.g. wave-guides, FETS, gratings}  |
| 33/5438  | . . . . . | {Electrodes}  |
| 33/54386 | . . . . . | {Analytical elements}   |
| 33/54393 | . . . . . | {Improving reaction conditions or stability, e.g. by coating or irradiation of surface, by reduction of non-specific binding, by promotion of specific binding}   |
| 33/544   | . . . . . | the carrier being organic   |
| 33/545   | . . . . . | Synthetic resin   |
| 33/546   | . . . . . | as water suspendable particles  |
| 33/547   | . . . . . | with antigen or antibody attached to the carrier <u>via</u> 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   |
| 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 | . . . . . | {AIDS or HTLV}  |
| 33/56994 | . . . . . | {Herpetoviridae, e.g. cytomegalovirus, Epstein-Barr virus}  |
| 33/571   | . . . . . | for venereal disease, e.g. syphilis, gonorrhoea {( <a href="#">herpes G01N 33/56994</a> ; <a href="#">chlamydia G01N 33/56927</a> )}  |
| 33/573   | . . . . . | for enzymes or isoenzymes   |
| 33/5735  | . . . . . | {co-enzymes or co-factors, e.g. NAD, ATP}   |
| 33/574   | . . . . . | for cancer  |

**NOTE**

In this group:

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

|          |           |  |
|----------|-----------|--|
| 33/57407 | . . . . . | {Specifically defined cancers}   |
| 33/57411 | . . . . . | {of cervix}  |
| 33/57415 | . . . . . | {of breast}  |
| 33/57419 | . . . . . | {of colon}   |
| 33/57423 | . . . . . | {of lung}  |
| 33/57426 | . . . . . | {leukemia}   |
| 33/5743  | . . . . . | {of skin, e.g. melanoma}   |
| 33/57434 | . . . . . | {of prostate}  |
| 33/57438 | . . . . . | {of liver, pancreas or kidney}   |
| 33/57442 | . . . . . | {of the uterus and endometrial}  |
| 33/57446 | . . . . . | {of stomach or intestine}  |
| 33/57449 | . . . . . | {of ovaries}   |
| 33/57469 | . . . . . | {involving tumor associated glycolinkage, i.e. TAG}  |
| 33/57473 | . . . . . | {involving carcinoembryonic antigen, i.e. CEA}   |
| 33/57476 | . . . . . | {involving oncofetal proteins}   |
| 33/5748  | . . . . . | {involving oncogenic proteins}   |
| 33/57484 | . . . . . | {involving compounds serving as markers for tumor, cancer, neoplasia, e.g. cellular determinants, receptors, heat shock/stress proteins, A-protein, oligosaccharides, metabolites} |
| 33/57488 | . . . . . | {involving compounds identifiable in body fluids}  |

- 33/57492 . . . . . {involving compounds localized on the membrane of tumor or cancer cells}
- 33/57496 . . . . . {involving intracellular compounds}
- 33/576 . . . . . for hepatitis
- 33/5761 . . . . . {Hepatitis B}
- 33/5762 . . . . . {Hepatitis B core antigen}
- 33/5764 . . . . . {Hepatitis B surface antigen}
- 33/5765 . . . . . {Hepatitis delta antigen}
- 33/5767 . . . . . {non-A, non-B hepatitis}
- 33/5768 . . . . . {Hepatitis A}
- 33/577 . . . . . involving monoclonal antibodies {binding reaction mechanisms characterised by the use of monoclonal antibodies; monoclonal antibodies *per se* are classified with their corresponding antigens; ([G01N 33/53](#) - [G01N 33/576](#) take precedence)}
- 33/579 . . . . . involving limulus lysate
- 33/58 . . . . . involving labelled substances ([G01N 33/53](#) takes precedence)
- 33/581 . . . . . {with enzyme label (including co-enzymes, co-factors, enzyme inhibitors or substrates)}
- 33/582 . . . . . {with fluorescent label}
- 33/583 . . . . . {with non-fluorescent dye label}
- 33/585 . . . . . {with a particulate label, e.g. coloured latex}
- 33/586 . . . . . {Liposomes, microcapsules or cells}
- 33/587 . . . . . {Nanoparticles}
- 33/588 . . . . . {with semiconductor nanocrystal label, e.g. quantum dots}
- 33/60 . . . . . involving radioactive labelled substances
- 33/62 . . . . . involving urea
- 33/64 . . . . . involving ketones
- 33/66 . . . . . involving blood sugars, e.g. galactose
- 33/68 . . . . . involving proteins, peptides or amino acids {(*involving lipoproteins* [G01N 33/92](#))}
- 33/6803 . . . . . {General methods of protein analysis not limited to specific proteins or families of proteins}
- 33/6806 . . . . . {Determination of free amino acids}
- 33/6809 . . . . . {involving fluorescent derivatizing reagents reacting non-specifically with all amino acids}
- 33/6812 . . . . . {Assays for specific amino acids}
- 33/6815 . . . . . {containing sulfur, e.g. cysteine, cystine, methionine, homocysteine}
- 33/6818 . . . . . {Sequencing of polypeptides}
- 33/6821 . . . . . {involving C-terminal degradation}
- 33/6824 . . . . . {involving N-terminal degradation, e.g. Edman degradation}
- 33/6827 . . . . . {Total protein determination, e.g. albumin in urine}
- 33/683 . . . . . {involving metal ions}
- 33/6833 . . . . . {Copper, e.g. Folin-, Lowry-, biuret methods}
- 33/6836 . . . . . {Silver staining}
- 33/6839 . . . . . {involving dyes, e.g. Coomassie blue, bromcresol green}
- 33/6842 . . . . . {Proteomic analysis of subsets of protein mixtures with reduced complexity, e.g. membrane proteins, phosphoproteins, organelle proteins}
- 33/6845 . . . . . {Methods of identifying protein-protein interactions in protein mixtures}
- 33/6848 . . . . . {Methods of protein analysis involving mass spectrometry}
- 33/6851 . . . . . {Methods of protein analysis involving laser desorption ionisation mass spectrometry}
- 33/6854 . . . . . {Immunoglobulins}
- 33/6857 . . . . . {Antibody fragments}
- 33/686 . . . . . {Anti-idiotypic}
- 33/6863 . . . . . {Cytokines, i.e. immune system proteins modifying a biological response such as cell growth proliferation or differentiation, e.g. TNF, CNF, GM-CSF, lymphotoxin, MIF or their receptors}
- 33/6866 . . . . . {Interferon}
- 33/6869 . . . . . {Interleukin}
- 33/6872 . . . . . {Intracellular protein regulatory factors and their receptors, e.g. including ion channels}
- 33/6875 . . . . . {Nucleoproteins}
- 33/6878 . . . . . {in epitope analysis}
- 33/6881 . . . . . {from skin}
- 33/6884 . . . . . {from lung}
- 33/6887 . . . . . {from muscle, cartilage or connective tissue}
- 33/689 . . . . . {related to pregnancy or the gonads}
- 33/6893 . . . . . {related to diseases not provided for elsewhere}
- 33/6896 . . . . . {Neurological disorders, e.g. Alzheimer's disease}
- 33/70 . . . . . involving creatine or creatinine
- 33/72 . . . . . involving blood pigments, e.g. haemoglobin, bilirubin {or other porphyrins; involving occult blood}
- 33/721 . . . . . {Haemoglobin}
- 33/723 . . . . . {Glycosylated haemoglobin}
- 33/725 . . . . . {using peroxidative activity}
- 33/726 . . . . . {Devices}
- 33/728 . . . . . {Bilirubin; including biliverdin}
- 33/74 . . . . . involving hormones {or other non-cytokine intercellular protein regulatory factors such as growth factors, including receptors to hormones and growth factors}
- 33/743 . . . . . {Steroid hormones}
- 33/746 . . . . . {Erythropoietin}
- 33/76 . . . . . Human chorionic gonadotropin {including luteinising hormone, follicle stimulating hormone, thyroid stimulating hormone or their receptors}
- 33/78 . . . . . Thyroid gland hormones {, e.g. T3, T4, TBH, TBG or their receptors}
- 33/80 . . . . . involving blood groups or blood types {or red blood cells (*white blood cells* [G01N 33/56972](#))}
- 33/82 . . . . . involving vitamins {or their receptors}
- 33/84 . . . . . involving inorganic compounds or pH
- 33/86 . . . . . involving blood coagulating time {or factors, or their receptors}
- 33/88 . . . . . involving prostaglandins {or their receptors}
- 33/90 . . . . . involving iron binding capacity of blood
- 33/92 . . . . . involving lipids, e.g. cholesterol {, lipoproteins, or their receptors (*steroid hormones* [G01N 33/743](#))}
- 33/94 . . . . . involving narcotics {or drugs or pharmaceuticals, neurotransmitters or associated receptors}

|              |  |            |   |
|--------------|--|------------|---|
| 33/9406      | . . . . {Neurotransmitters}  | 2035/00287 | . . . {movable lid/cover for sample or reaction tubes}  |
| 33/9413      | . . . . {Dopamine}   | 2035/00297 | . . . {Antistatic arrangements}   |
| 33/942       | . . . . {Serotonin, i.e. 5-hydroxy-tryptamine}   | 2035/00306 | . . {Housings, cabinets, control panels (details)}  |
| 33/9426      | . . . . {GABA, i.e. gamma-amino-butyrate}  | 2035/00316 | . . . {Detecting door closure}  |
| 33/9433      | . . . . {(Nor)adrenaline}  | 2035/00326 | . . {Analysers with modular structure}  |
| 33/944       | . . . . {Acetylcholine}  | 2035/00336 | . . . {Analysers adapted for operation in microgravity, i.e. spaceflight}   |
| 33/9446      | . . . . {Antibacterials}   | 2035/00346 | . {Heating or cooling arrangements}   |
| 33/9453      | . . . . {Cardioregulators, e.g. antihypotensives, antiarrhythmics}   | 2035/00356 | . . {Holding samples at elevated temperature (incubation)}  |
| 33/946       | . . . . {CNS-stimulants, e.g. cocaine, amphetamines}   | 2035/00366 | . . . {Several different temperatures used}   |
| 33/9466      | . . . . {Antidepressants}  | 2035/00376 | . . . {Conductive heating, e.g. heated plates}  |
| 33/9473      | . . . . {Anticonvulsants, e.g. phenobarbitol, phenytoin}   | 2035/00386 | . . . {using fluid heat transfer medium}  |
| 33/948       | . . . . {Sedatives, e.g. cannabinoids, barbiturates (opiates <a href="#">G01N 33/9486</a> )}   | 2035/00396 | . . . . {where the fluid is a liquid}   |
| 33/9486      | . . . . {Analgesics, e.g. opiates, aspirine}   | 2035/00405 | . . . {Microwaves}  |
| 33/9493      | . . . . {Immunosuppressants}   | 2035/00415 | . . . {Other radiation}   |
| 33/96        | . . . involving blood or serum control standard  | 2035/00425 | . . {Heating or cooling means associated with pipettes or the like, e.g. for supplying sample/reagent at given temperature} |
| 33/98        | . . . involving alcohol, e.g. ethanol in breath  | 2035/00435 | . . {Refrigerated reagent storage}  |
| <b>35/00</b> | <b>Automatic analysis not limited to methods or materials provided for in any single one of groups <a href="#">G01N 1/00</a> - <a href="#">G01N 33/00</a>; Handling materials therefor</b> | 2035/00445 | . . {Other cooling arrangements}  |
| 35/00009     | . {provided with a sample supporting tape, e.g. with absorbent zones}  | 2035/00455 | . . {Controlling humidity in analyser}  |
| 2035/00019   | . . {cassette structures}  | 2035/00465 | . {Separating and mixing arrangements}  |
| 35/00029     | . {provided with flat sample substrates, e.g. slides ( <a href="#">G01N 35/028</a> takes precedence)}  | 2035/00475 | . . {Filters}   |
| 2035/00039   | . . {Transport arrangements specific to flat sample substrates, e.g. pusher blade}   | 2035/00485 | . . . {combined with sample carriers}   |
| 2035/00049   | . . . {for loading/unloading a carousel}   | 2035/00495 | . . {Centrifuges}   |
| 2035/00059   | . . . {vacuum chucks}  | 2035/00504 | . . . {combined with carousels}   |
| 35/00069     | . . {whereby the sample substrate is of the bio-disk type, i.e. having the format of an optical disk}  | 2035/00514 | . . {Stationary mixing elements}  |
| 2035/00079   | . . {Evaporation covers for slides}  | 2035/00524 | . . {Mixing by agitating sample carrier}  |
| 2035/00089   | . . {Magazines}  | 2035/00534 | . . {Mixing by a special element, e.g. stirrer}   |
| 2035/00099   | . . {Characterised by type of test elements}   | 2035/00544 | . . . {using fluid flow}  |
| 2035/00108   | . . . {Test strips, e.g. paper}  | 2035/00554 | . . . {using ultrasound}  |
| 2035/00118   | . . . . {for multiple tests}   | 2035/00564 | . . {Handling or washing solid phase elements, e.g. beads}  |
| 2035/00128   | . . . . {with pressing or squeezing devices}   | 2035/00574 | . . . {Means for distributing beads}  |
| 2035/00138   | . . . {Slides}   | 35/00584   | . {Control arrangements for automatic analysers}  |
| 2035/00148   | . . . {Test cards, e.g. Biomerieux or McDonnell multiwell test cards}  | 35/00594   | . . {Quality control, including calibration or testing of components of the analyser}                                       |
| 2035/00158   | . . . {Elements containing microarrays, i.e. "biochip"}  | 35/00603   | . . . {Reinspection of samples}   |
| 2035/00168   | . . {Manufacturing or preparing test elements}   | 35/00613   | . . . {Quality control}   |
| 2035/00178   | . {Special arrangements of analysers}  | 35/00623   | . . . . {of instruments}  |
| 2035/00188   | . . {the analyte being in the solid state}   | 2035/00633 | . . . . {logging process history of individual samples}   |
| 2035/00198   | . . . {Dissolution analysers}  | 2035/00643 | . . . . {detecting malfunctions in conveying systems}   |
| 2035/00207   | . . {Handling bulk quantities of analyte}  | 2035/00653 | . . . . {statistical methods comparing labs or apparatuses}   |
| 2035/00217   | . . . {involving measurement of weight}  | 35/00663   | . . . . {of consumables}  |
| 2035/00227   | . . . {Monitoring a process (online)}  | 2035/00673 | . . . . {of reagents}   |
| 2035/00237   | . . {Handling microquantities of analyte, e.g. microvalves, capillary networks}  | 2035/00683 | . . . . {of detectors}  |
| 2035/00247   | . . . {Microvalves}  | 35/00693   | . . . {Calibration}   |
| 2035/00257   | . . . . {Capillary stop flow circuits}   | 2035/00702 | . . . . {Curve-fitting; Parameter matching; Calibration constants}  |
| 2035/00267   | . . . . {Melttable plugs}  | 35/00712   | . . . {Automatic status testing, e.g. at start-up or periodic}  |
| 2035/00277   | . . {Special precautions to avoid contamination (e.g. enclosures, glove-boxes, sealed sample carriers, disposal of contaminated material)}   | 35/00722   | . . {Communications; Identification}  |
|              |  | 35/00732   | . . . {Identification of carriers, materials or components in automatic analysers}  |
|              |  | 2035/00742 | . . . . {Type of codes}   |
|              |  | 2035/00752 | . . . . {bar codes}   |
|              |  | 2035/00762 | . . . . {magnetic code}   |

