

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1292

DATE: MAY 1, 2022

PROJECT MP10319

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:	C12Q	1/70
Notes New:	C12Q	1/00, 1/70
	C12Q	2500/00
Notes Modified:	C12Q	SUBCLASS
	C12Q	1/68
DEFINITIONS:		
Definitions New:	C12Q	2500/00
Definitions Modified:	C12Q	SUBCLASS
	C12Q	1/00, 1/025, 1/61, 1/66, 1/68, 1/6804, 1/6806, 1/6809, 1/6811, 1/6813, 1/6816, 1/6818, 1/682, 1/6825, 1/6827, 1/6832, 1/6834, 1/6837, 1/6839, 1/6841, 1/6844, 1/6848, 1/6851, 1/6853, 1/6855, 1/6858, 1/686, 1/6862, 1/6865, 1/6867, 1/6869, 1/6872, 1/6874, 1/6876, 1/6883, 1/6886, 1/6897, 1/70, 1/701, 1/702, 1/703, 1/705, 1/706, 1/707, 1/708

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 C12Q- MEASURING OR TESTING PROCESSES INVOLVING ENZYMES, NUCLEIC ACIDS OR MICROORGANISMS (immunoassay G01N33/53); COMPOSITIONS OR TEST PAPERS THEREFOR; PROCESSES OF PREPARING SUCH COMPOSITIONS; CONDITION-RESPONSIVE CONTROL IN MICROBIOLOGICAL OR ENZYMOLOGICAL PROCESSES

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level 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	C12Q 1/70	1	involving virus or bacteriophage {(immunoassay for viruses G01N33/56983)}	

*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>.
- 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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B. New, Modified or Deleted Note(s)**SUBCLASS C12Q- MEASURING OR TESTING PROCESSES INVOLVING ENZYMES, NUCLEIC ACIDS OR MICROORGANISMS (immunoassay G01N33/53); COMPOSITIONS OR TEST PAPERS THEREFOR; PROCESSES OF PREPARING SUCH COMPOSITIONS; CONDITION-RESPONSIVE CONTROL IN MICROBIOLOGICAL OR ENZYMOLOGICAL PROCESSES**

<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
M	C12Q	<p>1. This subclass does not cover the observation of the progress or of the result of processes specified in this subclass by any of the methods specified in groups G01N 3/00 - G01N 29/00, which is covered by subclass G01N.</p> <p>2. In this subclass, the following expression is used with the meaning indicated: "involving", when used in relation to a substance, includes the testing for the substance as well as employing the substance as a determinant or reactant in a test for a different substance.</p> <p>3. Attention is drawn to Notes (1) to (3) following the title of class C12.</p> <p>4. In this subclass, test media are classified in the appropriate group for the relevant test process.</p> <p>5. Documents describing the use of an electrode for analysis of a specific analyte are classified in C12Q 1/001 or subgroups and not according to the last place rule</p> <p>6. Documents relating to new peptides, e.g. enzymes, 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 where the new nucleic acids are principally used in diagnostic processes, e.g. PCR,</p>	<p><u>Replace:</u> The notes 5 through 8 with the following new notes:</p> <p>5. In this subclass, it is desirable to add the indexing codes of subclass C12R.</p> <p>6. {Documents describing the use of an electrode for analysis of a specific analyte are classified in C12Q 1/001 or subgroups and not according to the last place rule.}</p> <p>7. {Documents relating new peptides, e.g. enzymes, 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 where the new nucleic acids are principally used in diagnostic processes, e.g. PCR, hybridization reactions, the documents are also classified in group C12Q 1/68}</p> <p>8. {In groups C12Q 1/6876 - C12Q 1/6895 and C12Q 1/701 - C12Q 1/708 it is compulsory to add the indexing codes C12Q 2600/00 - C12Q 2600/178 which reflect the use of the product in combination with the virus groups only if the document relates to products.}</p> <p>9. {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
		<p>hybridization reactions, the documents are also classified in group C12Q 1/68</p> <p>7. When classifying in groups C12Q 1/68 - C12Q 1/70 it is desirable to classify with symbols from groups C12Q 2500/00 - C12Q 2565/634, relating to relevant technical features of the invention, using Combination Sets.</p> <p>8. In groups C12Q 1/6876 - C12Q 1/6895 and C12Q 1/70 - C12Q 1/708 it is desirable to add the indexing codes C12Q 2600/00 - C12Q 2600/178 which reflect the use of the product in combination</p>	<p>syntextrules is present in the definitions of C12Q.}</p>
N	C12Q 1/00		{In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of C12Q.}
M	C12Q 1/68	In this group, classification is made according to the most relevant feature irrespective of the last place priority rule.	<p>Replace: The existing NOTE with the following new notes:</p> <ol style="list-style-type: none"> In this group, classification is made according to the most relevant feature irrespective of the last place priority rule. {In groups C12Q 1/68 - C12Q1/6874, and C12Q1/6897, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntaxrules are found in the Definitions of C12Q.}
N	C12Q 1/70		<ol style="list-style-type: none"> {In this group, classification is made according to the most relevant feature irrespective of the last place priority rule.} {In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntaxrules

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<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
N	C12Q 2500/00		Indexing codes C12Q 2500/00 - C12Q 2565/634 are only used as subsequent symbols in C-Sets and are not allocated as single symbols. The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of C12Q.

*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

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2. A. DEFINITIONS (New)

Insert the following NEW definition.

C12Q 2500/00

Special rules of classification

Indexing codes [C12Q 2500/00](#) - [C12Q 2565/634](#) are only used as subsequent symbols in C-Sets and are not allocated as single symbols.

C-Sets classification:

Indexing codes [C12Q 2500/00](#) - [C12Q 2565/634](#) are used as subsequent symbols in C-Sets #C12Qa, #C12Na and #C12Nb. The detailed information about the C-Sets construction and the associated syntax rules are found in the “Special rules of classification” in [C12Q1/68](#) for C-Set rule #C12Qa, [C12N15/10](#) for C-Set rule #C12Na, and [C12N15/64](#) for C-Set rule #C12Nb.

C-Sets searches:

C-Sets search queries may be made according to C-Set classification rules #C12Qa, #C12Na or #C12Nb, described in [C12Q1/68](#), [C12N15/10](#) or [C12N15/64](#), respectively.

2. A. DEFINITIONS (Modified)

Insert the following modified definition.

C12Q

Relationships with other classification places

Delete: The second paragraph “In subclasses C12M-C12Q and within ... is made in the last appropriate place.” in the Relationship with other classification places.

Special rules of classification

Delete: The entire existing “Special rules of classification” text and replace it with the following new text and table:

In this subclass, in absence of an indication to the contrary, classification is made in the last appropriate place.

In this subclass, test media are classified in the appropriate group for the relevant test process.

In this subclass, bacteria, fungi, viruses, protozoa and algae are considered as microorganisms.

In this subclass, sub-cellular parts, unless specifically provided for, are classified with the whole cell.

Combination Sets [C-Sets]:

In this subclass, C-Sets classification is applied to the following groups, listed in the table below, if the document discloses a pertinent combination of technical features that cannot be covered by the allocation of a single symbol. The fourth column of the table indicates the place where the detailed information about the C-Sets construction and the associated syntax rules can be found, in the definition section “Special rules of classification”.

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C-SETS ID	BASE SYMBOL	SUBSEQUENT SYMBOLS	C-SETS FORMULA; LOCATION OF C-SETS RULES
#C12Qa	C12Q1/68 - C12Q1/6874, C12Q1/6897, C12Q1/70	C12Q2500/00 - C12Q2565/634	(C12Q, C12Q); measuring or testing processes involving in a nucleic acid; see C12Q1/68
#C12Na	C12N15/10 - C12N15/1096	C12Q2500/00 - C12Q2565/634	(C12N, C12Q); DNA or RNA isolation/preparation process and cell culture components; see C12N15/10
#C12Nb	C12N15/64 - C12N15/66	C12Q2500/00 - C12Q2565/634	(C12N, C12Q); general methods for preparing vectors; see C12N15/64

The specific C-Sets rule is located at only one place of the base symbol in the section “Special rules of classification” in the definition. If the C-Sets rule is applicable to all groups of a subclass, it is located at the subclass level only. If the same C-Sets rule is applicable to multiple groups or subgroups within the same subclass, the C-Sets rule is placed at the highest group or subgroup of the multiple groups.

