

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1709

DATE: JANUARY 1, 2025

PROJECT MP12468

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Titles Changed:	G01N	SUBCLASS
	G01N	15/00
DEFINITIONS:		
Definitions Modified:	G01N	15/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS 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)

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	G01N	Subclass	INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing apparatus or processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q)	
M	G01N15/00	0	Investigating characteristics of particles; Investigating permeability, pore-volume or surface-area of porous materials	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “<administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.

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- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

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2. A. DEFINITIONS (modified)

G01N15/00

References

Delete: The entire Limiting references section.

Replace: The existing Application-oriented references table with the following updated table.

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Investigating concentration of particle suspensions by weighing	G01N5/00
Investigating particle size or size distribution by measuring osmotic pressure	G01N7/10
Chemical analysis of biological material	G01N33/50
Diagnosis, analysis on the human or animal body	A61B
Veterinary instruments, implements, tools or methods	A61D
Methods or apparatus for disinfecting or sterilising materials, including testing the effectiveness or completeness thereof	A61L
Devices for introducing media into, or onto, the body, e.g. sprayers, atomisers for therapeutic purposes or inhalators	A61M
Investigating particle size or size distribution by filtering, e.g. testing of membranes	B01D65/10
Apparatus for enzymology or microbiology, e.g. inoculator, sampler, tissue, human, animal or plant cell or virus culture apparatus	C12M
Microorganisms or enzymes, compositions thereof, propagating preserving or maintaining microorganisms, mutation or genetic engineering, including sperm cell counting	C12N
Measuring or testing processes involving enzymes or microorganisms	C12Q
Testing the nature of borehole walls or formation testing by injection test	E21B49/00
Exhaust apparatus having means for purifying exhaust, e.g. by regenerating the soot filter	F01N3/00
Electrical control of exhaust gas treating apparatus, including detection of clogging to prepare filter regeneration	F01N9/00
Monitoring or diagnostics devices for exhaust gas treatment	F01N11/00
Fluid tightness of structures	G01M3/00

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Testing of internal-combustion engines, by monitoring exhaust gases	G01M15/10
Scanning probe or apparatus	G01Q
Arrangements or instruments for measuring magnetic properties of articles or specimens of solids or fluids	G01R33/12
Radio direction finding, radio navigation, determining distance or velocity by use of radio waves	G01S
Geophysics, e.g. seismology or prospecting	G01V
Discharge tubes for examining objects or materials exposed to the discharge, e.g. electron or ion microscopes	H01J37/00
Particle spectrometers or separators	H01J49/00

Replace: The existing Informative references table with the following updated table.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sampling; Preparing specimens for investigation	G01N1/00
Aerosol sampling devices	G01N2001/2223
Staining of samples	G01N1/30
Investigating density or specific gravity of materials	G01N9/00
Investigating flow properties of materials, e.g. viscosity, plasticity; Analysing materials by determining flow properties	G01N11/00
Investigating surface or boundary effects, e.g. wetting power; Investigating diffusion effects; Analysing materials by determining surface, boundary or diffusion effects	G01N13/00
Analysing materials by optical means, e.g. using scattering	G01N21/47
Analysing materials by optical means, e.g. using fluorescence	G01N21/64
Analysing materials by electric or magnetic means	G01N27/00
Analysing materials by ultrasonic, sonic or infrasonic waves	G01N29/00
Analyses of materials according to the nature of the material analysed	G01N33/00
Automatic analysis not limited to specific methods or materials provided for in any single one of groups G01N 1/00 - G01N 33/00; Handling materials therefor	G01N35/00
Separating particles from fluids	B01D
Mixing, e.g. dissolving, emulsifying or dispersing	B01F
Chemical or physical processes, e.g. catalysis, colloid chemistry and their relevant apparatus	B01J
Containers or dishes for laboratory use, e.g. laboratory glassware, microfluidic systems or centrifuge vessels	B01L3/00
Crushing, pulverising, preparatory treatment of grain for milling	B02