|            |           |   |           |           |   |
|------------|-----------|---|-----------|-----------|---|
| 2035/00772 | . . . . . | {mechanical or optical code other than bar code}  | 2035/0413 | . . . . . | {moving in one dimension}   |
| 2035/00782 | . . . . . | {reprogrammable code}   | 2035/0415 | . . . . . | {moving in two dimensions in a horizontal plane}                          |
| 2035/00792 | . . . . . | {Type of components bearing the codes, other than sample carriers}  | 2035/0417 | . . . . . | {forming an endless chain in a vertical plane}                            |
| 2035/00801 | . . . . . | {Holders for sample carriers, e.g. trays, carroussel, racks}  | 2035/0418 | . . . . . | {Plate elements with several rows of samples}                             |
| 2035/00811 | . . . . . | {consumable or exchangeable components other than sample carriers, e.g. detectors, flow cells}  | 2035/042  | . . . . . | {moved independently, e.g. by fork manipulator}                           |
| 2035/00821 | . . . . . | {nature of coded information}   | 2035/0422 | . . . . . | {carried on a linear conveyor}  |
| 2035/00831 | . . . . . | {identification of the sample, e.g. patient identity, place of sampling}  | 2035/0424 | . . . . . | {Two or more linear conveyors}  |
| 2035/00841 | . . . . . | {results of the analyses}   | 2035/0425 | . . . . . | {Stacks, magazines or elevators for plates}                               |
| 2035/00851 | . . . . . | {process control parameters}  | 2035/0427 | . . . . . | {nestable or stockable}   |
| 2035/00861 | . . . . . | {printing and sticking of identifiers}  | 2035/0429 | . . . . . | {Sample carriers adapted for special purposes}                            |
| 35/00871   | . . .     | {Communications between instruments or with remote terminals}   | 2035/0431 | . . . . . | {characterised by material of construction}                               |
| 2035/00881 | . . . . . | {network configurations}  | 2035/0432 | . . . . . | {integrated with measuring devices}                                       |
| 2035/00891 | . . .     | {Displaying information to the operator}  | 2035/0434 | . . . . . | {in the form of a syringe or pipette tip}                                 |
| 2035/009   | . . . . . | {alarms, e.g. audible}  | 2035/0436 | . . . . . | {with pre-packaged reagents, i.e. test-packs}                             |
| 2035/0091  | . . . . . | {GUI [graphical user interfaces]}   | 2035/0437 | . . . . . | {Cleaning cuvettes or reaction vessels}                                   |
| 35/0092    | . .       | {Scheduling}  | 2035/0439 | . . .     | {Rotary sample carriers, i.e. carousels}                                  |
| 2035/0093  | . . .     | {random access not determined by physical position}   | 2035/0441 | . . . . . | {for samples}   |
| 2035/0094  | . . .     | {optimisation; experiment design}   | 2035/0443 | . . . . . | {for reagents}  |
| 35/0095    | . . .     | {introducing urgent samples with priority, e.g. Short Turn Around Time Samples [STATS]}   | 2035/0444 | . . . . . | {for cuvettes or reaction vessels}  |
| 2035/0096  | . . .     | {post analysis management of samples, e.g. marking, removing, storing}  | 2035/0446 | . . . . . | {Combinations of the above}   |
| 2035/0097  | . .       | {monitoring reactions as a function of time}  | 2035/0448 | . . . . . | {composed of interchangeable ring elements}                               |
| 35/0098    | . .       | {involving analyte bound to insoluble magnetic carrier, e.g. using magnetic separation ( <a href="#">magnetic particles used in immunoassays G01N 33/54326</a> ; <a href="#">magnetic separation in general B03C</a> )} | 2035/0449 | . . . . . | {using centrifugal transport of liquid}                                   |
| 35/0099    | . .       | {comprising robots or similar manipulators ( <a href="#">robots per se B25J</a> )}  | 2035/0451 | . . . . . | {composed of interchangeable sectors}                                     |
| 35/02      | . .       | using a plurality of sample containers moved by a conveyor system past one or more treatment or analysis stations {( <a href="#">G01N 35/0098</a> and <a href="#">G01N 35/0099</a> take precedence)}                    | 2035/0453 | . . . . . | {Multiple carousels working in parallel}                                  |
| 35/021     | . .       | {having a flexible chain, e.g. "cartridge belt", conveyor for reaction cells or cuvettes}   | 2035/0455 | . . . . . | {Coaxial carousels}   |
| 2035/023   | . . .     | {forming cuvettes <u>in situ</u> , e.g. from plastic strip}   | 2035/0456 | . . . . . | {Spiral tracks}   |
| 35/025     | . .       | {having a carousel or turntable for reaction cells or cuvettes}   | 2035/0458 | . . . . . | {Multiple concentric rows of wells}                                       |
| 35/026     | . .       | {having blocks or racks of reaction cells or cuvettes}  | 2035/046  | . . .     | {General conveyor features}   |
| 35/028     | . .       | {having reaction cells in the form of microtitration plates}  | 2035/0462 | . . . . . | {Buffers [FIFO] or stacks [LIFO] for holding carriers between operations} |
| 35/04      | . .       | Details of the conveyor system {( <a href="#">G01N 35/021</a> - <a href="#">G01N 35/028</a> take precedence)}   | 2035/0463 | . . . . . | {in incubators}   |
| 2035/0401  | . . .     | {Sample carriers, cuvettes or reaction vessels}   | 2035/0465 | . . . . . | {Loading or unloading the conveyor}                                       |
| 2035/0403  | . . . . . | {Sample carriers with closing or sealing means}   | 2035/0467 | . . . . . | {Switching points ("aiguillages")}  |
| 2035/0405  | . . . . . | {manipulating closing or opening means, e.g. stoppers, screw caps, lids or covers}  | 2035/0468 | . . . . . | {converging, e.g. selecting carriers from multiple incoming streams}      |
| 2035/0406  | . . . . . | {Individual bottles or tubes}   | 2035/047  | . . . . . | {diverging, e.g. sending carriers to different analysers}                 |
| 2035/0408  | . . . . . | {connected in a flexible chain}   | 2035/0472 | . . . . . | {for selective recirculation of carriers}                                 |
| 2035/041   | . . . . . | {lifting items out of a rack for access}  | 2035/0474 | . . .     | {Details of actuating means for conveyors or pipettes}                    |
| 2035/0412  | . . . . . | {Block or rack elements with a single row of samples}   | 2035/0475 | . . . . . | {electric, e.g. stepper motor, solenoid}                                  |
|            |           |   | 2035/0477 | . . . . . | {Magnetic}  |
|            |           |   | 2035/0479 | . . . . . | {hydraulic or pneumatic}  |
|            |           |   | 2035/0481 | . . . . . | {Pneumatic tube conveyors; Tube mails; "Rohrpost"}                        |
|            |           |   | 2035/0482 | . . . . . | {Transmission}  |
|            |           |   | 2035/0484 | . . . . . | {Belt or chain}   |
|            |           |   | 2035/0486 | . . . . . | {Gearing, cams}   |
|            |           |   | 2035/0487 | . . . . . | {Helix or lead screw}   |
|            |           |   | 2035/0489 | . . . . . | {Self-propelled units}  |
|            |           |   | 2035/0491 | . . . . . | {Position sensing, encoding; closed-loop control}                         |
|            |           |   | 2035/0493 | . . . . . | {Locating samples; identifying different tube sizes}                      |
|            |           |   | 2035/0494 | . . . . . | {Detecting or compensating piositioning errors}                           |

|           |   |                |   |
|-----------|---|----------------|---|
| 2035/0496 | . . . {Other details}   | 35/109         | . . . {with two horizontal degrees of freedom}  |
| 2035/0498 | . . . {Drawers used as storage or dispensing means for vessels or cuvettes}   | 2035/1093      | . . . {Cylindrical, e.g. variable radius and angle}   |
| 35/08     | . using a stream of discrete samples flowing along a tube system, e.g. flow injection analysis  | 35/1095        | . {for supplying the samples to flow-through analysers (for a specific analyser see relevant groups, e.g. under <a href="#">G01N 15/00</a> , <a href="#">G01N 21/00</a> , <a href="#">G01N 27/00</a> , <a href="#">G01N 30/00</a> , <a href="#">H01J 49/00</a> )} |
| 35/085    | . {Flow Injection Analysis}   | 35/1097        | . . . {characterised by the valves (valves in general <a href="#">F16K</a> )}   |
| 35/10     | . Devices for transferring samples {or any liquids} to, in, or from, the analysis apparatus, e.g. suction devices, injection devices ( <a href="#">G01N 35/0099</a> takes precedence) | <b>37/00</b>   | <b>Details not covered by any other group of this subclass</b>  |
| 35/1002   | . {Reagent dispensers}  | 37/005         | . {Measurement methods not based on established scientific theories}  |
| 35/1004   | . {Cleaning sample transfer devices}  | <b>2201/00</b> | <b>Features of devices classified in <a href="#">G01N 21/00</a></b>   |
| 2035/1006 | . . {Rinsing only the inside of the tip}  | 2201/02        | . Mechanical  |
| 35/1009   | . {Characterised by arrangements for controlling the aspiration or dispense of liquids}   | 2201/021       | . . Special mounting in general   |
| 35/1011   | . . {Control of the position or alignment of the transfer device}   | 2201/0212      | . . . Liquid borne; swimming apparatus  |
| 2035/1013 | . . . {Confirming presence of tip}  | 2201/0214      | . . . Airborne  |
| 35/1016   | . . {Control of the volume dispensed or introduced}   | 2201/0216      | . . . Vehicle borne   |
| 2035/1018 | . . . {Detecting inhomogeneities, e.g. foam, bubbles, clots}  | 2201/0218      | . . . Submersible, submarine  |
| 2035/102  | . . . {Preventing or detecting loss of fluid by dripping}   | 2201/022       | . . Casings   |
| 2035/1023 | . . . . {using a valve in the tip or nozzle}  | 2201/0221      | . . . Portable; cableless; compact; hand-held   |
| 2035/1025 | . . . {Fluid level sensing}   | 2201/0222      | . . . Pocket size   |
| 2035/1027 | . . {General features of the devices}   | 2201/0224      | . . . Pivoting casing   |
| 2035/103  | . . . {using disposable tips}   | 2201/0225      | . . . Part of casing being slidable, telescopic   |
| 2035/1032 | . . . {Dilution or aliquotting}   | 2201/0227      | . . . Sealable enclosure  |
| 2035/1034 | . . . {Transferring microquantities of liquid}  | 2201/0228      | . . . Moulded parts   |
| 2035/1037 | . . . . {Using surface tension, e.g. pins or wires}   | 2201/023       | . . Controlling conditions in casing  |
| 2035/1039 | . . . . {Micropipettes, e.g. microcapillary tubes}  | 2201/0231      | . . . Thermostating   |
| 2035/1041 | . . . . {Ink-jet like dispensers}   | 2201/0233      | . . . Gas purge   |
| 2035/1044 | . . . . {Using pneumatic means}   | 2201/0235      | . . . . with gas filters in casing  |
| 2035/1046 | . . . . {Levitated, suspended drops}  | 2201/0236      | . . . Explosion proof   |
| 2035/1048 | . . . {using the transfer device for another function}  | 2201/0238      | . . . Moisture monitoring or controlling  |
| 2035/1051 | . . . . {for transporting containers, e.g. retained by friction}  | 2201/024       | . . Modular construction  |
| 2035/1053 | . . . . {for separating part of the liquid, e.g. filters, extraction phase}   | 2201/0245      | . . . with insertable-removable part  |
| 2035/1055 | . . . . {for immobilising reagents, e.g. dried reagents}  | 2201/025       | . . Mechanical control of operations  |
| 2035/1058 | . . . . {for mixing}  | 2201/0253      | . . . Switches mounted at the casing  |
| 2035/106  | . . . . {by sucking and blowing}  | 2201/0256      | . . . Sensor for insertion of sample, cuvette, test strip   |
| 2035/1062 | . . . . {for testing the liquid while it is in the transfer device}   | 2201/04        | . Batch operation; multisample devices  |
| 35/1065   | . . {Multiple transfer devices}   | 2201/0407      | . . with multiple optical units, e.g. one per sample  |
| 35/1067   | . . {for transfer to or from containers having different spacing}   | 2201/0415      | . . Carrusel, sequential  |
| 2035/1069 | . . . . {by adjusting the spacing between multiple probes of a single transferring head}  | 2201/0423      | . . . with rotating optics  |
| 35/1072   | . . . {with provision for selective pipetting of individual channels}   | 2201/043       | . . . . optics constituted by optical fibre multiplex selector  |
| 35/1074   | . . . {arranged in a two-dimensional array}   | 2201/0438      | . . Linear motion, sequential   |
| 2035/1076 | . . . {plurality or independently movable heads}  | 2201/0446      | . . Multicell plate, sequential   |
| 35/1079   | . . {with means for piercing stoppers or septums}   | 2201/0453      | . . Multicell sequential and multitest, e.g. multiwavelength  |
| 35/1081   | . . {characterised by the means for relatively moving the transfer device and the containers in an horizontal plane ( <a href="#">G01N 35/1011</a> takes precedence)}                 | 2201/0461      | . . Simultaneous, e.g. video imaging  |
| 35/1083   | . . . {with one horizontal degree of freedom}   | 2201/0469      | . . One cell, sequential, e.g. successive samples   |
| 2035/1086 | . . . . {Cylindrical, e.g. variable angle}  | 2201/0476      | . . Keyboard controlled, e.g. for plural analysis at one sample, channel selection, coding  |
| 2035/1088 | . . . . . {Coaxial with a carousel}   | 2201/0484      | . . Computer controlled   |
|           |   | 2201/0492      | . . Automatised microscope  |
|           |   | 2201/06        | . Illumination; Optics  |
|           |   | 2201/061       | . . Sources   |
|           |   | 2201/06106     | . . . Plural sources used for calibration   |
|           |   | 2201/06113     | . . . Coherent sources; lasers  |
|           |   | 2201/0612      | . . . . Laser diodes  |
|           |   | 2201/06126     | . . . Large diffuse sources   |
|           |   | 2201/06133     | . . . . Light tables  |