Glossary of terms

Replace: The existing description text for Microorganism with the following new description:

Microorganism	For the purposes of classification, this term includes bacteria, fungi, viruses, protozoa and algae.
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C12Q 1/00

Definition statement

Delete: The seventh paragraph "Processes involving enzymes or microorganisms ... condition responsive control."

Relationships with other classification places

Delete: The entire Relationships with other classification places section.

Special rules of classification

Delete: The second paragraph "In this group, viruses, protozoa, unicellular ... classified with the whole cell."

C12Q 1/025

References

Limiting references

Replace: The existing Limiting reference table with the following new reference.

Antimicrobial activity	C12Q1/18
------------------------	----------

Insert: The following new Informative reference section and references.

Informative references

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

Testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics, using animal cells	G01N33/5008
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Testing or evaluating the effect of chemical or biological compounds, e.g. drugs, cosmetics, using plant cells	G01N33/5097
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C12Q 1/61

Definition statement

Replace: The term “triglycerides” with the correct term and comma
triglycerides,

C12Q 1/66

Definition statement

Delete: The following statement from the Definition statement.
Involving nucleic acids

C12Q1/68

References

Informative references

Replace: The term “Microfluidic” in the description portion of reference B01L1/00-
B01L99/00 with the term
Microfluidic

Special rules of classification

Delete: The entire existing “Special rules of classification” text and replace it with the following new text and table.

In groups [C12Q 1/68](#) - [C12Q1/708](#), the common rule is applied, i.e. the classification is made at the most appropriate place.

Classification guidance

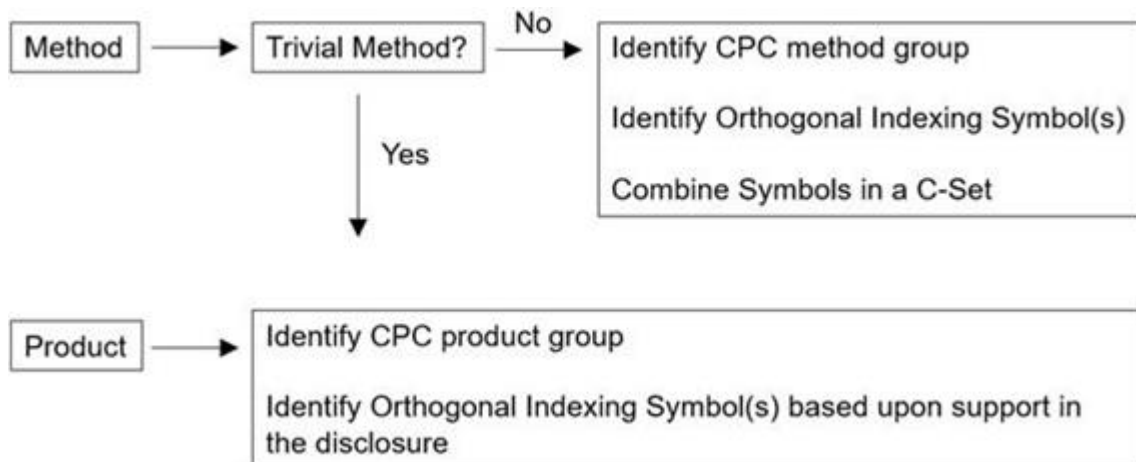
The subgroups [C12Q 1/68](#) - [C12Q 1/708](#) are divided in method groups and nucleic acid product groups (primers, probes, arrays, and other nucleic acid products) as shown in the tables below.

Depending on which kind of subject matter of invention is being classified (i.e. method or product), different rules for classification apply.

If the methods disclosed by an application are known or trivial, classification of such trivial methods is determined based on the use of the products identified and follows the classification guidance for products.

Orthogonal Indexing symbols [C12Q 2500/00](#) - [C12Q 2565/634](#) are used with the CPC method groups.

Orthogonal Indexing symbols of the groups [C12Q 2600/00](#) - [C12Q 2600/178](#) are used with the CPC product groups.