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Magnetic or electrostatic separation of solid materials from solid material or fluids; Separation by high-voltage electric fields	B03C
Flotation; Differential sedimentation	B03D
Centrifuges	B04B
Spraying apparatus; Atomising apparatus; Nozzles	B05B
Separating solid particles from bulk materials	B07B
Apparatus for measuring or testing microorganisms with condition measuring or sensing means, e.g. colony counters	C12M1/34
Identification of microorganisms	C12Q
Controlling; Regulating; Systems for controlling or regulating	G05
Counting objects disposed at random with size distinction	G06M11/04
Image enhancement in general	G06T5/00
Image analysis in general	G06T7/00
Extraction of features from image for pattern recognition	G06V10/40
Specific image analysis method for the recognition of microscopic objects	G06V20/69
Techniques for handling particles, e.g. optical traps	G21K
Means for supporting or positioning the objects or the material in electron microscopy	H01J37/20
Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid-state devices or of parts thereof	H01L21/00

Replace: The existing Special rules of classification text with the following updated text below.

Special rules of classification

An indexing code scheme was developed in parallel to the structure of the group and mirrors it, apart from finer subdivisions for the purpose of classifying additional (secondary) aspects. Documents with the invention outside [G01N15/00](#), but covering some specific aspects of a group or subgroup of [G01N15/00](#), should only obtain an indexing code in [G01N15/00](#), with their classification as invention in other subclasses.

In general, subgroups of this place are further subdivided into subgroups according to the method of investigation used, e.g., optical, electrical or mechanical/inertia. Usually the most specific (sub-)group takes precedence. In borderline cases or cases with different inventive aspects, classification takes place in different groups or subgroups, respectively.

The mere sampling or withdrawal of samples of particle suspensions without the inventive aspect being in the investigation comes under [G01N1/02](#) and its subgroups, mere sample preparation under [G01N1/28](#) and its subgroups.

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For searches: Indexing code [G01N2001/2223](#) (sampling of aerosols) could in some cases be relevant for aerosol-related searches in [G01N15/00](#). [G01N15/02](#) and its subgroups refer to investigating particle size or size distribution of particle assemblies. When the size is investigated on individual particles, classification in [G01N15/10](#) and its subgroups is done.

For searches in [G01N15/0255](#), [G01N15/0272](#) or [G01N15/0266](#), relevant documents might be found in some of the classes and groups referring to separation, as mentioned above. In case of optical methods being used, [G01N21/00](#) may often contain relevant additional documents, e.g. in [G01N21/47](#) (scattering, in general), in [G01N21/49](#) (scattering within a body or fluid), in [G01N21/51](#) (scattering inside a container), in [G01N21/53](#) (scattering within a flowing fluid) or in [G01N21/64](#) (fluorescence). In case of ultrasonic methods used, [G01N29/00](#) and its subgroups should be consulted in addition to [G01N15/02](#).

For atomisers, sprayers for therapeutic purposes, inhalators occasionally relevant to searches in [G01N15/0255](#), cf. [A61M11/00](#), [A61M15/00](#). [G01N15/04](#) and its subgroup refer to sedimentation of particle suspensions and take precedence over [G01N15/02](#). The groups relating to centrifuges ([B04B](#)), laboratory centrifuge vessels ([B01L3/5021](#)) or differential sedimentation ([B03D](#)) are also relevant.

[G01N15/06](#) and its subgroups cover the investigation of the concentration of particles in suspension (gas or liquid). [G01N15/02](#), [G01N15/04](#), and [G01N15/10](#) and their subgroups take precedence.