|            |         |   |           |         |  |
|------------|---------|---|-----------|---------|--|
| 2201/0614  | . . . . | Diffusing light tube with sample within                                       | 2201/0699 | . . . . | Randomly pulsed source                                       |
| 2201/06146 | . . .   | Multisources for homogenisation, as well sequential as simultaneous operation | 2201/08   | .       | Optical fibres; light guides                                 |
| 2201/06153 | . . . . | the sources being LED's   | 2201/0806 | . .     | Light rod  |
| 2201/0616  | . . .   | Ambient light is used   | 2201/0813 | . .     | Arrangement of collimator tubes, glass or empty              |
| 2201/06166 | . . .   | Line selective sources  | 2201/082  | . .     | Fibres for a reference path                                  |
| 2201/06173 | . . . . | IR sources from heated molecular species                                      | 2201/0826 | . .     | Fibre array at source, distributing                          |
| 2201/0618  | . . . . | Halogene sources  | 2201/0833 | . .     | Fibre array at detector, resolving                           |
| 2201/06186 | . . .   | Resistance heated; wire sources; lamelle sources                              | 2201/084  | . .     | Fibres for remote transmission                               |
| 2201/06193 | . . .   | Secondary <u>in-situ</u> sources, e.g. fluorescent particles                  | 2201/0846 | . .     | Fibre interface with sample, e.g. for spatial resolution     |
| 2201/062   | . .     | LED's   | 2201/0853 | . .     | Movable fibre optical member, e.g. for scanning or selecting |
| 2201/0621  | . . .   | Supply  | 2201/086  | . .     | Modular construction, e.g. disconnectable fibre parts        |
| 2201/0622  | . . .   | Use of a compensation LED   | 2201/0866 | . .     | Use of GRIN elements   |
| 2201/0623  | . . .   | Use of a reference LED  | 2201/0873 | . .     | Using optically integrated constructions                     |
| 2201/0624  | . . .   | Compensating variation in output of LED source                                | 2201/088  | . .     | Using a sensor fibre   |
| 2201/0625  | . . .   | Modulated LED   | 2201/0886 | . . .   | and using OTDR   |
| 2201/0626  | . . .   | Use of several LED's for spatial resolution                                   | 2201/0893 | . .     | Using fibres for resolution in time                          |
| 2201/0627  | . . .   | Use of several LED's for spectral resolution                                  | 2201/10   | .       | Scanning   |
| 2201/0628  | . . .   | Organic LED [OLED]  | 2201/101  | . .     | Scanning measuring head                                      |
| 2201/063   | . .     | Illuminating optical parts  | 2201/102  | . .     | Video camera   |
| 2201/0631  | . . .   | Homogeneising elements  | 2201/103  | . .     | Scanning by mechanical motion of stage                       |
| 2201/0632  | . . . . | homogeneising by integrating sphere   | 2201/1035 | . . .   | 3D motion  |
| 2201/0633  | . . .   | Directed, collimated illumination   | 2201/104  | . .     | Mechano-optical scan, i.e. object and beam moving            |
| 2201/0634  | . . .   | Diffuse illumination  | 2201/1042 | . . .   | X, Y scan, i.e. object moving in X, beam in Y                |
| 2201/0635  | . . .   | Structured illumination, e.g. with grating                                    | 2201/1045 | . . .   | Spiral scan  |
| 2201/0636  | . . .   | Reflectors  | 2201/1047 | . . .   | with rotating optics and moving stage                        |
| 2201/0637  | . . . . | Elliptic  | 2201/105  | . .     | Purely optical scan  |
| 2201/0638  | . . .   | Refractive parts  | 2201/1053 | . . .   | System of scan mirrors for composite motion of beam          |
| 2201/0639  | . . . . | Sphere lens   | 2201/1056 | . . .   | Prism scan, diasporameter                                    |
| 2201/064   | . .     | Stray light conditioning  | 2201/106  | . .     | Acousto-optical scan   |
| 2201/0642  | . . .   | Light traps; baffles  | 2201/107  | . .     | CRT flying spot scan   |
| 2201/0644  | . . . . | Simple baffled tube construction  | 2201/108  | . .     | Miscellaneous  |
| 2201/0646  | . . .   | Light seals   | 2201/1082 | . . .   | Descanning   |
| 2201/0648  | . . .   | Shutters  | 2201/1085 | . . .   | Using optical fibre array and scanner                        |
| 2201/065   | . .     | Integrating spheres   | 2201/1087 | . . .   | Focussed scan beam, e.g. laser                               |
| 2201/0655  | . . .   | Hemispheres   | 2201/11   | . .     | Monitoring and controlling the scan                          |
| 2201/066   | . .     | Modifiable path; multiple paths in one sample                                 | 2201/112  | . . .   | Grating pulse time encoder                                   |
| 2201/0662  | . . .   | Comparing measurements on two or more paths in one sample                     | 2201/115  | . . .   | Optical equalisation of scan intensity                       |
| 2201/0664  | . . .   | Using two ways, i.e. two devices in same path in one sample                   | 2201/117  | . . .   | Indexed, memorised or programmed scan                        |
| 2201/0666  | . . .   | Selectable paths; insertable multiple sources                                 | 2201/12   | .       | Circuits of general importance; Signal processing            |
| 2201/0668  | . . .   | Multiple paths; optimisable path length                                       | 2201/121  | . .     | Correction signals   |
| 2201/067   | . .     | Electro-optic, magneto-optic, acousto-optic elements                          | 2201/1211 | . . .   | for temperature  |
| 2201/0675  | . . .   | SLM   | 2201/1212 | . . . . | and switch-off from upwarming                                |
| 2201/068   | . .     | Optics, miscellaneous   | 2201/1214 | . . .   | for humidity   |
| 2201/0683  | . . .   | Brewster plate; polarisation controlling elements                             | 2201/1215 | . . .   | for interfering gases  |
| 2201/0686  | . . .   | Cold filter; IR filter  | 2201/1217 | . . .   | for index of solution, carrying fluids                       |
| 2201/069   | . .     | Supply of sources   | 2201/1218 | . . .   | for pressure variations                                      |
| 2201/0691  | . . .   | Modulated (not pulsed supply)   | 2201/122  | . .     | Kinetic analysis; determining reaction rate                  |
| 2201/0692  | . . .   | Regulated sources; stabilised supply  | 2201/1222 | . . .   | Endpoint determination; reaction time determination          |
| 2201/0693  | . . .   | Battery powered circuitry   | 2201/1224 | . . .   | Polymerisation   |
| 2201/0694  | . . .   | Microprocessor controlled supply  | 2201/1226 | . . .   | Relaxation methods, e.g. temperature jump, field jump        |
| 2201/0695  | . . .   | Supply to maintain constant beam intensity                                    | 2201/1228 | . . .   | Reading time being controlled, e.g. by microprocessor        |
| 2201/0696  | . . .   | Pulsed  | 2201/123  | . .     | Conversion circuit   |
| 2201/0697  | . . . . | Pulsed lasers   | 2201/1232 | . . .   | Log representation, e.g. for low transmittance               |
| 2201/0698  | . . . . | Using reference pulsed source   |           |         |  |

|            |  |   |           |         |  |     |                    |
|------------|--|---|-----------|---------|--|-----|--------------------|
| 2201/1235  | . . .  | Measuring or displaying selectably absorbance or density      | 2203/0026 | . . .   | Combination of several types of applied forces   |     |                    |
| 2201/1237  | . . .  | Measuring extrema   | 2203/0028 | . . .   | Rotation and bending   |     |                    |
| 2201/124   | . .  | Sensitivity   | 2203/003  | .       | Generation of the force  |     |                    |
| 2201/1241  | . . .  | Multirange  | 2203/0032 | . .     | using mechanical means   |     |                    |
| 2201/1242  | . . .  | Validating, e.g. range invalidation, suspending operation     | 2203/0033 | . . .   | Weight   |     |                    |
| 2201/1244  | . . .  | Ambient light detector, e.g. for invalidating                 | 2203/0035 | . . .   | Spring   |     |                    |
| 2201/1245  | . . .  | Averaging several measurements                                | 2203/0037 | . . .   | involving a rotating movement, e.g. gearing, cam, eccentric, or centrifuge effects   |     |                    |
| 2201/1247  | . . .  | Thresholding  | 2203/0039 | . . .   | Hammer or pendulum   |     |                    |
| 2201/1248  | . . .  | Validating from signal shape, slope, peak                     | 2203/0041 | . . .   | Human or animal power  |     |                    |
| 2201/125   | . .  | Digital circuitry   | 2203/0042 | . .     | Pneumatic or hydraulic means   |     |                    |
| 2201/126   | . .  | Microprocessor processing                                     | 2203/0044 | . . .   | Pneumatic means  |     |                    |
| 2201/1263  | . . .  | Microprocessor is used as variant to separate part circuits   | 2203/0046 | . . . . | Vacuum   |     |                    |
| 2201/1266  | . . .  | Interface card  | 2203/0048 | . . .   | Hydraulic means  |     |                    |
| 2201/127   | . .  | Calibration; base line adjustment; drift compensation         | 2203/005  | . .     | Electromagnetic means  |     |                    |
| 2201/12707 | . . .  | Pre-test of apparatus, e.g. dark test, sensor test            | 2203/0051 | . . .   | Piezoelectric means  |     |                    |
| 2201/12715 | . . .  | Zero adjustment, i.e. to verify calibration                   | 2203/0053 | . .     | Cutting or drilling tools  |     |                    |
| 2201/12723 | . . .  | Self check capacity; automatic, periodic step of checking     | 2203/0055 | . .     | using mechanical waves, e.g. acoustic  |     |                    |
| 2201/1273  | . . .  | Check triggered by sensing conditions, e.g. ambient changes   | 2203/0057 | . .     | using stresses due to heating, e.g. conductive heating, radiative heating  |     |                    |
| 2201/12738 | . . .  | Selectively initiating check                                  | 2203/0058 | . .     | Kind of property studied   |     |                    |
| 2201/12746 | . . .  | Calibration values determination                              | 2203/006  | . .     | Crack, flaws, fracture or rupture  |     |                    |
| 2201/12753 | . . . .  | and storage   | 2203/0062 | . . .   | Crack or flaws   |     |                    |
| 2201/12761 | . . . .  | Precalibration, e.g. for a given series of reagents           | 2203/0064 | . . . . | Initiation of crack  |     |                    |
| 2201/12769 | . . . .  | and adjusting controls, e.g. zero and 100 %                   | 2203/0066 | . . . . | Propagation of crack   |     |                    |
| 2201/12776 | . . . .  | Automatic scaling up  | 2203/0067 | . . .   | Fracture or rupture  |     |                    |
| 2201/12784 | . . . .  | Base line obtained from computation, histogram                | 2203/0069 | . .     | Fatigue, creep, strain-stress relations or elastic constants   |     |                    |
| 2201/12792 | . . .  | Compensating own radiation in apparatus                       | 2203/0071 | . . .   | Creep  |     |                    |
| 2201/128   | . .  | Alternating sample and standard or reference part in one path | 2203/0073 | . . .   | Fatigue  |     |                    |
| 2201/1281  | . . .  | Reflecting part, i.e. for autocollimation                     | 2203/0075 | . . .   | Strain-stress relations or elastic constants   |     |                    |
| 2201/1283  | . . .  | Opaque part   | 2203/0076 | . .     | Hardness, compressibility or resistance to crushing  |     |                    |
| 2201/1285  | . . .  | Standard cuvette  | 2203/0078 | . . .   | using indentation  |     |                    |
| 2201/1286  | . . . .  | More than one cuvette   | 2203/008  | . . . . | Residual indentation measurement   |     |                    |
| 2201/1288  | . . .  | Calibration medium periodically inserted in one cell          | 2203/0082 | . . . . | Indentation characteristics measured during load   |     |                    |
| 2201/129   | . .  | Using chemometrical methods                                   | 2203/0083 | . . .   | Rebound strike or reflected energy   |     |                    |
| 2201/1293  | . . .  | resolving multicomponent spectra                              | 2203/0085 | . . .   | Compressibility  |     |                    |
| 2201/1296  | . . .  | using neural networks   | 2203/0087 | . . .   | Resistance to crushing   |     |                    |
| 2201/13    | . .  | Standards, constitution                                       | 2203/0089 | . .     | Biorheological properties  |     |                    |
| 2203/00    | Investigating strength properties of solid materials by application of mechanical stress |   |           |         | 2203/0091  | . . | Peeling or tearing |
| 2203/0001  | . .  | Type of application of the stress                             | 2203/0092 | . .     | Visco-elasticity, solidification, curing, cross-linking degree, vulcanisation or strength properties of semi-solid materials |     |                    |
| 2203/0003  | . .  | Steady  | 2203/0094 | . . .   | Visco-elasticity   |     |                    |
| 2203/0005  | . .  | Repeated or cyclic  | 2203/0096 | . .     | Fibre-matrix interaction in composites   |     |                    |
| 2203/0007  | . . .  | Low frequencies up to 100 Hz                                  | 2203/0098 | . .     | Tests specified by its name, e.g. Charpy, Brinell, Mullen  |     |                    |
| 2203/0008  | . . .  | High frequencies from 10 000 Hz                               | 2203/02   | . .     | Details not specific for a particular testing method   |     |                    |
| 2203/001   | . .  | Impulsive   | 2203/0202 | . .     | Control of the test  |     |                    |
| 2203/0012  | . .  | Constant speed test   | 2203/0204 | . . .   | Safety arrangements, e.g. remote control, emergency stop   |     |                    |
| 2203/0014  | . .  | Type of force applied   | 2203/0206 | . . .   | Means for supplying or positioning specimens or exchangeable parts of the machine such as indenters...                       |     |                    |
| 2203/0016  | . .  | Tensile or compressive  | 2203/0208 | . . .   | Specific programs of loading, e.g. incremental loading or pre-loading  |     |                    |
| 2203/0017  | . . .  | Tensile   | 2203/021  | . . .   | Treatment of the signal; Calibration   |     |                    |
| 2203/0019  | . . .  | Compressive   | 2203/0212 | . . .   | Theories, calculations   |     |                    |
| 2203/0021  | . .  | Torsional   | 2203/0214 | . . . . | Calculations a priori without experimental data  |     |                    |
| 2203/0023  | . .  | Bending   |           |         |  |     |                    |
| 2203/0025  | . .  | Shearing  |           |         |  |     |                    |