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Classification of Nucleic acid product groups and trivial methods:

Nucleic acid product groups are shown below:

Symbol	Title
C12Q 1/6876	Hybridisation probes, primers, and other nucleic acid products
C12Q 1/6879	For sex determination
C12Q 1/6881	For tissue and cell typing, e.g. hla probes
C12Q 1/6883	For diseases caused by alterations of genetic material
C12Q 1/6886	For cancer
C12Q 1/6888	For detection or identification of organisms
C12Q 1/689	For bacteria
C12Q 1/6893	For protozoa
C12Q 1/6895	For plants, fungi, or algae
C12Q 1/701	Specific hybridisation probes
C12Q 1/702	For retroviruses
C12Q 1/703	Viruses associated with AIDS
C12Q 1/705	For herpetoviridae, e.g. herpes simplex, varicella zoster
C12Q 1/706	For hepatitis
C12Q 1/707	Non-A, non-B Hepatitis, excluding hepatitis D
C12Q 1/708	For papilloma

Classification guidance for nucleic acid products and trivial methods:

- The nucleic acid product groups [C12Q 1/6876](#) - [C12Q1/6895](#) and [C12Q1/701](#)-[C12Q 1/708](#) are allocated as single symbols in conjunction with orthogonal Indexing symbols of the groups [C12Q 2600/00](#) - [C12Q2600/178](#).
- The [C12Q 2600/00](#) orthogonal Indexing symbols are given as independent symbols.
- The use of the [C12Q 2600/00](#) codes is compulsory. They should be given if the claims and/or examples support a functional use as given by any of the [C12Q 2600/00](#) symbols as shown above.

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Examples for nucleic acid product groups:

Example 1. An invention is directed to the identification of the TNF haplotype TNF-1031C/-857C/-863C/-308G and its association with Crohn's Disease. The disclosure provides data showing a significant association of the haplotype with the Crohn's Disease. The invention also relates to the identification of the -857C allele. The methods and means for determining these polymorphisms and haplotypes are known in the art, therefore considered as trivial.

The nucleic acid product symbol for this invention is [C12Q 1/6883](#).

Although the method for determining the -857C polymorphism is known, adding the orthogonal indexing symbol [C12Q 2600/156](#) (polymorphic or mutational markers) will help in retrieving the information about use of the identified polymorphic allele, like 857C, and its association with Crohn's Disease.

The method for determining the haplotype is known. However, adding the orthogonal indexing symbol [C12Q2600/172](#) (Haplotypes) will aid in retrieving the information about use of haplotypes, like TNF-1031C/-857C/-863C/-308G, and its association with Crohn's Disease.

The complete classification should therefore be [C12Q 1/6883](#), [C12Q 2600/156](#) and [C12Q2600/172](#).

Example 2. An application relates to the use of the B1153 gene in testing for an allergic disease. The expression level of this gene is increased in patients with an allergic disease. The methods and means for determining the expression level are trivial.

The nucleic acid product symbol for this application is [C12Q 1/6883](#).

The methods for determining the expression level are trivial but adding the orthogonal indexing symbol [C12Q 2600/158](#) (expression marker) will aid in retrieving the information of use of specific expression markers, including B1153.

The complete classification should therefore be [C12Q 1/6883](#) and [C12Q 2600/158](#).

Example 3. An application relates to the use of a SNP for determining if a patient would benefit from an anti-cancer therapy. The methods and means for determining the SNP are trivial.

The nucleic acid product symbol for this application would be [C12Q 1/6886](#).

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The methods for determining the SNP are trivial but adding the orthogonal indexing symbol [C12Q 2600/156](#) (polymorphic or mutational markers) will aid in retrieving information about polymorphic or mutational markers.

In addition, the application claims pharmacogenomics. If the application provides evidence-based support (e.g. examples) for this claim, orthogonal indexing symbol [C12Q 2600/106](#) is also given. If no support is present, only the Indexing symbol for polymorphic marker [C12Q 2600/156](#) is given.

The complete classification should therefore be:

- [C12Q 1/6886](#) and [C12Q 2600/156](#) if no support is present, or
- [C12Q 1/6886](#), [C12Q 2600/106](#) and [C12Q 2600/156](#) if the application provides support for a pharmacogenomics claim.

