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GENEVA

SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION (IPC UNION)

COMMITTEE OF EXPERTS

Twenty-Ninth Session
Geneva, March 13 to 17, 2000

REQUEST FOR REVISION OF THE
INTERNATIONAL PATENT CLASSIFICATION (IPC)

Document prepared by the International Bureau

The Annex to this document contains a proposal for the creation of a new subclass on combinatorial chemistry made by the United States of America following a revision request submitted to the Committee of Experts (see document IPC/CE/29/7, Annex 1).

[Annex follows]

ANNEX/ANNEXE

IPC DETAILED PROPOSAL

Page No.: 1
Number of pages: 5
Project: **Class title - C15 - COMBINATORIAL CHEMISTRY TECHNOLOGY**
Office:US
Class/Subclass:

Type of amendment: C = Change of scope D = Deletion of the entry N = Creation of the entry

Type	Place	Wording	Remarks/ Examples
N	C15	COMBINATORIAL CHEMISTRY TECHNOLOGY	
N	C15B	LIBRARIES; METHODS OF PREPARING AND SCREENING LIBRARIES; MISCELLANEOUS PROCESSES AND PRODUCTS SPECIALLY ADAPTED FOR THE TECHNOLOGY	*Note: All example documents are US patents*
N	1 / 00	**Method of Screening a Library, or a Product Related to Screening**	5,541,070
N	1 / 04	• Involving a specified biologically replicable entity, (e.g. genetic package or vector), which is a component of a library, or which displays, contains, or presents a library	5,270,170 5,491, 084 5, 498,538
N	1 / 06	• • The entity is a virus, e.g. bacteriophage	5,427,908 5,498,538 5,571,681 5,994,083
N	1 / 08	• • The entity is a prokaryotic or eukaryotic cell, e.g. arabidopsis cell	5,824,485 5,948,653
N	1 / 10	• • • Eukaryotic animal cell, e.g. COS, HeLa	5,824,485 5,948,653
N	1 / 12	• • • Yeast or single-cell fungus	5,789,184 5,824,485 5,989,814
N	1 / 14	• • • Bacterium	5,824,485 5,948,653
N	1 / 16	• Screening a specified library consisting of inorganic compounds or materials	----------
N	1 / 18	• • For catalytic activity	----------
N	1 / 20	• • The library contains a metal-containing compound or material	----------
N	1 / 22	• • • As an alloy	----------
N	1 / 24	• • • As a metal oxide	----------
N	1 / 26	• Screening a specified library consisting of organic compounds or materials	5,593,853 5,712,171

Type	Place	Wording	Remarks/ Examples
	1 / 28	• • The library contains a peptide, a polypeptide or derivative thereof, i.e. a substance containing an amide bond formed between the carboxyl group of one aminocarboxylic acid molecule and the amino group of another, same or different, aminocarboxylic acid molecule	5,438,191 5,491,084 5,510,240 5,532,167 5,556,762 5,593,853
N	1 / 30	• • • Peptide nucleic acid, i.e. PNA	----------
N	1 / 32	• • The library contains a nucleotide, polynucleotide or derivative thereof, i.e. a substance containing at least one nucleotide	5,539,082 5,582,981 5,712,375 5,866,363
N	1 / 34	• • The library contains a carbohydrate or derivative thereof, i.e. a compound containing at least one polyhydroxy mono-(aldehyde or ketone) of the formula $C_n(H_2O)_n$ (where n is 5 or 6) or the corresponding hemiacetals thereof; or the derivatives thereof in which the carbon skeleton and the aldehyde or ketone function or hemiacetal function of the saccharide unit are not destroyed	5,593,853
N	1 / 36	• • The library contains a polymer	5,698,685
N	3 / 00	**Library or Related Product**	5,340,474 5,751,629 5,840,485
N	3 / 04	• A biologically replicable entity (e.g., genetic package or vector) is a specified component of a library, or the entity displays, contains, or presents a library	5,270,170 5,491,084 5,824,485 5,866,363
N	3 / 06	• • The entity is a virus, e.g. bacteriophage	5,751,629
N	3 / 08	• • The entity is a prokaryotic or eukaryotic cell, e.g. arabidopsis cell	----------
N	3 / 10	• • • Eukaryotic animal cell, e.g. COS, HeLa	5,824,485
N	3 / 12	• • • Yeast or single-cell fungus	5,789,184
N	3 / 14	• • • Bacterium	5,795,752 5,969,108
N	3 / 16	• Specified library consisting of inorganic compounds or materials	5,525,735
N	3 / 18	• • The library contains a metal containing compound or material	----------
N	3 / 20	• • • As an alloy	----------
N	3 / 22	• • • As a metal oxide	----------
N	3 / 24	• Specified library consisting of organic compounds or materials	5,545,568 5,731,438 5,840,485