|           |           |  |                |         |   |
|-----------|-----------|--|----------------|---------|---|
| 2203/0216 | . . . .   | Finite elements  | 2203/0447      | . . .   | Holders for quick insertion/removal of test pieces                |
| 2203/0218 | . . . .   | Calculations based on experimental data  | 2203/0452      | . . .   | Cushioning layer between test piece and grip                      |
| 2203/022  | . .       | Environment of the test  | 2203/0458      | . . .   | characterised by their material                                   |
| 2203/0222 | . . .     | Temperature  | 2203/0464      | . . .   | with provisions for testing more than one specimen at the time    |
| 2203/0224 | . . . .   | Thermal cycling  | 2203/047       | . . . . | in series   |
| 2203/0226 | . . . .   | High temperature; Heating means  | 2203/0476      | . . . . | in parallel   |
| 2203/0228 | . . . .   | Low temperature; Cooling means   | 2203/0482      | . . .   | comprising sensing means  |
| 2203/023  | . . .     | Pressure   | 2203/0488      | . . . . | Diamond anvil cells   |
| 2203/0232 | . . . .   | High pressure  | 2203/0494      | . . . . | Clamping ring, "whole periphery" clamping                         |
| 2203/0234 | . . . .   | Low pressure; Vacuum   | 2203/06        | . .     | Indicating or recording means; Sensing means                      |
| 2203/0236 | . . .     | Other environments   | 2203/0605      | . . .   | Mechanical indicating, recording or sensing means                 |
| 2203/0238 | . . . .   | Inert  | 2203/0611      | . . .   | Hydraulic or pneumatic indicating, recording or sensing means     |
| 2203/024  | . . . .   | Corrosive  | 2203/0617      | . . .   | Electrical or magnetic indicating, recording or sensing means     |
| 2203/0242 | . . . .   | With circulation of a fluid  | 2203/0623      | . . . . | using piezo-electric gauges                                       |
| 2203/0244 | . . .     | Tests performed " <u>in situ</u> " or after " <u>in situ</u> " use   | 2203/0629      | . . . . | using thin films, paintings                                       |
| 2203/0246 | . . . .   | Special simulation of " <u>in situ</u> " conditions, scale models or dummies   | 2203/0635      | . . . . | using magnetic properties   |
| 2203/0248 | . . .     | Tests "on-line" during fabrication   | 2203/0641      | . . .   | using optical, X-ray, ultra-violet, infrared or similar detectors |
| 2203/025  | . .       | Geometry of the test   | 2203/0647      | . . . . | Image analysis  |
| 2203/0252 | . . .     | Monoaxial, i.e. the forces being applied along a single axis of the specimen   | 2203/0652      | . . . . | using contrasting ink, painting, staining                         |
| 2203/0254 | . . .     | Biaxial, the forces being applied along two normal axes of the specimen  | 2203/0658      | . . .   | using acoustic or ultrasonic detectors                            |
| 2203/0256 | . . .     | Triaxial, i.e. the forces being applied along three normal axes of the specimen                                      | 2203/0664      | . . .   | using witness specimens   |
| 2203/0258 | . . .     | Non axial, i.e. the forces not being applied along an axis of symmetry of the specimen                               | 2203/067       | . . .   | Parameter measured for estimating the property                    |
| 2203/026  | . .       | Specifications of the specimen   | 2203/0676      | . . . . | Force, weight, load, energy, speed or acceleration                |
| 2203/0262 | . . .     | Shape of the specimen  | 2203/0682      | . . . . | Spatial dimension, e.g. length, area, angle                       |
| 2203/0264 | . . . .   | Beam   | 2203/0688      | . . . . | Time or frequency   |
| 2203/0266 | . . . .   | Cylindrical specimens  | 2203/0694      | . . . . | Temperature   |
| 2203/0268 | . . . .   | Dumb-bell specimens  | <b>2223/00</b> |         | <b>Investigating materials by wave or particle radiation</b>      |
| 2203/027  | . . . .   | Specimens with holes or notches  | 2223/01        | . .     | by radioactivity, nuclear decay                                   |
| 2203/0272 | . . . .   | Cruciform specimens  | 2223/03        | . .     | by transmission   |
| 2203/0274 | . . . .   | Tubular or ring-shaped specimens   | 2223/04        | . .     | and measuring absorption  |
| 2203/0276 | . . . .   | Spherical specimens  | 2223/041       | . . .   | X-ray absorption fine structure [EXAFS]                           |
| 2203/0278 | . . . .   | Thin specimens   | 2223/043       | . . .   | gamma ray resonance absorption (Mossbauer effect)                 |
| 2203/028  | . . . . . | One dimensional, e.g. filaments, wires, ropes or cables  | 2223/045       | . .     | combination of at least 2 measurements (transmission and scatter) |
| 2203/0282 | . . . . . | Two dimensional, e.g. tapes, webs, sheets, strips, disks or membranes  | 2223/05        | . .     | by diffraction, scatter or reflection                             |
| 2203/0284 | . . .     | Bulk material, e.g. powders  | 2223/051       | . .     | correcting for scatter  |
| 2203/0286 | . . .     | Miniature specimen; Testing on microregions of a specimen  | 2223/052       | . .     | reflection  |
| 2203/0288 | . . .     | Springs  | 2223/053       | . .     | back scatter  |
| 2203/029  | . . . .   | Leaf spring  | 2223/054       | . .     | small angle scatter   |
| 2203/0292 | . . . .   | Coil spring  | 2223/055       | . .     | scatter raster collimator   |
| 2203/0294 | . . . .   | Airs-spring, air bag spring or bellows   | 2223/056       | . .     | diffraction   |
| 2203/0296 | . . .     | Welds  | 2223/0561      | . . .   | diffraction cameras   |
| 2203/0298 | . . .     | Manufacturing or preparing specimens   | 2223/0563      | . . .   | measure of energy-dispersion spectrum of diffracted radiation     |
| 2203/04   | . .       | Chucks, fixtures, jaws, holders or anvils  | 2223/0565      | . . .   | diffraction of electrons, e.g. LEED                               |
| 2203/0405 | . . .     | Features allowing alignment between specimen and chucks  | 2223/0566      | . . .   | analysing diffraction pattern                                     |
| 2203/0411 | . . .     | using pneumatic or hydraulic pressure  | 2223/0568      | . . .   | spectro-diffractometry  |
| 2203/0417 | . . .     | using vacuum   | 2223/063       | . .     | inelastic scatter, e.g. Compton effect                            |
| 2203/0423 | . . .     | using screws   | 2223/064       | . .     | interference of radiation, e.g. Borrmann effect                   |
| 2203/0429 | . . .     | using adhesive bond; Gluing  | 2223/07        | . .     | secondary emission  |
| 2203/0435 | . . .     | modifying the type of the force applied, e.g. the chuck transforms a compressive machine for applying a bending test | 2223/071       | . .     | combination of measurements, at least 1 secondary emission        |
| 2203/0441 | . . .     | with dampers or shock absorbing means  |                |         |   |

|           |  |           |   |
|-----------|--|-----------|---|
| 2223/072  | . . combination of measurements, 2 kinds of secondary emission       | 2223/3106 | . . . heating, furnaces   |
| 2223/073  | . . use of a laser   | 2223/311  | . . high pressure testing, anvil cells  |
| 2223/074  | . . activation analysis  | 2223/312  | . . powder preparation  |
| 2223/0745 | . . . neutron-gamma activation analysis                              | 2223/313  | . . filters, rotating filter disc   |
| 2223/076  | . . X-ray fluorescence   | 2223/314  | . . chopper   |
| 2223/0763 | . . . Compton background correcting                                  | 2223/315  | . . monochromators  |
| 2223/0766 | . . . X-ray fluorescence with indicator, tags                        | 2223/316  | . . collimators   |
| 2223/079  | . . incident electron beam and measuring excited X-rays              | 2223/317  | . . windows   |
| 2223/08   | . . incident electron beam and measuring cathode luminescence (U.V.) | 2223/318  | . . protective films  |
| 2223/081  | . . incident ion beam, e.g. proton                                   | 2223/319  | . . using opaque penetrant medium   |
| 2223/0813 | . . . incident ion beam and measuring X-rays [PIXE]                  | 2223/32   | . . adjustments of elements during operation                                  |
| 2223/0816 | . . . incident ion beam and measuring secondary ion beam [SIMS]      | 2223/321  | . . manipulator for positioning a part  |
| 2223/084  | . . photo-electric effect  | 2223/322  | . . immersed detecting head   |
| 2223/085  | . . photo-electron spectrum [ESCA, XPS]                              | 2223/323  | . . irradiation range monitor, e.g. light beam                                |
| 2223/086  | . . Auger electrons  | 2223/33   | . . scanning, i.e. relative motion for measurement of successive object-parts |
| 2223/09   | . . exo-electron emission  | 2223/3301 | . . . beam is modified for scan, e.g. moving collimator                       |
| 2223/095  | . . tribo-emission   | 2223/3302 | . . . object and detector fixed   |
| 2223/10   | . Different kinds of radiation or particles                          | 2223/3303 | . . . object fixed; source and detector move                                  |
| 2223/1003 | . . monochromatic  | 2223/3304 | . . . helicoidal scan   |
| 2223/1006 | . . different radiations, e.g. X and alpha                           | 2223/3305 | . . . detector fixed; source and body moving                                  |
| 2223/101  | . . electromagnetic radiation  | 2223/3306 | . . . object rotates  |
| 2223/1013 | . . . gamma  | 2223/3307 | . . . source and detector fixed; object moves                                 |
| 2223/1016 | . . . X-ray  | 2223/3308 | . . . object translates   |
| 2223/102  | . . beta or electrons  | 2223/331  | . . rocking curve analysis  |
| 2223/104  | . . ions   | 2223/335  | . . electronic scanning   |
| 2223/1045 | . . . alpha  | 2223/34   | . . sensing means for gap between source and detector                         |
| 2223/105  | . . molecular or atomic beams  | 2223/345  | . . mathematical transformations on beams or signals, e.g. Fourier            |
| 2223/106  | . . neutrons   | 2223/348  | . . ellipsoidal collector   |
| 2223/1063 | . . . fast   | 2223/351  | . . prohibiting charge accumulation on sample substrate                       |
| 2223/1066 | . . . thermal  | 2223/40   | . Imaging   |
| 2223/107  | . . protons  | 2223/401  | . . image processing  |
| 2223/108  | . . positrons; electron-positron annihilation                        | 2223/402  | . . mapping distribution of elements  |
| 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  | . . stimuable 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  |           |   |
| 2223/3103 | . . . cooling, cryostats   |           |   |

|           |  |                |  |
|-----------|--|----------------|--|
| 2223/425  | . . temporal (time difference) subtraction processing    | 2223/639       | . . material in a container  |
| 2223/426  | . . image comparing, unknown with known substance        | 2223/64        | . . multiple-sample chamber, multiplicity of materials                 |
| 2223/427  | . . stepped imaging (selected area of sample is changed) | 2223/641       | . . particle sizing  |
| 2223/50   | . Detectors  | 2223/642       | . . moving sheet, web  |
| 2223/501  | . . array  | 2223/6425      | . . . correcting for web flutter                                       |
| 2223/5015 | . . . linear array                                       | 2223/643       | . . object on conveyor   |
| 2223/502  | . . ionisation chamber                                   | 2223/645       | . . quality control  |
| 2223/503  | . . auxiliary reference detector                         | 2223/646       | . . flaws, defects   |
| 2223/504  | . . pin-diode  | 2223/6462      | . . . microdefects   |
| 2223/505  | . . scintillation  | 2223/6464      | . . . radioactive substance into defect site                           |
| 2223/5055 | . . . scintillation crystal coupled to PMT               | 2223/6466      | . . . flaws comparing to predetermined standards                       |
| 2223/506  | . . time-of-flight                                       | 2223/6468      | . . . at different temperatures  |
| 2223/507  | . . secondary-emission detector                          | 2223/647       | . . leak detection   |
| 2223/508  | . . photo-acoustic                                       | 2223/648       | . . voids  |
| 2223/509  | . . infra-red  | 2223/649       | . . porosity   |
| 2223/60   | . Specific applications or type of materials             | 2223/65        | . . cavitation pits  |
| 2223/601  | . . density profile                                      | 2223/651       | . . dust   |
| 2223/602  | . . crystal growth                                       | 2223/652       | . . impurities, foreign matter, trace amounts                          |
| 2223/603  | . . superlattices  | 2223/66        | . . multiple steps inspection, e.g. coarse/fine                        |
| 2223/604  | . . monocrystal  |                |  |
| 2223/605  | . . phases   | <b>2291/00</b> | <b>Indexing codes associated with group <a href="#">G01N 29/00</a></b> |
| 2223/606  | . . texture  | 2291/01        | . Indexing codes associated with the measuring variable                |
| 2223/607  | . . strain   | 2291/011       | . . Velocity or travel time  |
| 2223/608  | . . superconductors                                      | 2291/012       | . . Phase angle  |
| 2223/61   | . . thin films, coatings                                 | 2291/014       | . . Resonance or resonant frequency                                    |
| 2223/611  | . . patterned objects; electronic devices                | 2291/015       | . . Attenuation, scattering  |
| 2223/6113 | . . . printed circuit board [PCB]                        | 2291/017       | . . Doppler techniques   |
| 2223/6116 | . . . semiconductor wafer                                | 2291/018       | . . Impedance  |
| 2223/612  | . . biological material                                  | 2291/02        | . Indexing codes associated with the analysed material                 |
| 2223/6123 | . . . bone mineral                                       | 2291/021       | . . Gases  |
| 2223/6126 | . . . tissue   | 2291/0212      | . . . Binary gases   |
| 2223/613  | . . moisture   | 2291/0215      | . . . Mixtures of three or more gases, e.g. air                        |
| 2223/614  | . . road surface   | 2291/0217      | . . . Smoke, combustion gases  |
| 2223/615  | . . composite materials, multilayer laminates            | 2291/022       | . . Liquids  |
| 2223/616  | . . earth materials                                      | 2291/0222      | . . . Binary liquids   |
| 2223/617  | . . ash in coal  | 2291/0224      | . . . Mixtures of three or more liquids                                |
| 2223/618  | . . food   | 2291/0226      | . . . Oils, e.g. engine oils   |
| 2223/619  | . . wood   | 2291/0228      | . . . Aqueous liquids  |
| 2223/62   | . . powders  | 2291/023       | . . Solids   |
| 2223/621  | . . tobacco  | 2291/0231      | . . . Composite or layered materials                                   |
| 2223/622  | . . paper  | 2291/0232      | . . . Glass, ceramics, concrete or stone                               |
| 2223/623  | . . plastics   | 2291/0234      | . . . Metals, e.g. steel   |
| 2223/624  | . . steel, castings                                      | 2291/0235      | . . . Plastics; polymers; soft materials, e.g. rubber                  |
| 2223/625  | . . nuclear fuels, laser imploded targets                | 2291/0237      | . . . Thin materials, e.g. paper, membranes, thin films                |
| 2223/626  | . . radioactive material                                 | 2291/0238      | . . . Wood   |
| 2223/6265 | . . . sample with radioactive tracer, tag, label         | 2291/024       | . . Mixtures   |
| 2223/627  | . . tyres  | 2291/02408     | . . . Solids in gases, e.g. particle suspensions                       |
| 2223/628  | . . tubes, pipes   | 2291/02416     | . . . Solids in liquids  |
| 2223/629  | . . welds, bonds, sealing compounds                      | 2291/02425     | . . . Liquids in gases, e.g. sprays                                    |
| 2223/63   | . . turbine blades                                       | 2291/02433     | . . . Gases in liquids, e.g. bubbles, foams                            |
| 2223/631  | . . large structures, walls                              | 2291/02441     | . . . Liquids in porous solids   |
| 2223/632  | . . residual life, life expectancy                       | 2291/0245      | . . . Gases in porous solids   |
| 2223/633  | . . thickness, density, surface weight (unit area)       | 2291/02458     | . . . Solids in solids, e.g. granules                                  |
| 2223/634  | . . wear behaviour, roughness                            | 2291/02466     | . . . Biological material, e.g. blood                                  |
| 2223/635  | . . fluids, granulates                                   | 2291/02475     | . . . Tissue characterisation  |
| 2223/636  | . . fluid sample with radioactive sources                | 2291/02483     | . . . Other human or animal parts, e.g. bones                          |
| 2223/637  | . . liquid   | 2291/02491     | . . . Materials with nonlinear acoustic properties                     |
| 2223/638  | . . gas  | 2291/025       | . . Change of phase or condition                                       |

