U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1869

OCTOBER 2, 2007

PROJECT X-6295

The following classification changes will be effected by this order:

	Class	**Subclass**	**Art Unit**	**Ex'r Search Room**
Abolished:				
Digests:	435	1-50	1639	RND0000A51
		51	1631	RND0000A51
Established:	506 (New)	1-32	1639	ELEC0000
		33-40	1743	ELEC0000
		41-43	1639	ELEC0000

The following classes are also impacted by this order:
204, 260, 420, 422, 423, 424, 436, 502, 520, 530, 532, 536, 540, 585, 702, 703, 977

This order includes the following:

A. CLASSIFICATION MANUAL CHANGES

C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS

CLASSIFICATION ORDER 1869

OCTOBER 2, 2007

PROJECT X-6295

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CLASS 435 CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY

OCTOBER 2007

1.1 DIFFERENTIATED TISSUE OR ORGAN OTHER THAN BLOOD, PER SE, OR DIFFERENTIATED TISSUE OR ORGAN MAINTAINING; COMPOSITION THEREFOR
1.2 .Including perfusion; composition therefor
1.3 .Including freezing; composition therefor
2 MAINTAINING BLOOD OR SPERM IN A PHYSIOLOGICALLY ACTIVE STATE OR COMPOSITIONS THEREOF OR THEREFOR OR METHODS OF IN VITRO BLOOD CELL SEPARATION OR TREATMENT
3 CONDITION RESPONSIVE CONTROL PROCESS
4 MEASURING OR TESTING PROCESS INVOLVING ENZYMES OR MICRO-ORGANISMS; COMPOSITION OR TEST STRIP THEREFORE; PROCESSES OF FORMING SUCH COMPOSITION OR TEST STRIP
5 .Involving virus or bacteriophage
6 .Involving nucleic acid
7.1 .Involving antigen-antibody binding, specific binding protein assay or specific ligand-receptor binding assay
7.2 ..Involving a micro-organism or cell membrane bound antigen or cell membrane bound receptor or cell membrane bound antibody or microbial lysate
7.21 ...Animal cell
7.22 ....Parasite or protozoa
7.23 ....Tumor cell or cancer cell
7.24 ....Leukocyte (e.g., lymphocyte, granulocyte, monocyte, etc.)
7.25 ....Erythrocyte
7.3 ...Flagellar-antigen or pili-antigen
7.31 ...Fungi (e.g., yeast, mold, etc.)
7.32 ...Bacteria or actinomycetales
7.33 ....Staphylococcus
7.34 ....Streptococcus
7.35 ....Salmonella
7.36 ....Sexually transmitted disease (e.g., chlamydia, syphilis, gonorrhea, etc.)
7.37 ....Escherichia coli
7.4 ..To identify an enzyme or isoenzyme
7.5 ..Involving avidin-biotin binding
7.6 ..Involving a modified enzyme (e.g., abzyme, recombinant, chemically altered, etc.)
7.7 ..Assay in which a label present is an apoenzyme, prosthetic group, or enzyme cofactor
7.71 ..Assay in which a label present is an enzyme inhibitor or functions to alter enzyme activity
7.72 ..Assay in which a label present is an enzyme substrate or substrate analogue
7.8 ..Involving nonmembrane bound receptor binding or protein binding other than antigen-antibody binding
7.9 ..Assay in which an enzyme present is a label
7.91 ...Enzyme produces product which is part of another reaction system (e.g., cyclic reaction, cascade reaction, etc.)
7.92 ...Heterogeneous or solid phase assay system (e.g., ELISA, etc.)
7.93 ....Competitive assay
7.94 ....Sandwich assay
7.95 ....Indirect assay
8 .Involving luciferase
9 .Geomicrobiological testing (e.g., for petroleum, etc.)
10 .Involving uric acid
11 .Involving cholesterol
12 .Involving urea or urease
13 .Involving blood clotting factor (e.g., involving thrombin, thromboplastin, fibrinogen, etc.)
14 .Involving glucose or galactose
15 .Involving transferase
16 ..Involving transaminase
17 ..Involving creatine phosphokinase
18 .Involving hydrolase
19 ..Involving esterase
20 ...Involving cholinesterase
21 ...Involving phosphatase
22 ..Involving amylase
23 ..Involving proteinase
24 ..Involving peptidase
25 .Involving oxidoreductase
26 ..Involving dehydrogenase
27 ..Involving catalase
28 ..Involving peroxidase
29 .Involving viable micro-organism
30 ..Methods of sampling or inoculating or spreading a sample; methods of physically isolating an intact micro-organism
31 ..Testing for sterility condition
32 ..Testing for antimicrobial activity of a material
33 ...Using multifield media
34 ..Determining presence or kind of micro-organism; use of selective media
35 ...Using radioactive material
36 ...Streptococcus; staphylococcus
37 ...Nitrate to nitrite reducing bacteria
38 ...Enterobacteria
39 ...Quantitative determination
40 ....Using multifield media
40.5 .Involving fixed or stabilized, nonliving microorganism, cell, or tissue (e.g., processes of staining, stabilizing, dehydrating, etc.; compositions used therefore, etc.)
40.51 ..Involving a monolayer, smear or suspension of microorganisms or cells
40.52 ..Involving tissue sections