Classification of non-invention information (additional information):

All subgroups in [C12Q 1/68](#) - [C12Q 1/708](#) can be used for classifying non-invention information (or Additional information) that compliments Invention information and is useful for searches. Such Additional information is given under the classifier's discretion. The following example illustrates how to classify non-invention information as (A) that is useful for search:

Example: An application relates to oligonucleotide probes used for the species-specific identification of parodontopathogenic bacteria by in situ hybridisation. The methods for performing the in situ hybridisation are known in the art and considered as non-invention.

The application is given [C12Q 1/689](#) for the bacterial detection probes as Inventive information.

Although the method in situ hybridisation is known in the art, adding [C12Q 1/6841](#) (in situ hybridisation) as Additional information will aid in retrieving the method of identifying novel bacteria by using in situ hybridisation.

In searching, the combination of [C12Q 1/689](#) (Inventive information (I)), [C12Q 1/6841](#)(Additional information (A)), and keywords will directly lead to the most relevant documents.

The complete classification should therefore be:

- [C12Q 1/689](#) (I)
- [C12Q 1/6841](#)(A)

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Classification of methods groups as invention information:

Within [C12Q 1/68](#) - [C12Q 1/6874](#) and [C12Q 1/6897](#)- [C12Q 1/70](#), the following subgroups listed in table below are considered as method groups related to nucleic acids.

Symbol	Title
C12Q 1/6804	Nucleic acid analysis utilising immunogens
C12Q 1/6806	Preparing nucleic acids for analysis, e.g. for PCR assay
C12Q 1/6809	Sequence identification involving differential detection
C12Q 1/6811	Selection methods for production or design of target specific oligonucleotide or binding molecules
C12Q 1/6813	Hybridisation assays
C12Q 1/6816	Characterised by the means of detection
C12Q 1/6818	Involving interaction of at least two labels, e.g. resonant energy transfer
C12Q 1/682	Signal amplification
C12Q 1/6823	Release of bound marker
C12Q 1/6825	Nucleic acid detection involving sensors
C12Q 1/6827	For mutation or polymorphism detection
C12Q 1/683	Involving restriction enzymes, e.g. rflp
C12Q 1/6832	Enhancement of hybridisation reaction
C12Q 1/6834	Nucleic acid analysis involving immobilisation; Immobilisation characterised by the carrier or coupling agent
C12Q 1/6837	Characterised by the use of probe arrays or probe chips
C12Q 1/6839	Triple helix formation in hybridisation assays
C12Q 1/6841	In situ hybridisation
C12Q 1/6844	Nucleic acid amplification reactions
C12Q 1/6846	Common amplification features
C12Q 1/6848	Preventing contamination
C12Q 1/6851	Quantitative amplification
C12Q 1/6853	Using modified primers or templates

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C12Q 1/6855	Ligating adaptors
C12Q 1/6858	Allele specific amplification
C12Q 1/686	Polymerase chain reaction [PCR]
C12Q 1/6862	Ligase chain reaction [LCR]
C12Q 1/6865	Promoter based amplification, e.g. NASBA, 3SR, TAS
C12Q 1/6867	Replicase based amplifications, e.g. Q-beta replicase
C12Q 1/6869	Methods for sequencing; sequencing using nanopores and other sequencing systems based on physical properties of nucleic acids, e.g. Atomic Force Microscopy [AFM]
C12Q 1/6872	Involving mass spectrometry
C12Q 1/6874	Involving nucleic acid arrays, e.g. sequencing by hybridisation [SBH]
C12Q 1/6897	Involving reporter genes operably linked to promoters
C12Q 1/70	Involving viruses and Bacteriophages

Combination sets (C-Sets):

Methods related to nucleic acids as listed above in the table are classified in the form of C-Sets, which follows C-Sets rule #C12Qa as described in below.