|            |   |                |   |
|------------|---|----------------|---|
| 2291/0251  | . . . Solidification, icing, curing composites, polymerisation              | 2291/2632      | . . . flat  |
| 2291/0252  | . . . Melting, molten solids  | 2291/2634      | . . . cylindrical from outside  |
| 2291/0253  | . . . Condensation  | 2291/2636      | . . . cylindrical from inside   |
| 2291/0254  | . . . Evaporation   | 2291/2638      | . . . Complex surfaces  |
| 2291/0255  | . . . (Bio)chemical reactions, e.g. on biosensors                           | 2291/265       | . . Spherical objects   |
| 2291/0256  | . . . Adsorption, desorption, surface mass change, e.g. on biosensors       | 2291/267       | . . Welds   |
| 2291/0257  | . . . . with a layer containing at least one organic compound               | 2291/2672      | . . . Spot welding  |
| 2291/0258  | . . . Structural degradation, e.g. fatigue of composites, ageing of oils    | 2291/2675      | . . . Seam, butt welding  |
| 2291/028   | . . Material parameters   | 2291/2677      | . . . Lapp welding  |
| 2291/02809 | . . . Concentration of a compound, e.g. measured by a surface mass change   | 2291/269       | . . Various geometry objects  |
| 2291/02818 | . . . Density, viscosity  | 2291/2691      | . . . Bolts, screws, heads  |
| 2291/02827 | . . . Elastic parameters, strength or force                                 | 2291/2692      | . . . Tyres   |
| 2291/02836 | . . . Flow rate, liquid level   | 2291/2693      | . . . Rotor or turbine parts  |
| 2291/02845 | . . . Humidity, wetness   | 2291/2694      | . . . Wings or other aircraft parts   |
| 2291/02854 | . . . Length, thickness   | 2291/2695      | . . . Bottles, containers   |
| 2291/02863 | . . . Electric or magnetic parameters                                       | 2291/2696      | . . . Wheels, Gears, Bearings   |
| 2291/02872 | . . . Pressure  | 2291/2697      | . . . Wafer or (micro)electronic parts  |
| 2291/02881 | . . . Temperature   | 2291/2698      | . . . Other discrete objects, e.g. bricks   |
| 2291/0289  | . . . Internal structure, e.g. defects, grain size, texture                 |                |   |
| 2291/04    | . Wave modes and trajectories   | <b>2333/00</b> | <b>Assays involving biological materials from specific organisms or of a specific nature</b>  |
| 2291/042   | . . Wave modes  |                | <b>NOTE</b>   |
| 2291/0421  | . . . Longitudinal waves  |                | In groups <a href="#">G01N 2333/47</a> - <a href="#">G01N 2333/994</a> indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism. |
| 2291/0422  | . . . Shear waves, transverse waves, horizontally polarised waves           | 2333/001       | . by chemical synthesis   |
| 2291/0423  | . . . Surface waves, e.g. Rayleigh waves, Love waves                        | 2333/003       | . . of Peptide-nucleic acids (PNAs)   |
| 2291/0425  | . . . Parallel to the surface, e.g. creep waves                             | 2333/005       | . from viruses  |
| 2291/0426  | . . . Bulk waves, e.g. quartz crystal microbalance, torsional waves         | 2333/01        | . . DNA viruses   |
| 2291/0427  | . . . Flexural waves, plate waves, e.g. Lamb waves, tuning fork, cantilever | 2333/015       | . . . Parvoviridae, e.g. feline panleukopenia virus, human Parvovirus   |
| 2291/0428  | . . . Mode conversion   | 2333/02        | . . . Hepadnaviridae, e.g. hepatitis B virus  |
| 2291/043   | . . Complex trajectories  | 2333/025       | . . . Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus  |
| 2291/044   | . . Internal reflections (echoes), e.g. on walls or defects                 | 2333/03        | . . . Herpetoviridae, e.g. pseudorabies virus   |
| 2291/045   | . . External reflections, e.g. on reflectors                                | 2333/032       | . . . . Pseudorabies virus, i.e. Aujeszky virus   |
| 2291/048   | . . Transmission, i.e. analysed material between transmitter and receiver   | 2333/035       | . . . . Herpes simplex virus I or II  |
| 2291/051   | . . Perpendicular incidence, perpendicular propagation                      | 2333/04        | . . . . Varicella-zoster virus  |
| 2291/052   | . . Perpendicular incidence, angular propagation                            | 2333/045       | . . . . . Cytomegalovirus   |
| 2291/055   | . . Angular incidence, perpendicular propagation                            | 2333/05        | . . . . Epstein-Barr virus  |
| 2291/056   | . . Angular incidence, angular propagation                                  | 2333/055       | . . . . Marek's disease virus   |
| 2291/057   | . . Angular incidence, parallel to surface propagation                      | 2333/06        | . . . . Infectious bovine rhinotracheitis virus   |
| 2291/10    | . Number of transducers   | 2333/065       | . . . Poxviridae, e.g. avipoxvirus  |
| 2291/101   | . . one transducer  | 2333/07        | . . . . Vaccinia virus; Variola virus   |
| 2291/102   | . . one emitter, one receiver   | 2333/075       | . . . Adenoviridae  |
| 2291/103   | . . one emitter, two or more receivers                                      | 2333/08        | . . RNA viruses   |
| 2291/104   | . . two or more emitters, one receiver                                      | 2333/085       | . . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus  |
| 2291/105   | . . two or more emitters, two or more receivers                             | 2333/09        | . . . . Foot-and-mouth disease virus  |
| 2291/106   | . . one or more transducer arrays   | 2333/095       | . . . . Rhinovirus  |
| 2291/26    | . Scanned objects   | 2333/10        | . . . . Hepatitis A virus   |
| 2291/262   | . . Linear objects  | 2333/105       | . . . . Poliovirus  |
| 2291/2623  | . . . Rails; Railroads  | 2333/11        | . . . Orthomyxoviridae, e.g. influenza virus  |
| 2291/2626  | . . . Wires, bars, rods   | 2333/115       | . . . Paramyxoviridae, e.g. parainfluenza virus   |
| 2291/263   | . . Surfaces  | 2333/12        | . . . . Mumps virus; Measles virus  |
|            |   | 2333/125       | . . . . Newcastle disease virus   |
|            |   | 2333/13        | . . . . Canine distemper virus  |
|            |   | 2333/135       | . . . . Respiratory syncytial virus   |
|            |   | 2333/14        | . . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus   |

|  |           |   |            |           |  |
|--|-----------|---|------------|-----------|--|
| 2333/145   | . . .     | Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus  | 2333/285   | . .       | from Pasteurellaceae (F), e.g. Haemophilus influenza   |
| 2333/15  | . . .     | Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus, feline leukaemia virus, human T-cell leukaemia-lymphoma virus                            | 2333/29    | . .       | from Richettsiales (o)   |
| 2333/155   | . . . .   | Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV   | 2333/295   | . .       | from Chlamydiales (o)  |
| 2333/16  | . . . . . | HIV-1, HIV-2  | 2333/30    | . .       | from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]                             |
| 2333/161   | . . . . . | gag-pol, e.g. p55, p24/25, p17/18, p.7, p6, p66/68, p51/52, p31/34, p32, p40  | 2333/305   | . .       | from Micrococcaceae (F)  |
| 2333/162   | . . . . . | env, e.g. gp160, gp110/120, gp41, V3, peptid T, DC4-Binding site  | 2333/31    | . . .     | from Staphylococcus (G)  |
| 2333/163   | . . . . . | Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx  | 2333/315   | . .       | from Streptococcus (G), e.g. Enterococci   |
| 2333/165   | . . .     | Coronaviridae, e.g. avian infectious bronchitis virus   | 2333/3153  | . . .     | Streptokinase  |
| 2333/17  | . . . .   | Porcine transmissible gastroenteritis virus   | 2333/3156  | . . .     | from Streptococcus pneumoniae (Pneumococcus) (Streptokinase <a href="#">G01N 2333/3153</a> ) |
| 2333/175   | . . .     | Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus  | 2333/32    | . .       | from Bacillus (G)  |
| 2333/18  | . . .     | Togaviridae; Flaviviridae   | 2333/325   | . . .     | Bacillus thuringiensis crystal protein (delta-endotoxin)                                     |
| 2333/181   | . . . .   | Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE or semliki forest virus ( <a href="#">rubella virus G01N 2333/19</a> )                     | 2333/33    | . .       | from Clostridium (G)   |
| 2333/183   | . . . .   | Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus) or border disease virus | 2333/335   | . .       | from Lactobacillus (G)   |
| 2333/185   | . . . . . | Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue  | 2333/34    | . .       | from Corynebacterium (G)   |
| 2333/186   | . . . . . | Hepatitis C; Hepatitis NANB   | 2333/345   | . .       | from Brevibacterium (G)  |
| 2333/188   | . . . . . | Hepatitis G; Hepatitis NANBNCNDNE   | 2333/35    | . .       | from Mycobacteriaceae (F)  |
| 2333/19  | . . . .   | Rubella virus   | 2333/355   | . .       | from Nocardia (G)  |
| 2333/195   | . .       | from bacteria   | 2333/36    | . .       | from Actinomyces; from Streptomyces (G)  |
| <b>NOTE</b>  |           |   | 2333/365   | . .       | from Actinoplanes (G)  |
| In groups <a href="#">G01N 2333/20</a> - <a href="#">G01N 2333/365</a> , where appropriate, after the bacteria terminology, the indication of the order (O), family (F) or genus (G) of the bacteria is given in brackets. |           |   | 2333/37    | . .       | from fungi   |
| 2333/20  | . .       | from Spirochaetales (O), e.g. Treponema, Leptospira   | 2333/375   | . .       | from Basidiomycetes  |
| 2333/205   | . .       | from Campylobacter (G)  | 2333/38    | . .       | from Aspergillus   |
| 2333/21  | . .       | from Pseudomonadaceae (F)   | 2333/385   | . .       | from Penicillium   |
| 2333/212   | . . .     | Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella or Psychrobacter   | 2333/39    | . .       | from yeasts  |
| 2333/215   | . .       | from Halobacteriaceae (F)   | 2333/395   | . . .     | from Saccharomyces   |
| 2333/22  | . .       | from Neisseriaceae (F), e.g. Acinetobacter  | 2333/40    | . . .     | from Candida   |
| 2333/225   | . .       | from Alcaligenes (G)  | 2333/405   | . .       | from algae   |
| 2333/23  | . .       | from Brucella (G)   | 2333/41    | . .       | from lichens   |
| 2333/235   | . .       | from Bordetella (G)   | 2333/415   | . .       | from plants  |
| 2333/24  | . .       | from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia   | 2333/42    | . .       | Lectins, e.g. concanavalin, phytohaemagglutinin  |
| 2333/245   | . . .     | Escherichia (G)   | 2333/425   | . .       | Zeins  |
| 2333/25  | . . .     | Shigella (G)  | 2333/43    | . .       | Sweetening agents, e.g. thaumatin, monellin  |
| 2333/255   | . . .     | Salmonella (G)  | 2333/435   | . .       | from animals; from humans  |
| 2333/26  | . . .     | Klebsiella (G)  | 2333/43504 | . . .     | from invertebrates   |
| 2333/265   | . . .     | Enterobacter (G)  | 2333/43508 | . . .     | from crustaceans   |
| 2333/27  | . . .     | Erwinia (G)   | 2333/43513 | . . .     | from arachnidae  |
| 2333/275   | . . .     | Hafnia (G)  | 2333/43517 | . . . .   | from spiders   |
| 2333/28  | . .       | from Vibrionaceae (F)   | 2333/43521 | . . . .   | from scorpions   |
|  |           |   | 2333/43526 | . . .     | from worms   |
|  |           |   | 2333/4353  | . . . .   | from nematodes   |
|  |           |   | 2333/43534 | . . . . . | from Caenorhabditis  |
|  |           |   | 2333/43539 | . . . . . | from cestodes  |
|  |           |   | 2333/43543 | . . . . . | from Taenia  |
|  |           |   | 2333/43547 | . . . . . | from trematodes  |
|  |           |   | 2333/43552 | . . .     | from insects   |
|  |           |   | 2333/43556 | . . . .   | from ticks   |
|  |           |   | 2333/4356  | . . . .   | from wasps   |
|  |           |   | 2333/43565 | . . . .   | from bees  |
|  |           |   | 2333/43569 | . . . .   | from flies   |
|  |           |   | 2333/43573 | . . . . . | from Drosophila  |
|  |           |   | 2333/43578 | . . . . . | from silkworm  |
|  |           |   | 2333/43582 | . . . . . | from mites   |
|  |           |   | 2333/43586 | . . . . . | from fleas   |
|  |           |   | 2333/43591 | . . . . . | from mosquitoes  |
|  |           |   | 2333/43595 | . . .     | from coelenteratae, e.g. medusae   |
|  |           |   | 2333/44    | . .       | from protozoa  |
|  |           |   | 2333/445   | . . .     | Plasmodium   |