41 MICRO-ORGANISM, TISSUE CELL CULTURE OR ENZYME USING PROCESS TO SYNTHESIZE A DESIRED CHEMICAL COMPOUND OR COMPOSITION

42 .Process involving micro-organisms of different genera in the same process, simultaneously

43 .Preparing compound having a 1-thia-4-aza-bicyclo (3.2.0) heptane ring system (e.g., penicillin, etc.)

44 ..By desacylation of the substituent in 6-position

45 ..By acylation of the substituent in 6-position

46 ..In presence of phenyl acetic acid or phenyl acetamide or their derivatives

47 .Preparing compound having a 1-thia-5-aza-bicyclo (4.2.0) octane ring system (e.g., cephalosporin, etc.)

48 ..Di-substituted in 7-position

49 ..Cephalosporin C

50 ..By acylation of the substituent in the 7-position

51 ..By desacylation of the substituent in the 7-position

52 .Preparing compound containing a cyclopentanohydrophenanthrene nucleus; nor-, homo-, or D-ring lactone derivatives thereof

53 ..Containing heterocyclic ring

54 ..Acting on D-ring

55 ...Acting at 17-position

56 ....Hydroxylating at 17-position

57 ...Hydroxylating at 16-position

58 ..Hydroxylating

59 ...At 11-position

60 ....At 11 alpha position

61 ..Dehydrogenating; dehydroxylating

62 ...Forming an aryl ring from "A" ring

63 .Preparing compound containing a prostaglandin nucleus

64 .Preparing compound other than saccharide containing a tetracycline nucleus (e.g., naphacene, etc.)

65 .Preparing compound other than saccharide containing a gibberellin nucleus (i.e., gibbane)

66 .Preparing compound other than saccharide containing alloxazine or isoalloxazine nucleus

67 .Preparing compound containing a carotene nucleus (i.e., carotene)

68.1 .Enzymatic production of a protein or polypeptide (e.g., enzymatic hydrolysis, etc.)

69.1 .Recombinant DNA technique included in method of making a protein or polypeptide

69.2 ..Enzyme inhibitors or activators

69.3 ..Antigens

69.4 ..Hormones and fragments thereof

69.5 ..Lymphokines or monokines

69.51 ...Interferons

69.52 ...Interleukins

69.6 ..Blood proteins

69.7 ..Fusion proteins or polypeptides

69.8 ..Signal sequence (e.g., beta-galactosidase, etc.)

69.9 ...Yeast derived

70.1 .Using tissue cell culture to make a protein or polypeptide

70.2 ..Fused or hybrid cells

70.21 ...Producing monoclonal antibody

70.3 ..Animal tissue cell culture

70.4 ...Blood (lymphoid) cell culture

70.5 ....Producing interferons

71.1 .Using a micro-organism to make a protein or polypeptide

71.2 ..Procaryotic micro-organism

71.3 ...Antibiotic or toxin

72 .Preparing compound containing saccharide radical

73 ..Preparing S-glycoside (e.g., lincomycin, etc.)

74 ..Preparing O-glycoside (e.g., glucosides, etc.)

75 ...Oxygen of the saccharide radical is directly bonded to a nonsaccharide heterocyclic ring or a fused- or bridged-ring system which contains a nonsaccharide heterocyclic ring (e.g., coumermycin, novobiocin, etc.)

76 ....The hetero ring has eight or more ring members and only oxygen as ring hetero atoms (e.g., erythromycin, spiramycin, nystatin, etc.)