For searches: In case of optical or sonic/ultrasonic techniques, see groups of [G01N21/00](#) and [G01N29/00](#), respectively, as mentioned already for [G01N15/02](#). In case of measuring the concentration of particles in exhaust gas/soot particles, cf. also [F01N11/00](#). For monitoring the functioning of the soot filter, or its regeneration, cf. [F01N3/00](#), [F01N9/002](#). For the electrical sensors, e.g. electrode arrangements, cf. [G01N27/00](#). In case of measuring the mass of the particles collected, cf. e.g. [G01N5/00](#) or [G01N5/02](#). For effectiveness or completeness of sterilisation, cf. [A61L2/28](#).

[G01N15/08](#) refers to the second aspect covered by [G01N15/00](#), i.e. the investigation of permeability, pore-volume and surface-area of porous materials. The term of porous materials is interpreted in a broad sense, as all materials have pores, though of different sizes. Testing of membranes (without explicit reference to measurement of the permeability, pore-volume or surface-area) is classified in [B01D65/10](#). For investigating the fluid tightness of structures, cf. [G01M3/02](#). Medical dialysis systems with membranes are dealt with in [A61M1/16](#), and documents related to testing the nature of borehole walls or formation testing by injection test are classified in [E21B49/00](#).

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[G01N15/10](#) and its subgroups deal with the first aspect covered by [G01N15/00](#) again, i.e. the investigation of particles, in this part of [G01N15/00](#): of individual particles. In case of characterisation of the individual particles, the related document is classified in [G01N15/10](#) and below. For the electrode structures in [G01N15/12](#) or [G01N15/1031](#), cf. also [G01N27/00](#) and relevant subgroups.

[G01N15/1031](#) refers to measuring electrical or magnetic effects of the individual particles other than their resistance or impedance as measured in the specific way in which Coulter counters operate. For magnetic separation of particles in automatic analysis, see [G01N35/0098](#). For use of magnetic beads in immunoassays, see [G01N33/54326](#). Mere separation of particles by electrical or magnetic methods is dealt with in [B03C](#). If the focus is on the specific magnetic sensor for measuring individual or collective magnetic effects of particles, e.g. giant magnetoresistance, see [G01R33/12](#).

[G01N15/12](#) and its subgroups refer to Coulter counters and their details, i.e. the impedance or resistance change due to the transfer of an individual particle through an aperture is measured between electrodes upstream and downstream of the aperture.

[G01N15/14](#) and its subgroups refer to the electro-optical investigation of individual particles, e.g. in flow cytometers, whether or not microstructured (microfabricated devices are covered by subgroup [G01N15/1484](#); mere manipulation of particles in microfluidic systems is dealt with in [B01L3/5027](#)). In case of image analysis for only measuring the size distribution without any interest in the analysis of individual particles, the related document is classified in [G01N15/0227](#). In case the focus is on the characterisation of individual particles by image analysis, the document is classified in [G01N15/1433](#), either with or without resolution of the inner structure of the particle.

For searches: [G01N21/00](#) may contain additional relevant documents, e.g. in [G01N21/03](#) (cuvette constructions), in particular [G01N21/05](#) (flow-through cuvettes), in [G01N21/47](#) (scattering, in general), in [G01N21/49](#) (scattering within a body or fluid), in [G01N21/51](#) (scattering inside a container), in [G01N21/53](#) (scattering within a flowing fluid) or in [G01N21/64](#) (fluorescence).

The details of the image analysis in [G01N15/1433](#) can be classified in addition in (and should therefore be circulated to) [G06M11/04](#) (counting objects disposed at random with size distinction) [G06V10/40](#) (extraction of features from image for pattern recognition), [G06V20/69](#) (specific image analysis method for the recognition of microscopic objects), [G06T5/00](#) (image enhancement in general) and [G06T7/00](#) (image analysis in general).

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Replace: The existing Glossary of terms table with the following updated table.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

particle	discrete material structure with a representative dimension less than 1 cm and with at least one nearly constant geometrical attribute, like shape, diameter or boundary. Some examples are: biological cells, bubbles or material chips.
permeability	capacity of a porous material to transmit a fluid
porosity	fraction of the volume of an apparent solid that is actually empty space
porous materials	include microporous materials, as well as film or membrane materials