|           |           |  |           |           |  |
|-----------|-----------|--|-----------|-----------|--|
| 2333/45   | . . .     | Toxoplasma   | 2333/4745 | . . . . . | Insulin-like growth factor binding protein   |
| 2333/455  | . . .     | Eimeria  | 2333/4746 | . . . . . | Cancer-associated SCM-recognition factor, CRISPP   |
| 2333/46   | . .       | from vertebrates   | 2333/4748 | . . . . . | p53  |
| 2333/4603 | . . .     | from fish  | 2333/475  | . .       | Assays involving growth factors  |
| 2333/4606 | . . .     | from amphibians  | 2333/4753 | . . .     | Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II  |
| 2333/4609 | . . .     | from reptiles  | 2333/4756 | . . .     | Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor  |
| 2333/4613 | . . . .   | Snake venom  | 2333/48   | . . .     | Nerve growth factor [NGF]  |
| 2333/4616 | . . . . . | from Russell's viper   | 2333/485  | . . .     | Epidermal growth factor [EGF] (urogastrone)  |
| 2333/462  | . . . . . | from Agkistrodon sp., e.g. acutase, ACTE   | 2333/49   | . . .     | Platelet-derived growth factor [PDGF]  |
| 2333/4623 | . . . . . | from Agkistrodon rhodostoma (Malayan pit viper); Arvin (R); Batroboxin; Ancrod                       | 2333/495  | . . .     | Transforming growth factor [TGF]   |
| 2333/4626 | . . . . . | from Agkistrodon contortrix contortrix (copperhead snake); Protac (R)                                | 2333/50   | . . .     | Fibroblast growth factors [FGF]  |
| 2333/463  | . . . . . | from Croatalus adamanteus (Eastern Diamondback rattlesnake); Crotolase                               | 2333/501  | . . . .   | acidic FGF [aFGF]  |
| 2333/4633 | . . . . . | from Echis carinatus; Ecarin   | 2333/503  | . . . .   | basic FGF [bFGF]   |
| 2333/4636 | . . . . . | from Bothrops sp.  | 2333/505  | . . .     | Erythropoietin [EPO]   |
| 2333/464  | . . . . . | from Bothrops atrox; Reptilase; Atroxin  | 2333/51   | . . .     | Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor  |
| 2333/4643 | . . . . . | from Bothrops jararaca; Botroctetin  | 2333/515  | . . .     | Angiogenesis factors; Angiogenin   |
| 2333/4646 | . . . . . | from Oxyuran(eo)us scutellatus (Taipan snake of Elapidae family)                                     | 2333/52   | . .       | Assays involving cytokines   |
| 2333/465  | . . .     | from birds   | 2333/521  | . . .     | Chemokines   |
| 2333/47   | . . .     | Assays involving proteins of known structure or function as defined in the subgroups                 | 2333/522  | . . . .   | Alpha-chemokines, e.g. NAP-2, ENA-78, GRO-alpha/MGSA/NAP-3, GRO-beta/MIP-2alpha, GRO-gamma/MIP-2beta, IP-10, GCP-2, MIG, PBSF, PF-4 or KC                  |
| 2333/4701 | . . . .   | Details  | 2333/523  | . . . .   | Beta-chemokines, e.g. RANTES, I-309/TCA-3, MIP-1alpha, MIP-1beta/ACT-2/LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1 or LDCF-2                               |
| 2333/4703 | . . . . . | Regulators; Modulating activity  | 2333/524  | . . .     | Thrombopoietin, i.e. C-MPL ligand  |
| 2333/4704 | . . . . . | Inhibitors; Suppressors  | 2333/525  | . . .     | Tumor necrosis factor [TNF]  |
| 2333/4706 | . . . . . | stimulating, promoting or activating activity  | 2333/5255 | . . . .   | Lymphotoxin [LT]   |
| 2333/4707 | . . . . . | Guanosine triphosphatase activating protein, GAP   | 2333/53   | . . .     | Colony-stimulating factor [CSF]  |
| 2333/4709 | . . . . . | Amyloid plaque core protein  | 2333/535  | . . . .   | Granulocyte CSF; Granulocyte-macrophage CSF  |
| 2333/471  | . . . . . | Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein | 2333/54   | . . .     | Interleukins [IL]  |
| 2333/4712 | . . . . . | Muscle proteins, e.g. myosin, actin, protein   | 2333/5403 | . . . .   | IL-3   |
| 2333/4713 | . . . . . | Plasma globulins, lactoglobulin  | 2333/5406 | . . . .   | IL-4   |
| 2333/4715 | . . . . . | Cytokine-induced proteins  | 2333/5409 | . . . .   | IL-5   |
| 2333/4716 | . . . . . | Complement proteins, e.g. anaphylatoxin, C3a, C5a  | 2333/5412 | . . . .   | IL-6   |
| 2333/4718 | . . . . . | Lipocortins  | 2333/5415 | . . . .   | Leukaemia inhibitory factor [LIF]  |
| 2333/4719 | . . . . . | G-proteins   | 2333/5418 | . . . .   | IL-7   |
| 2333/4721 | . . . . . | Cationic antimicrobial peptides, e.g. defensins  | 2333/5421 | . . . .   | IL-8   |
| 2333/4722 | . . . . . | Proteoglycans, e.g. aggrecan   | 2333/5425 | . . . .   | IL-9   |
| 2333/4724 | . . . . . | Lectins  | 2333/5428 | . . . .   | IL-10  |
| 2333/4725 | . . . . . | Mucins, e.g. human intestinal mucin  | 2333/5431 | . . . .   | IL-11  |
| 2333/4727 | . . . . . | Calcium binding proteins, e.g. calmodulin  | 2333/5434 | . . . .   | IL-12  |
| 2333/4728 | . . . . . | alpha-Glycoproteins  | 2333/5437 | . . . .   | IL-13  |
| 2333/473  | . . . . . | Recognins, e.g. malignin   | 2333/544  | . . . .   | IL-14  |
| 2333/4731 | . . . . . | Casein   | 2333/5443 | . . . .   | IL-15  |
| 2333/4733 | . . . . . | Acute pancreatitis-associated protein  | 2333/5446 | . . . .   | IL-16  |
| 2333/4734 | . . . . . | Villin   | 2333/545  | . . . .   | IL-1   |
| 2333/4736 | . . . . . | Retinoblastoma protein   | 2333/55   | . . . .   | IL-2   |
| 2333/4737 | . . . . . | C-reactive protein   | 2333/555  | . . .     | Interferons [IFN]  |
| 2333/4739 | . . . . . | Cyclin; Prad 1   | 2333/56   | . . . .   | IFN-alpha  |
| 2333/474  | . . . . . | Pancreatic thread protein; Reg protein   | 2333/565  | . . . .   | IFN-beta   |
| 2333/4742 | . . . . . | Keratin; Cytokeratin   | 2333/57   | . . . .   | IFN-gamma  |
| 2333/4743 | . . . . . | Bactericidal/Permeability-increasing protein BPI   | 2333/575  | . .       | Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin <a href="#">G01N 2333/665</a> , corticotropin <a href="#">G01N 2333/695</a> ) |

|            |         |  |            |         |   |
|------------|---------|--|------------|---------|---|
| 2333/5751  | . . .   | Corticotropin releasing factor [CRF] (Urotensin)   | 2333/70546 | . . .   | Integrin superfamily, e.g. VLAs, leuCAM, GPIIb/GPIIIa, LPAM   |
| 2333/5752  | . . .   | Placental lactogen; Chorionic Somatomammotropin  | 2333/7055  | . . . . | Integrin beta1-subunit-containing molecules, e.g. CD29, CD49  |
| 2333/5753  | . . .   | Calcitonin gene related peptide  | 2333/70553 | . . . . | Integrin beta2-subunit-containing molecules, e.g. CD11, CD18  |
| 2333/5754  | . . .   | Endothelin, vasoactive intestinal contractor [VIC]   | 2333/70557 | . . . . | Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61  |
| 2333/5755  | . . .   | Neuropeptide Y   | 2333/7056  | . . .   | Selectin superfamily, e.g. LAM-1, GlyCAM, ELAM-1, PADGEM  |
| 2333/5756  | . . .   | Prolactin  | 2333/70564 | . . . . | Selectins, e.g. CD62  |
| 2333/5757  | . . .   | Vasoactive intestinal peptide [VIP] or related peptides  | 2333/70567 | . . .   | Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors   |
| 2333/5758  | . . .   | Gastrin releasing peptide  | 2333/70571 | . . .   | for neuromediators, e.g. serotonin receptor, dopamine receptor  |
| 2333/5759  | . . .   | Thymosin or related peptides   | 2333/70575 | . . .   | NGF/TNF-superfamily, e.g. CD70, CD95L, CD153 or CD154 ( <a href="#">NGF G01N 2333/48</a> , <a href="#">TNF G01N 2333/525</a> )                                  |
| 2333/58    | . . .   | Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Brain natriuretic peptide [BNP, proBNP]; Cardionatrin; Cardiodilatin | 2333/70578 | . . .   | NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30 CD40 or CD95 ( <a href="#">NGF-receptor G01N 2333/71</a> , <a href="#">TNF-receptor G01N 2333/7151</a> ) |
| 2333/585   | . . .   | Calcitonins  | 2333/70582 | . . .   | CD71  |
| 2333/59    | . . .   | Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]                     | 2333/70585 | . . .   | CD44  |
| 2333/595   | . . .   | Gastrins; Cholecystokinins [CCK]   | 2333/70589 | . . .   | CD45  |
| 2333/60    | . . .   | Growth-hormone releasing factors (GH-RF) (Somatoliberin)   | 2333/70592 | . . .   | CD52  |
| 2333/605   | . . .   | Glucagons  | 2333/70596 | . . .   | Molecules with a "CD"-designation not provided for elsewhere in <a href="#">G01N 2333/705</a>   |
| 2333/61    | . . .   | Growth hormones [GH] (Somatotropin)  | 2333/71    | . . .   | for growth factors; for growth regulators   |
| 2333/62    | . . .   | Insulins   | 2333/715   | . . .   | for cytokines; for lymphokines; for interferons   |
| 2333/63    | . . .   | Motilins   | 2333/7151  | . . . . | for tumor necrosis factor [TNF]; for lymphotoxin [LT]   |
| 2333/635   | . . .   | Parathyroid hormone (parathormone); Parathyroid hormone-related peptides   | 2333/7153  | . . . . | or colony-stimulating factors [CSF]   |
| 2333/64    | . . .   | Relaxins   | 2333/7155  | . . . . | for interleukins [IL]   |
| 2333/645   | . . .   | Secretins  | 2333/7156  | . . . . | for interferons [IFN]   |
| 2333/65    | . . .   | Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2  | 2333/7158  | . . . . | for chemokines  |
| 2333/655   | . . .   | Somatostatins  | 2333/72    | . . .   | for hormones ( <a href="#">for neuromediators G01N 2333/70571</a> )   |
| 2333/66    | . . .   | Thymopoietins  | 2333/723   | . . . . | Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor  |
| 2333/665   | . .     | Assays involving proteins derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin   | 2333/726   | . . . . | G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH  |
| 2333/67    | . . .   | Lipotropins, e.g. beta, gamma lipotropin   | 2333/745   | . .     | Assays involving non-enzymic blood coagulation factors  |
| 2333/675   | . . .   | beta-Endorphins  | 2333/7452  | . . .   | Thrombomodulin  |
| 2333/68    | . . .   | Melanocyte-stimulating hormone [MSH]   | 2333/7454  | . . .   | Tissue factor (tissue thromboplastin, Factor III)   |
| 2333/685   | . . . . | alpha-Melanotropin   | 2333/7456  | . . .   | Factor V  |
| 2333/69    | . . . . | beta-Melanotropin  | 2333/7458  | . . .   | Protein S   |
| 2333/695   | . . .   | Corticotropin [ACTH]   | 2333/75    | . . .   | Fibrin; Fibrinogen  |
| 2333/70    | . . .   | Enkephalins  | 2333/755   | . . .   | Factors VIII, e.g. factor VIII C [AHF], factor VIII Ag [VWF]  |
| 2333/705   | . .     | Assays involving receptors, cell surface antigens or cell surface determinants   | 2333/76    | . .     | Assays involving albumins other than in routine use for blocking surfaces or for anchoring haptens during immunisation  |
| 2333/70503 | . . .   | Immunoglobulin superfamily, e.g. VCAMs, PECAM, LFA-3   | 2333/765   | . . .   | Serum albumin, e.g. HSA   |
| 2333/70507 | . . . . | C2D  | 2333/77    | . . .   | Ovalbumin   |
| 2333/7051  | . . . . | T-cell receptor (TcR)-CD3 complex  | 2333/775   | . .     | Apolipopptides  |
| 2333/70514 | . . . . | CD4  | 2333/78    | . .     | Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin [CIG]  |
| 2333/70517 | . . . . | CD8  | 2333/785   | . .     | Alveolar surfactant peptides; Pulmonary surfactant peptides   |
| 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  |            |         |   |

|            |   |            |  |
|------------|---|------------|--|
| 2333/79    | . . Transferrins, e.g. lactoferrins, ovotransferrins  | 2333/90248 | . . . . with NADH or NADPH as one of the donors, and incorporation of one atom of oxygen   |
| 2333/795   | . Porphyrin- or corrin-ring-containing peptides   |            | 1.14.13  |
| 2333/80    | . . Cytochromes   | 2333/90251 | . . . . . with a definite EC number (1.14.13.-)  |
| 2333/805   | . . Haemoglobins; Myoglobins  | 2333/90254 | . . . . . Nitric-oxide synthase (NOS; 1.14.13.39)  |
| 2333/81    | . Protease inhibitors   | 2333/90258 | . . . . . with a reduced iron-sulfur protein as one donor (1.14.15) in general             |
| 2333/8103  | . . Exopeptidase (E.C. 3.4.11-19) inhibitors  | 2333/90261 | . . . . . with a definite EC number (1.14.15.-)  |
| 2333/8107  | . . Endopeptidase (E.C. 3.4.21-99) inhibitors   | 2333/90264 | . . . . . Steroid 11 beta monooxygenase (P-450 protein)(1.14.15.4)                         |
| 2333/811   | . . . Serine protease (E.C. 3.4.21) inhibitors  | 2333/90267 | . . . . . Cholesterol monooxygenase (cytochrome P 450 <sub>sc</sub> )(1.14.15.6)           |
| 2333/8114  | . . . . Kunitz type inhibitors  | 2333/9027  | . . . . . Miscellaneous (1.14.99)  |
| 2333/8117  | . . . . . Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)   | 2333/90274 | . . . . . with a definite EC number (1.14.99.-)  |
| 2333/8121  | . . . . . Serpins   | 2333/90277 | . . . . . Steroid 17 alpha-monooxygenase (1.14.99.9)                                       |
| 2333/8125  | . . . . . Alpha-1-antitrypsin   | 2333/9028  | . . . . . Steroid 21-monooxygenase (1.14.99.10)  |
| 2333/8128  | . . . . . Antithrombin III  | 2333/90283 | . . . . acting on superoxide radicals as acceptor (1.15)                                   |
| 2333/8132  | . . . . . Plasminogen activator inhibitors  | 2333/90287 | . . . . oxidising metal ions (1.16)  |
| 2333/8135  | . . . . . Kazal type inhibitors, e.g. pancreatic secretory inhibitor or ovomucoid   | 2333/9029  | . . . . acting on -CH <sub>2</sub> - groups (1.17)   |
| 2333/8139  | . . . Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin   | 2333/90293 | . . . . acting on reduced ferredoxin as donor (1.18)                                       |
| 2333/8142  | . . . Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors   | 2333/90296 | . . . . acting on reduced flavodoxin as donor (1.19)                                       |
| 2333/8146  | . . . Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metallo proteinase, TIMP   | 2333/904   | . . . . acting on CHOH groups as donors, e.g. glucose oxidase, lactate dehydrogenase (1.1) |
| 2333/815   | . . from leeches, e.g. hirudin, eglin   | 2333/906   | . . . . acting on nitrogen containing compounds as donors (1.4, 1.5, 1.7)                  |
| 2333/82    | . Translation products from oncogenes   | 2333/90605 | . . . . . acting on the CH-NH <sub>2</sub> group of donors (1.4)                           |
| 2333/825   | . Metallothioneins  | 2333/90611 | . . . . . with NAD or NADP as acceptor (1.4.1) in general                                  |
| 2333/90    | . Enzymes; Proenzymes   | 2333/90616 | . . . . . with a definite EC number (1.4.1.-)  |
|            | <b>NOTE</b>   | 2333/90622 | . . . . . Phenylalanine dehydrogenase (1.4.1.20)   |
|            | 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. | 2333/90627 | . . . . . with a cytochrome as acceptor (1.4.2)  |
| 2333/9005  | . . Enzymes with nucleic acid structure; e.g. ribozymes   | 2333/90633 | . . . . . with oxygen as acceptor (1.4.3) in general                                       |
| 2333/901   | . . Antibodies with enzymatic activity; e.g. abzymes  | 2333/90638 | . . . . . with a definite EC number (1.4.3.-)  |
| 2333/9015  | . . Ligases (6)   | 2333/90644 | . . . . . D-Amino acid oxidase (1.4.3.3)   |
| 2333/902   | . . Oxidoreductases (1.)  | 2333/9065  | . . . . . acting on CH-NH groups of donors (1.5)   |
| 2333/90203 | . . . acting on the aldehyde or oxo group of donors (1.2)   | 2333/90655 | . . . . . with NAD or NADP as acceptor (1.5.1) in general                                  |
| 2333/90206 | . . . acting on the CH-CH group of donors (1.3)   | 2333/90661 | . . . . . with a definite EC number (1.5.1.-)  |
| 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)   | 2333/90666 | . . . . . Dihydrofolate reductase [DHFR] (1.5.1.3)   |
| 2333/90212 | . . . acting on a sulfur group of donors (1.8)  | 2333/90672 | . . . . . with oxygen as acceptor (1.5.3) in general                                       |
| 2333/90216 | . . . acting on a heme group of donors (1.9)  | 2333/90677 | . . . . . with a definite EC number (1.5.3.-)  |
| 2333/90219 | . . . acting on diphenols and related substances as donors (1.10)   | 2333/90683 | . . . . . Sarcosine oxidase (1.5.3.1)  |
| 2333/90222 | . . . . with oxygen as acceptor (1.10.3) in general   | 2333/90688 | . . . . . acting on other nitrogen compounds as donors (1.7)                               |
| 2333/90225 | . . . . . with a definite EC number (1.10.3.-)  | 2333/90694 | . . . . . with oxygen as acceptor (1.7.3), e.g. uricase (1.7.3.3)                          |
| 2333/90229 | . . . . . Catechol oxidase, i.e. Tyrosinase (1.10.3.1)  | 2333/908   | . . . . acting on hydrogen peroxide as acceptor (1.11)                                     |
| 2333/90232 | . . . . . Laccase (1.10.3.2)  | 2333/91    | . . . Transferases (2.)  |
| 2333/90235 | . . . . . Ascorbate oxidase (1.10.3.3)  | 2333/91005 | . . . . transferring one-carbon groups (2.1)   |
| 2333/90238 | . . . acting on hydrogen as donor (1.12)  | 2333/91011 | . . . . Methyltransferases (general) (2.1.1.)  |
| 2333/90241 | . . . acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13)  | 2333/91017 | . . . . . with definite EC number (2.1.1.-)  |
| 2333/90245 | . . . acting on paired donors with incorporation of molecular oxygen (1.14)   | 2333/91022 | . . . . . Catecholmethyltransferases (2.1.1.6)   |
|            |   | 2333/91028 | . . . . Hydroxymethyl-, formyl-transferases (2.1.2)  |
|            |   | 2333/91034 | . . . . Carboxyl- and carbamoyl transferases (2.1.3)                                       |
|            |   | 2333/9104  | . . . . Aldehyde and ketone transferases (2.2)   |
|            |   | 2333/91045 | . . . . Acyltransferases (2.3)   |
|            |   | 2333/91051 | . . . . . Acyltransferases other than aminoacyltransferases (general) (2.3.1)              |
|            |   | 2333/91057 | . . . . . with definite EC number (2.3.1.-)  |