Type	Place	Wording	Remarks/ Examples
N	3 / 26	• • The library contains a peptide or a polypeptide or derivative thereof, i.e. a substance containing an amide bond formed between the carboxyl group of one aminocarboxylic acid molecule and the amino group of a another, same or different, aminocarboxylic acid molecule	5,340,474 5,571,681 5,582,997 5,751,629 5,840,485 5,866,363
N	3 / 28	• • • Peptide nucleic acid, i.e. PNA	----------
N	3 / 30	• • The library contains a nucleotide, polynucleotide or derivative thereof, i.e. a substance containing at least one nucleotide	5,866,363 5,948,653
N	3 / 32	• • The library contains a carbohydrate or derivative thereof, i.e. a compound containing at least one polyhydroxy mono-(aldehyde or ketone) of the formula $C_n(H_2O)_n$ (where n is 5 or 6) or the corresponding hemiacetals thereof; or the derivatives thereof in which the carbon skeleton and the aldehyde or ketone function or hemiacetal function of the saccharide unit are not destroyed	5,278,303 5,840,485 5,861,492
N	3 / 34	• • The library contains a polymer	5,506,337
N	3 / 36	• Process of preparing a library, e.g. employing solution phase and not utilizing a support	5,010,175 5,593,853 5,712,171 5,780,241
N	3 / 38	• • Utilizing biological means, e.g. enzyme or cellular component	5,759,817 5,824,485 5,866,363 5,871,907 5,942,907
N	3 / 40	• • Wherein library members are bonded to a soluble support during library preparation	5,877,214 5,886,186

Type	Place	Wording	Remarks/ Examples
N	3 / 42	• • Wherein library members are bonded to a solid support during library preparation	5,010,175 5,242,186 5,264,563 5,288,514 5,384,261 5,539,083 5,545,531 5,545,568 5,690,894 5,712,171 5,732,263 5,859,191 5,885,837 5,886,186 5,929,208
N	9 / 00	**Miscellaneous (e.g. optimization process, etc.)**	

GUIDE TO USE OF THE PROPOSED C15B SCHEDULE

The schedule is written in conformity with USPC-suggested new IPC practice, i.e.,

(1) a top-down placement rule is employed, allowing the following methodology of claim placement:

> to determine the main group or subgroup that provides for a given claim or for one of plural embodiments within a given claim, start at the top of the subclass schedule and work down to the highest coordinate main group or subgroup in the deepest level of indentation that provides for the claim or for the embodiment.

(2) a process for preparation of a product is classified with the product, except if
   (a) the process appears higher in the schedule than the product, or
   (b) the process is classified in a different subclass.

The term “specified” is employed in a number of subgroups in this subclass to indicate that a claim must define a library in terms of its structure to be placed in these subgroups. Doing so allows claims to generic processes (i.e., those applicable to libraries in general)

   (a) to bypass subgroups that define libraries by structure, and
   (b) to be placed in the residual method of screening subgroup, or in the appropriate method of preparation subgroup.

CLASS C15 – COMBINATORIAL CHEMISTRY TECHNOLOGY

Subclass C15B - Libraries; Methods of Preparing and Screening Libraries; Miscellaneous Processes and Products Specially Adapted for the Technology

Within this subclass, the terms 'library' and 'combinatorial library' are used interchangeably.

This subclass provides for the following aspects of combinatorial chemistry technology:

(1) the libraries themselves, and subsets thereof (having at least two members),
(2) methods of creating and screening libraries,
(3) chemically or physically modified libraries, and
(4) miscellaneous processes and products specially adapted for combinatorial chemistry technology.

A library is an intentionally created unitary collection of a plurality of biologicals, compounds, or other materials. The collection is useful as a test vehicle for determining which of its members possess useful properties. A library may exist as

(1) a solution,
(2) a physical admixture,
(3) an ordered array,
(4) a plurality of members present on a support and affixed thereto by chemical bonding, by physical attractive forces, or by coating, or
(5) a 'virtual library', i.e., one whose members exist only as representations within a computer or on a computer-readable medium.

A method of preparing a library is provided for in this subclass on the condition that the method, taken in its entirety, results in the library. A claim that recites a method of preparing a library **and** steps of separating the library into its individual components will be classified on the basis of the individual components, unless the claim recites said separating for the purpose of deconvoluting the library. Preparation and separation for the purpose of deconvolution is proper for this subclass.

A method of screening or testing a library is provided for in this subclass if the method involves screening or testing of the library as a whole. Simple iterative repetition of a screen or test on an ordered array of compounds in individual containers simultaneously or sequentially would not meet this test.

Types of screening or testing proper for this subclass include:

(1) direct screening of library members,
(2) structure activity analysis,
(3) quantitative structure activity relationship analysis,

This subclass also provides for a process or product that does not fall within the categories mentioned above, but is specially adapted for the area of combinatorial chemistry technology. An example of a process adapted for this area is optimization of a library (e.g., determination of which members of a library would be most likely to provide representative test data).

[End of Annex and of document/
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