C-Sets statement: #C12Qa

- In these C-Sets, the base symbol, representing the type of method are taken from the groups [C12Q 1/68](#) - [C12Q 1/6874](#), [C12Q 1/6897](#) and [C12Q 1/70](#), whereas the subsequent symbols representing the essential technical features of the method are taken from the orthogonal symbols [C12Q 2500/00](#) - [C12Q 2565/634](#).
- Orthogonal symbols [C12Q 2500/00](#) - [C12Q 2565/634](#) are only used as subsequent symbols in C-Sets and should not be allocated as single symbol.
- In the C-Set, only the essential technical features of the invention, which differentiate it from the prior art, are to be represented: only exceptionally more than three technical feature (orthogonal symbols) codes should make up the C-Set. The least possible number of orthogonal symbols should be included in the C-Set.
- All indexing codes from groups [C12Q 2500/00](#) - [C12Q 2565/634](#) are to be used in the context literally expressed in the phrase ascribed to the code, i.e. the use of an indexing code is neither restricted by its hierarchical position in a group nor by the definition of the group in which the code is found.
- All C-Sets #C12Qa should be allocated as Invention information (INV).

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C-Sets syntax rules:

- Each C-Set shall contain two or more symbols. Each C-Set shall contain one base symbol from [C12Q1/68](#), [C12Q1/6804](#) - [C12Q1/6874](#), [C12Q1/6897](#) and [C12Q1/70](#), and at least one subsequent symbol from [C12Q2500/00](#) - [C12Q2565/634](#).
- Duplicate symbols are not allowed in these C-Sets.
- The order of the subsequent symbols in these C-Sets is not relevant.

C-Sets examples:

#C12Qa: Nanopore sequencing is accomplished by measuring changes to an electrical current as a nucleic molecule is passed through a pore. An application discloses an improved method of nanopore sequencing using an immobilized helicase at the pore entrance:

[C12Q 1/6869](#) is given as a base symbol for the method of sequencing

The essential technical features of the inventive method are assigned using orthogonal indexing codes as follows:

- Feature 1: [C12Q2565/631](#) being a biochannel or pore
- Feature 2: [C12Q2521/543](#) immobilized enzyme(s)
- Feature 3: [C12Q2521/513](#) winding/unwinding enzyme, e.g. helicase

These orthogonal indexing codes are selected to describe the essential technical features of the method, and not to capture all features of the method of nanopore sequencing, such as [C12Q 2565/607](#) being a sensor, e.g. electrode.

Complete C-set: ([C12Q1/6869](#), [C12Q 2521/513](#), [C12Q2521/543](#), [C12Q 2565/631](#))

#C12Qa: An application discloses an inventive method of nucleic acid quantification using an amplification method with an external standard and a logarithmic regression for determining the initial amount of nucleic acid present:

[C12Q 1/6851](#) is given as a base symbol for the method of quantitative amplification

The following orthogonal indexing codes in [C12Q2500/00](#) - [C12Q2565/634](#) are assigned for the essential technical features of the inventive method:

- Feature 1: [C12Q 2545/113](#) with an external standard/control
- Feature 2: [C12Q 2537/165](#) Mathematical modelling

Complete C-set: ([C12Q1/6851](#), [C12Q2537/165](#), [C12Q2545/113](#))

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C12Q 1/6804

Special rules of classification

Replace: The first paragraph in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6806

References

Limiting references

Delete: The entire Limiting reference table and section.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6809

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6811

References

Limiting references

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Delete: The entire Limiting reference table and section.

Informative references

Insert: The following new references into the Informative reference table.

Isolating an individual clone by screening libraries	C12N 15/1034
Screening libraries presented on the surface of microorganisms, e.g. phage display, E. coli display	C12N 15/1037
Ribosome/Polysome display, e.g. SPERT, ARM	C12N 15/1041
Preparation or screening of libraries displayed on scaffold proteins	C12N 15/1044
SELEX	C12N 15/1048
Gene trapping, e.g. exon-, intron-, IRES-, signal sequence-trap cloning, trap vectors	C12N 15/1051
Protein x Protein interaction, e.g. two hybrid selection	C12N 15/1055
Directional evolution of libraries, e.g. evolution of libraries is achieved by mutagenesis and screening or selection of mixed population of organisms	C12N 15/1058
mRNA-Display, e.g. polypeptide and encoding template are connected covalently	C12N 15/1062
Preparation or screening of tagged libraries, e.g. tagged microorganisms by STM-mutagenesis, tagged polynucleotides, gene tags	C12N 15/1065
Template (nucleic acid) mediated chemical library synthesis, e.g. chemical and enzymatical DNA-templated organic molecule synthesis, libraries prepared by non ribosomal polypeptide synthesis (NRPS), DNA/RNA-polymerase mediated polypeptide synthesis	C12N 15/1068
Differential gene expression library synthesis, e.g. subtracted libraries, differential screening	C12N 15/1072
By coupling phenotype to genotype, not provided for in other groups of this group	C12N 15/1075
Screening libraries by altering the phenotype or phenotypic trait of the host	C12N 15/1079