|            |   |            |  |
|------------|---|------------|--|
| 2333/91062 | . . . . . Chloramphenicol-acetyltransferases (2.3.1.28)   | 2333/914   | . . Hydrolases (3)   |
| 2333/91068 | . . . . . Chalcone synthases (2.3.1.74)   | 2333/916   | . . . acting on ester bonds (3.1), e.g. phosphatases (3.1.3), phospholipases C or phospholipases D (3.1.4)           |
| 2333/91074 | . . . . . Aminoacyltransferases (general) (2.3.2)   | 2333/918   | . . . . Carboxylic ester hydrolases (3.1.1)  |
| 2333/9108  | . . . . . with definite EC number (2.3.2.-)   | 2333/92    | . . . . . Triglyceride splitting, e.g. by means of lipase  |
| 2333/91085 | . . . . . Transglutaminases; Factor XIIIq (2.3.2.13)  | 2333/922   | . . . . . Ribonucleases (RNAses); Deoxyribonucleases (DNAses)  |
| 2333/91091 | . . . Glycosyltransferases (2.4)  | 2333/924   | . . . acting on glycosyl compounds (3.2)   |
| 2333/91097 | . . . . Hexosyltransferases (general) (2.4.1)   | 2333/926   | . . . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase                               |
| 2333/91102 | . . . . . with definite EC number (2.4.1.-)   | 2333/928   | . . . . . acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase                             |
| 2333/91108 | . . . . . Levansucrases (2.4.1.10)  | 2333/93    | . . . . . Fungal source  |
| 2333/91114 | . . . . . Cellulose synthases (2.4.1.12)  | 2333/932   | . . . . . alpha-amylase from plant source  |
| 2333/9112  | . . . . . Sucrose synthases (2.4.1.13)  | 2333/934   | . . . . . Glucoamylase   |
| 2333/91125 | . . . . . Sucrose phosphate synthases (2.4.1.14)  | 2333/936   | . . . . . acting on beta-1, 4 bonds between N-acetylmuramic acid and 2-acetyl-amino 2-deoxy-D-glucose, e.g. lysozyme |
| 2333/91131 | . . . . . Glucan branching enzymes (2.4.1.18)   | 2333/938   | . . . . acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase  |
| 2333/91137 | . . . . . Cyclomalto dextrin glucano transferases (2.4.1.19)  | 2333/94    | . . . . acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase  |
| 2333/91142 | . . . . Pentosyltransferases (2.4.2)  | 2333/942   | . . . . acting on beta-1, 4-glucosidic bonds, e.g. cellulase   |
| 2333/91148 | . . . . transferring other glycosyl groups (2.4.99)   | 2333/944   | . . . . acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase  |
| 2333/91154 | . . . . transferring alkyl or aryl groups other than methyl groups (2.5)                                | 2333/946   | . . . . . Dextranase   |
| 2333/9116  | . . . . transferring alkyl or aryl groups other than methyl groups (2.5)                                | 2333/948   | . . . acting on peptide bonds (3.4)  |
| 2333/91165 | . . . . general (2.5.1)   | 2333/95    | . . . . Proteinases, i.e. endopeptidases (3.4.21-3.4.99)   |
| 2333/91171 | . . . . . with definite EC number (2.5.1.-)   | 2333/9506  | . . . . . derived from viruses   |
| 2333/91177 | . . . . . Glutathione transferases (2.5.1.18)   | 2333/9513  | . . . . . derived from RNA viruses   |
| 2333/91182 | . . . . . Enolpyruvylshikimate-phosphate synthases (2.5.1.19)   | 2333/952   | . . . . . derived from bacteria  |
| 2333/91188 | . . . . transferring nitrogenous groups (2.6)   | 2333/954   | . . . . . bacteria being Bacillus  |
| 2333/91194 | . . . . transferring sulfur containing groups (2.8)   | 2333/956   | . . . . . Bacillus subtilis or Bacillus licheniformis  |
| 2333/912   | . . . . transferring phosphorus containing groups, e.g. kinases (2.7)                                   | 2333/958   | . . . . . derived from fungi   |
| 2333/91205 | . . . . . Phosphotransferases in general  | 2333/96    | . . . . . from yeast   |
| 2333/9121  | . . . . . with an alcohol group as acceptor (2.7.1), e.g. general tyrosine, serine or threonine kinases | 2333/962   | . . . . . from Aspergillus   |
| 2333/91215 | . . . . . with a definite EC number (2.7.1.-)   | 2333/964   | . . . . . derived from animal tissue   |
| 2333/9122  | . . . . . Thymidine kinase (2.7.1.21)   | 2333/96402 | . . . . . from non-mammals   |
| 2333/91225 | . . . . . with a carboxyl group as acceptor (2.7.2)   | 2333/96405 | . . . . . in general   |
| 2333/9123  | . . . . . with a nitrogenous group as acceptor (2.7.3), e.g. histidine kinases                          | 2333/96408 | . . . . . with EC number   |
| 2333/91235 | . . . . . with a phosphate group as acceptor (2.7.4)  | 2333/96411 | . . . . . Serine endopeptidases (3.4.21)   |
| 2333/9124  | . . . . . Diphosphotransferases (2.7.6)   | 2333/96413 | . . . . . Cysteine endopeptidases (3.4.22)   |
| 2333/91245 | . . . . . Nucleotidyltransferases (2.7.7)   | 2333/96416 | . . . . . Aspartic endopeptidases (3.4.23)   |
| 2333/9125  | . . . . . with a definite EC number (2.7.7.-)   | 2333/96419 | . . . . . Metalloendopeptidases (3.4.24)   |
| 2333/91255 | . . . . . DNA-directed RNA polymerase (2.7.7.6)   | 2333/96422 | . . . . . from snakes  |
| 2333/9126  | . . . . . DNA-directed DNA polymerase (2.7.7.7)   | 2333/96425 | . . . . . from mammals   |
| 2333/91265 | . . . . . Polyribonucleotide nucleotidyl transferases, i.e. polynucleotide phosphorylase (2.7.7.8)      | 2333/96427 | . . . . . in general   |
| 2333/9127  | . . . . . DNA nucleotidyl-exotransferases, i.e. terminal nucleotidyl transferases (2.7.7.31)            | 2333/9643  | . . . . . with EC number   |
| 2333/91275 | . . . . . RNA-directed RNA polymerases, e.g. replicases (2.7.7.48)                                      | 2333/96433 | . . . . . Serine endopeptidases (3.4.21)   |
| 2333/9128  | . . . . . RNA-directed DNA polymerases, e.g. RT (2.7.7.49)  | 2333/96436 | . . . . . Granzymes  |
| 2333/91285 | . . . . . RNA uridyltransferases (2.7.7.52)   | 2333/96438 | . . . . . Dibasic site splicing serine proteases, e.g. furin   |
| 2333/9129  | . . . . . Transferases for other substituted phosphate groups (2.7.8)                                   | 2333/96441 | . . . . . with definite EC number  |
| 2333/91295 | . . . . . with paired acceptors (2.7.9)   | 2333/96444 | . . . . . Factor X (3.4.21.6)  |
|            |   | 2333/96447 | . . . . . Factor VII (3.4.21.21)   |
|            |   | 2333/9645  | . . . . . Factor IX (3.4.21.22)  |
|            |   | 2333/96452 | . . . . . Factor XI (3.4.21.27)  |

|                |  |   |                |  |   |
|----------------|--|---|----------------|--|---|
| 2333/96455     | . . . . .  | Kallikrein (3.4.21.34; 3.4.21.35)   | 2400/14        | . . .  | alpha-D-Glucans, i.e. having alpha 1,n (n=3,4,6) linkages between saccharide units, e.g. pullulan   |
| 2333/96458     | . . . . .  | Factor XII (3.4.21.38)  | 2400/16        | . . . .  | Starch, amylose, amylopectin  |
| 2333/96461     | . . . . .  | Protein C (3.4.21.69)   | 2400/18        | . . . .  | Cyclodextrin  |
| 2333/96463     | . . . . .  | Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups  | 2400/22        | . . . .  | Dextran   |
| 2333/96466     | . . . . .  | Cysteine endopeptidases (3.4.22)  | 2400/24        | . . .  | beta-D-Glucans, i.e. having beta 1,n (n=3,4,6) linkages between saccharide units, e.g. xanthan  |
| 2333/96469     | . . . . .  | Interleukin 1-beta convertase-like enzymes  | 2400/26        | . . . .  | Cellulose   |
| 2333/96472     | . . . . .  | Aspartic endopeptidases (3.4.23)  | 2400/28        | . . . .  | Chitin, chitosan  |
| 2333/96475     | . . . . .  | with definite EC number   | 2400/32        | . . .  | Galactans, e.g. agar, agarose, agaropectin, carrageenan   |
| 2333/96477     | . . . . .  | Pepsin (3.4.23.1; 3.4.23.2; 3.4.23.3)   | 2400/34        | . . .  | alpha-D-Galacturonans, e.g. pectin  |
| 2333/9648      | . . . . .  | Chymosin, i.e. rennin (3.4.23.4)  | 2400/36        | . . .  | beta-D-Fructofuranans, e.g. levan, insulin  |
| 2333/96483     | . . . . .  | Renin (3.4.23.15)   | 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 ( <a href="#">proteoglycans G01N 2333/4722</a> ) |
| 2333/96486     | . . . . .  | Metalloendopeptidases (3.4.24)  | 2400/40        | . . .  | Glycosaminoglycans, i.e. GAG or mucopolysaccharides, e.g. chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparin, heparan sulfate, and related sulfated polysaccharides  |
| 2333/96488     | . . . . .  | Phosphoramidon sensitive endothelin converting enzymes  | 2400/44        | . . .  | Guluromannuronans, e.g. alginic acid  |
| 2333/96491     | . . . . .  | with definite EC number   | 2400/46        | . .  | Pectin  |
| 2333/96494     | . . . . .  | Matrix metalloproteases, e. g. 3.4.24.7   | 2400/48        | . .  | Reserve carbohydrates, e.g. glycogen  |
| 2333/96497     | . . . . .  | Enkephalinase (3.4.24.11)   | 2400/50        | . .  | Lipopolysaccharides; LPS  |
| 2333/966       | . . . .  | Elastase  | <b>2405/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving lipids (<a href="#">lipopolysaccharides G01N 2400/50</a>)</b> |   |
| 2333/968       | . . . .  | Plasmin, i.e. fibrinolysin  | 2405/02        | . .  | Triacylglycerols  |
| 2333/972       | . . . .  | Plasminogen activators  | 2405/04        | . .  | Phospholipids, i.e. phosphoglycerides   |
| 2333/9723      | . . . .  | Urokinase   | 2405/06        | . .  | Glycophospholipids, e.g. phosphatidyl inositol  |
| 2333/9726      | . . . .  | Tissue plasminogen activator  | 2405/08        | . .  | Sphingolipids   |
| 2333/974       | . . . .  | Thrombin  | 2405/10        | . .  | Glycosphingolipids, e.g. cerebroside, gangliosides  |
| 2333/976       | . . . .  | Trypsin; Chymotrypsin   | <b>2407/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving terpenes</b>  |   |
| 2333/978       | . . .  | acting on carbon to nitrogen bonds other than peptide bonds (3.5)   | 2407/02        | . .  | Taxol; Taxanes  |
| 2333/98        | . . . .  | acting on amide bonds in linear amides (3.5.1)  | <b>2410/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving peptides of less than 20 amino acids</b>                      |   |
| 2333/982       | . . . .  | Asparaginase  | 2410/02        | . .  | Angiotensins; Related peptides  |
| 2333/984       | . . . .  | Penicillin amidase  | 2410/04        | . .  | Oxytocins; Vasopressins; Related peptides   |
| 2333/986       | . . . .  | acting on amide bonds in cyclic amides (3.5.2), e.g. beta-lactamase (penicillinase, 3.5.2.6), creatinine amidohydrolase (creatininase, EC 3.5.2.10), N-methylhydantoinase (3.5.2.6) | 2410/06        | . .  | Kallidins; Bradykinins; Related peptides  |
| 2333/988       | . .  | Lyases (4.), e.g. aldolases, heparinase, enolases, fumarase   | 2410/08        | . .  | Cyclosporins and related peptides   |
| 2333/99        | . .  | Isomerases (5.)   | 2410/10        | . .  | Valinomycins and derivatives thereof  |
| 2333/992       | . . .  | Glucose isomerase; Xylose isomerase; Glucose-6-phosphate isomerase  | <b>2415/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving penicillins or cephalosporins</b>                             |   |
| 2333/994       | . .  | Pancreatin  | <b>2430/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving synthetic organic compounds as analytes</b>                   |   |
| <b>2400/00</b> | <b>Assays, e.g. immunoassays or enzyme assays, involving carbohydrates</b> |   |                |  |   |
| 2400/02        | . .  | involving antibodies to sugar part of glycoproteins ( <a href="#">lectins from plants G01N 2333/42</a> , <a href="#">lectins from mammals G01N 2333/4724</a> )                      | 2430/10        | . .  | Insecticides  |
| 2400/10        | . .  | Polysaccharides, i.e. having more than five saccharide radicals attached to each other by glycosidic linkages; Derivatives thereof, e.g. ethers, esters                             | 2430/12        | . .  | Pyrethroids   |
| 2400/12        | . .  | Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar  | 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  |
|                |  |   | <b>2440/00</b> | <b>Post-translational modifications [PTMs] in chemical analysis of biological material</b>                             |   |

- 2440/10 . acylation, e.g. acetylation, formylation, lipoylation, myristoylation, palmitoylation
- 2440/12 . alkylation, e.g. methylation, (iso-)prenylation, farnesylation
- 2440/14 . phosphorylation
- 2440/16 . (de-)amidation
- 2440/18 . citrullination
- 2440/20 . formation of disulphide bridges
- 2440/22 . iodination
- 2440/24 . hydroxylation
- 2440/26 . nitrosylation
- 2440/28 . PEGylation
- 2440/30 . sulphation
- 2440/32 . biotinylation
- 2440/34 . addition of amino acid(s), e.g. arginylation, (poly-)glutamylolation, (poly-)glycylation
- 2440/36 . addition of addition of other proteins or peptides, e.g. SUMOylation, ubiquitination
- 2440/38 . addition of carbohydrates, e.g. glycosylation, glycation
- 2440/40 . addition of nucleotides or derivatives, e.g. adenylation, flavin attachment
  
- 2446/00 Magnetic particle immunoreagent carriers**
- 2446/10 . the magnetic material being used to coat a pre-existing polymer particle but not being present in the particle core
- 2446/20 . the magnetic material being present in the particle core
- 2446/30 . the magnetic material being dispersed in the polymer composition before their conversion into particulate form
- 2446/40 . the magnetic material being dispersed in the monomer composition prior to polymerisation
- 2446/60 . the magnetic material being dispersed in a medium other than the main solvent prior to incorporation into the polymer particle
- 2446/62 . . Magnetic material dispersed in water drop
- 2446/64 . . Magnetic material dispersed in oil drop
- 2446/66 . . Magnetic material dispersed in surfactant
- 2446/80 . characterised by the agent used to coat the magnetic particles, e.g. lipids
- 2446/84 . . Polymer coating, e.g. gelatin
- 2446/86 . . the coating being pre-functionalised for attaching immunoreagents, e.g. aminodextran
- 2446/90 . . characterised by small molecule linker used to couple immunoreagents to magnetic particles
  
- 2458/00 Labels used in chemical analysis of biological material**
- 2458/10 . Oligonucleotides as tagging agents for labelling antibodies
- 2458/15 . Non-radioactive isotope labels, e.g. for detection by mass spectrometry
- 2458/20 . Labels for detection by gas chromatography, e.g. haloaryl systems
- 2458/30 . Electrochemically active labels
- 2458/40 . Rare earth chelates
  
- 2469/00 Immunoassays for the detection of microorganisms**
- 2469/10 . Detection of antigens from microorganism in sample from host
- 2469/20 . Detection of antibodies in sample from host which are directed against antigens from microorganisms
  
- 2496/00 Reference solutions for assays of biological material**
- 2496/05 . containing blood cells or plasma
- 2496/10 . containing particles to mimic blood cells
- 2496/15 . containing dyes to mimic optical absorption of, e.g. hemoglobin
- 2496/25 . containing added polymers to stabilise biological material against degradation or maintain viscosity or density, e.g. gelatin, polyacrylamides, polyvinyl alcohol ([casein G01N 2333/4731](#), [albumins G01N 2333/76](#), [polysaccharides G01N 2400/10](#))
- 2496/30 . . Polyethylene glycol, e.g. PEG
- 2496/35 . . Polyvinylpyrrolidone, e.g. PVP
- 2496/45 . containing protease inhibitors, e.g. sulfonylfluorides, chloromethylketones, organophosphates ([peptide-based protease inhibitors G01N 2333/81](#))
- 2496/70 . Blood gas control solutions containing dissolved oxygen, bicarbonate and the like
- 2496/80 . Multi-analyte reference solutions containing cholesterol, glucose and the like
  
- 2500/00 Screening for compounds of potential therapeutic value**
- 2500/02 . Screening involving studying the effect of compounds C on the interaction between interacting molecules A and B (e.g. A = enzyme and B = substrate for A, or A = receptor and B = ligand for the receptor)
- 2500/04 . Screening involving studying the effect of compounds C directly on molecule A (e.g. C are potential ligands for a receptor A, or potential substrates for an enzyme A)
- 2500/10 . involving cells
- 2500/20 . cell-free systems
  
- 2510/00 Detection of programmed cell death, i.e. apoptosis**
- 2520/00 Use of whole organisms as detectors of pollution**
- 2550/00 Electrophoretic profiling, e.g. for proteome analysis**
- 2560/00 Chemical aspects of mass spectrometric analysis of biological material**
- NOTES**
- 1. Analysis of proteins, peptides or amino acids by mass spectrometry is classified in [G01N 33/6848](#) and [G01N 33/6851](#).
- 2. Analysis of nucleic acids by mass spectrometry is classified in [C12Q 1/6872](#), [C12Q 2563/167](#) and [C12Q 2565/627](#).
  
- 2570/00 Omics, e.g. proteomics, glycomics or lipidomics; Methods of analysis focusing on the entire complement of classes of biological molecules or subsets thereof, i.e. focusing on proteomes, glycomes or lipidomes**
- 2600/00 Assays involving molecular imprinted polymers/ polymers created around a molecular template**
- 2610/00 Assays involving self-assembled monolayers [SAMs]**

|                |   |  |
|----------------|---|--|
| <b>2650/00</b> | <b>Assays involving polymers whose constituent monomers bore biological functional groups before polymerization, i.e. vinyl, acryl derivatives of amino acids, sugars</b>   |  |
| <b>2800/00</b> | <b>Detection or diagnosis of diseases</b>   |  |
|                | <b>NOTES</b>  |  |
|                | 1. The indexing codes <a href="#">G01N 2800/02</a> - <a href="#">G01N 2800/44</a> 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 <a href="#">G01N 33/569</a> and subgroups, <a href="#">G01N 33/571</a> or <a href="#">G01N 33/576</a> , the present indexing scheme is not used.   |  |
|                | 3. For cancers, which subject matter is classified in <a href="#">G01N 33/574</a> and subgroups, the present indexing scheme is not used.   |  |
|                | 4. When indexing in the following scheme, the organ takes precedence, e.g. inflammation of the skin is indexed with dermatological disorders and not with immunology or allergic disorders, asthma with pulmonary disorders and not with immunology or allergic disorders. Exception is made for thrombosis which is indexed with haematological disorders. |  |
| 2800/02        | . Nutritional disorders   | 2800/168 . . Glaucoma  |
| 2800/04        | . Endocrine or metabolic disorders  | 2800/18 . Dental and oral disorders  |
| 2800/042       | . . Disorders of carbohydrate metabolism, e.g. diabetes, glucose metabolism   | 2800/20 . Dermatological disorders   |
| 2800/044       | . . Hyperlipemia or hypolipemia, e.g. dyslipidaemia, obesity  | 2800/202 . . Dermatitis  |
| 2800/046       | . . Thyroid disorders   | 2800/205 . . Scaling palmar diseases, e.g. psoriasis, pityriasis   |
| 2800/048       | . . Pituitary or hypothalamic - pituitary relationships, e.g. vasopressin or ADH related  | 2800/207 . . Pigmentation disorders  |
| 2800/06        | . Gastro-intestinal diseases  | 2800/22 . Haematology  |
| 2800/062       | . . Gastritis or peptic ulcer disease   | 2800/222 . . Platelet disorders  |
| 2800/065       | . . Bowel diseases, e.g. Crohn, ulcerative colitis, IBS   | 2800/224 . . Haemostasis or coagulation  |
| 2800/067       | . . Pancreatitis or colitis   | 2800/226 . . Thrombotic disorders, i.e. thrombo-embolism irrespective of location/organ involved, e.g. renal vein thrombosis, venous thrombosis  |
| 2800/08        | . Hepato-biliary disorders other than hepatitis   | 2800/228 . . Disorders of the spleen, e.g. splenic rupture, splenomegaly   |
| 2800/085       | . . Liver diseases, e.g. portal hypertension, fibrosis, cirrhosis, bilirubin  | 2800/24 . Immunology or allergic disorders ( <a href="#">SLE G01N 2800/104</a> )   |
| 2800/10        | . Musculoskeletal or connective tissue disorders  | 2800/245 . . Transplantation related diseases, e.g. graft versus host disease  |
| 2800/101       | . . Diffuse connective tissue disease, e.g. Sjögren, Wegener's granulomatosis   | 2800/26 . Infectious diseases, e.g. generalised sepsis   |
| 2800/102       | . . . Arthritis; Rheumatoid arthritis, i.e. inflammation of peripheral joints   |  |
| 2800/104       | . . . Lupus erythematosus [SLE]   | <b>NOTE</b>  |
| 2800/105       | . . Osteoarthritis, e.g. cartilage alteration, hypertrophy of bone  | Indexing code <a href="#">G01N 2800/26</a> is not used for documents already classified in one or more of groups <a href="#">G01N 33/569</a> and subgroups, <a href="#">G01N 33/571</a> or <a href="#">G01N 33/576</a> and subgroups |
| 2800/107       | . . Crystal induced conditions; Gout  |  |
| 2800/108       | . . Osteoporosis  | 2800/28 . Neurological disorders   |
| 2800/12        | . Pulmonary diseases  | 2800/2807 . . Headache; Migraine   |
| 2800/122       | . . Chronic or obstructive airway disorders, e.g. asthma COPD   | 2800/2814 . . Dementia; Cognitive disorders  |
| 2800/125       | . . Adult respiratory distress syndrome   | 2800/2821 . . . Alzheimer  |
| 2800/127       | . . Bronchitis  | 2800/2828 . . . Prion diseases   |
| 2800/14        | . Disorders of ear, nose or throat  | 2800/2835 . . Movement disorders, e.g. Parkinson, Huntington, Tourette   |
| 2800/16        | . Ophthalmology   | 2800/2842 . . Pain, e.g. neuropathic pain, psychogenic pain  |
| 2800/162       | . . Conjunctival disorders, e.g. conjunctivitis   | 2800/285 . . Demyelinating diseases; Multiple sclerosis  |
| 2800/164       | . . Retinal disorders, e.g. retinopathy   | 2800/2857 . . Seizure disorders; Epilepsy  |
| 2800/166       | . . Cataract  | 2800/2864 . . Sleep disorders  |
|                |   | 2800/2871 . . Cerebrovascular disorders, e.g. stroke, cerebral infarct, cerebral haemorrhage, transient ischemic event   |
|                |   | 2800/2878 . . Muscular dystrophy   |
|                |   | 2800/2885 . . . Duchenne dystrophy   |
|                |   | 2800/2892 . . . Myotonic dystrophy   |
|                |   | 2800/30 . Psychoses; Psychiatry  |
|                |   | 2800/301 . . Anxiety or phobic disorders   |
|                |   | 2800/302 . . Schizophrenia   |
|                |   | 2800/303 . . Eating disorders, e.g. anorexia, bulimia  |
|                |   | 2800/304 . . Mood disorders, e.g. bipolar, depression  |
|                |   | 2800/305 . . Attention deficit disorder; Hyperactivity   |
|                |   | 2800/306 . . Chronic fatigue syndrome  |
|                |   | 2800/307 . . Drug dependency, e.g. alcoholism  |
|                |   | 2800/308 . . Psychosexual disorders, e.g. sexual arousal disorder  |
|                |   | 2800/32 . Cardiovascular disorders   |
|                |   | 2800/321 . . Arterial hypertension   |
|                |   | 2800/322 . . Orthostatic hypertension or syncope   |
|                |   | 2800/323 . . Arteriosclerosis, Stenosis  |
|                |   | 2800/324 . . Coronary artery diseases, e.g. angina pectoris, myocardial infarction   |
|                |   | 2800/325 . . Heart failure or cardiac arrest, e.g. cardiomyopathy, congestive heart failure  |

- 2800/326 . . Arrhythmias, e.g. ventricular fibrillation, tachycardia, atrioventricular block, torsade de pointes
- 2800/327 . . Endocarditis
- 2800/328 . . Vasculitis, i.e. inflammation of blood vessels
- 2800/329 . . Diseases of the aorta or its branches, e.g. aneurysms, aortic dissection
- 2800/34 . . Genitourinary disorders
- 2800/341 . . Urinary incontinence
- 2800/342 . . Prostate diseases, e.g. BPH, prostatitis
- 2800/344 . . Disorders of the penis and the scrotum and erectile dysfunction
- 2800/345 . . Urinary calculi
- 2800/347 . . Renal failures; Glomerular diseases; Tubulointerstitial diseases, e.g. nephritic syndrome, glomerulonephritis; Renovascular diseases, e.g. renal artery occlusion, nephropathy
- 2800/348 . . Urinary tract infections
- 2800/36 . . Gynecology or obstetrics
- 2800/361 . . Menstrual abnormalities or abnormal uterine bleeding, e.g. dysmenorrhea
- 2800/362 . . Menopause
- 2800/364 . . Endometriosis, i.e. non-malignant disorder in which functioning endometrial tissue is present outside the uterine cavity
- 2800/365 . . Breast disorders, e.g. mastalgia, mastitis, Paget's disease
- 2800/367 . . Infertility, e.g. sperm disorder, ovulatory dysfunction
- 2800/368 . . Pregnancy complicated by disease or abnormalities of pregnancy, e.g. preeclampsia, preterm labour
- 2800/38 . . Pediatrics
- 2800/382 . . Cystic fibrosis
- 2800/385 . . Congenital anomalies
- 2800/387 . . . Down syndrome; Trisomy 18; Trisomy 13
- 2800/40 . . Disorders due to exposure to physical agents, e.g. heat disorders, motion sickness, radiation injuries, altitude sickness, decompression illness
- 2800/42 . . Poisoning, e.g. from bites or stings
- 2800/44 . . Multiple drug resistance
- 2800/50 . . Determining the risk of developing a disease
- 2800/52 . . Predicting or monitoring the response to treatment; Prognosis
- 2800/54 . . Determining the risk of relapse
- 2800/56 . . Staging of a disease; Further complications associated with the disease
- 2800/60 . . Complex ways of combining multiple protein biomarkers for diagnosis
- 2800/70 . . Mechanisms involved in disease identification ([G01N 2800/02](#) - [G01N 2800/44](#) take precedence)
- 2800/7004 . . Stress
- 2800/7009 . . . Oxidative stress
- 2800/7014 . . (Neo)vascularisation - Angiogenesis
- 2800/7019 . . Ischaemia
- 2800/7023 . . (Hyper)proliferation
- 2800/7028 . . . Cancer
- 2800/7033 . . Non-proliferative mechanisms
- 2800/7038 . . Hypoxia
- 2800/7042 . . Aging, e.g. cellular aging
- 2800/7047 . . Fibrils-Filaments-Plaque formation
- 2800/7052 . . Fibrosis
- 2800/7057 . . (Intracellular) signaling and trafficking pathways
- 2800/7061 . . . Endoplasmic reticulum to Golgi trafficking
- 2800/7066 . . . Metabolic pathways
- 2800/7071 . . . . Carbohydrate metabolism, e.g. glycolysis, gluconeogenesis
- 2800/7076 . . . . Amino acid metabolism
- 2800/708 . . . . Nitrogen metabolism, e.g. urea cycle
- 2800/7085 . . . . Lipogenesis or lipolysis, e.g. fatty acid metabolism
- 2800/709 . . . Toxin induced
- 2800/7095 . . . Inflammation