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Preparation or screening gene libraries by chromosomal integration of polynucleotide sequences, HR-, site-specific-recombination, transposons, viral vectors	C12N 15/1082
Preparation or screening of expression libraries, e.g. reporter assays	C12N 15/1086
Design, preparation, screening or analysis of libraries using computer algorithms	C12N 15/1089
General methods of preparing gene libraries, not provided for in other subgroups	C12N 15/1093
Phage display	G01N 33/00

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6813**Special rules of classification**

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6816**Definition statement**

Delete: The extra period at the end of the paragraph.

References**Limiting references**

Delete: The entire Limiting reference section.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6818

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/682

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6825

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q1/6827

Relationships with other classification places

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Replace: The text in the second paragraph with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6832

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6834

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6837

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6839

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

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C12Q 1/6841

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6844

References

Informative references

Replace: The term "Microfluidic" in the description portion of the reference B01L1/00-B01L99/00 with the term

Microfluidic

Delete: The period at the end of the sentence for the reference B01L1/00 - B01L99/00.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6848

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

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C12Q 1/6851

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6853

Definition statement

Replace: The term "methods" in the statement with "Methods".

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

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C12Q 1/6855

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6858

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/686

Definition statement

Replace: The existing text in the Definition statement section with the following:

All applications dealing with PCR and modifications/improvements thereof (e.g. Taqman, multiplex-PCR, and etc.).

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

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C12Q 1/6862

Definition statement

Replace: The term “all” in the Definition statement with “All”.

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6865

Definition statement

Replace: The term “all” in the Definition statement with “All”.

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6867

Definition statement

Replace: The term “all” in the Definition statement with “All”.

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

DATE: MAY 1, 2022

PROJECT MP10319

C12Q 1/6869

References

Informative references

Replace: The term “Microfluidic” in the reference B01L1/00-B01L99/00 with the term
Microfluidic

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6872

Definition statement

Replace: The term “all” in the Definition statement with “All”.

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6874

Definition statement

Replace: The term “all” in the Definition statement with “All”.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6876

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6883

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6886

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/6897

Special rules of classification

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Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/70

Definition statement

Replace: The term "all" in the first sentence in the Definition statement with "All".

References

Limiting references

Delete: The following two references from the Limiting reference table.

Virus antigen in a vaccine	A61K39/12
Virus	C12N7/00

Insert: A new Informative reference section and the following two references.

Informative references

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

Virus antigen in a vaccine	A61K39/12
Virus	C12N7/00

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

Insert: The following text in the Special rules section immediately after the above instructions.

Combination sets (C-Sets):

In this group, C-sets are used. The detailed information about the C-sets construction and the associated syntax rules are found in the Special rules of [C12Q1/68](#).

C12Q 1/701

Definition statement

Replace: The term "all" in the Definition statement with "All".

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/702

Definition statement

Replace: The term "probes" in the first sentence in the Definition statement with "Probes".

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/703

Definition statement

Replace: The term "probes" in the first sentence in the Definition statement with "Probes".

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/705

Definition statement

This place covers:

Replace: The term "probes" in the first sentence in the Definition statement with "Probes".

Special rules of classification

Replace: The text in the Special rules section with the following
See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/706

Definition statement

DATE: MAY 1, 2022

PROJECT MP10319

Replace: The term “probes” in the first sentence in the Definition statement with “Probes”.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/707

Definition statement

Replace: The term “probes” in the first sentence in the Definition statement with “Probes”.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)

C12Q 1/708

Definition statement

Replace: The term “probes” in the first sentence in the Definition statement with “Probes”.

Special rules of classification

Replace: The text in the Special rules section with the following

See the "Special rules" section of [C12Q 1/68](#)