77 ...Oxygen atom of the saccharide radical is directly linked through only acyclic carbon atoms to a nonsaccharide heterocyclic ring (e.g., bleomycin, phleomycin, etc.)

78 ...Oxygen atom of the saccharide radical is directly bonded to a condensed ring system having three or more carboxyclic rings (e.g., dauomycin, adriamycin, etc.)

79 ...Oxygen atom of the saccharide radical is bonded to a cyclohexyl radical (e.g., kasugamycin, etc.)

80 ....Cyclohexyl radical is substituted by two or more nitrogen atoms (e.g., destomycin, neamin, etc.)

81 .....Cyclohexyl radical is attached directly to a nitrogen atom of two or more N-C(=N)-N radicals (e.g., streptomycin, etc.)

82 .....Having two saccharide radicals bonded through only oxygen to adjacent ring carbons of the cyclohexyl radical (e.g., ambutyrosin, ribostamycin, etc.)

MICRO-ORGANISM, TISSUE CELL CULTURE OR ENZYME USING PROCESS TO SYNTHESIZE A DESIRED CHEMICAL COMPOUND OR COMPOSITION

.Preparing compound containing saccharide radical

..Preparing O-glycoside (e.g., glucosides, etc.)

...Oxygen atom of the saccharide radical is bonded to a cyclohexyl radical (e.g., kasugamycin, etc.)

....Cyclohexyl radical is substituted by two or more nitrogen atoms (e.g., destomycin, neamin, etc.)

.....Having two saccharide radicals bonded through only oxygen to adjacent ring carbons of the cyclohexyl radical (e.g., ambutyrosin, ribostamycin, etc.)

83 ......Containing three or more saccharide radicals (e.g., liquidomycin, neomycin, lividomycin, etc.)

84 ..Preparing nitrogen-containing saccharide

85 ...N-glycoside

86 ....Cobalamin (i.e., vitamin B12, LLD factor)

87 ....Nucleoside

88 .....Having a fused ring containing a six-membered ring having two N-atoms in the same ring (e.g., purine nucleosides, etc.)

89 ....Nucleotide

90 .....Dinucleotide (e.g., NAD, etc.)

91.1 .....Polynucleotide (e.g., nucleic acid, oligonucleotide, etc.)

91.2 ......Acellular exponential or geometric amplification (e.g., PCR, etc.)

91.21 ....Involving the making of multiple RNA copies

91.3 ......Polynucleotide contains only ribonucleotide monomers

91.31 ....Involving catalytic ribonucleic acid

91.32 ....Prepared from virus, prokaryotic acid

91.33 ....Involving virus

91.4 ......Modification or preparation of a recombinant DNA vector

91.41 ....By insertion or addition of one or more nucleotides

91.42 ....Involving deletion of a nucleotide or nucleotides from a vector

91.5 ......Acellular preparation of polynucleotide

91.51 ....Involving RNA as a starting material or intermediate

91.52 ....Involving a ligase (6.)

91.53 ....Involving a hydrolase (3.)

92 .....Having a fused ring containing a six-membered ring having two N-atoms in the same ring (e.g., purine based mononucleotides, etc.)

93 ..Mashing or wort making

94 ..Produced by the action of an isomerase (e.g., fructose by the action of xylose isomerase on glucose, etc.)

95 ..Produced by the action of a beta-amylase (e.g., maltose by the action of beta-amylase on amylose, etc.)

96 ..Produced by the action of an exo-1.4 alpha glucosidase (e.g., dextrose by the action of glucoamylase on starch, etc.)

97 ..Produced by the action of a glycosyl transferase (e.g., alpha, beta, gamma-cyclodextrins by the action of glycosyl transferase on starch, etc.)

98 ..Produced by the action of an alpha-1, 6-glucosidase (e.g., amylose debranched amylopectin by the action of pullulanase, etc.)

99 ..Produced by the action of a carbohydrase (e.g., maltose by the action of alpha amylase on starch, etc.)

100 ..Disaccharide

101 ..Polysaccharide of more than five saccharide radicals attached to each other by glycosidic bonds

102 ...Pullulan

103 ...Dextran

104 ...Xanthan; i.e., xanthomonas-type heteropolysaccharides

105 ..Monosaccharide

106 .Preparing alpha or beta amino acid or substituted amino acid or salts thereof

107 ..Proline; hydroxyproline; histidine

108 ..Tryptophan; tyrosine; phenylalanine; 3,4 dihydroxyphenylalanine

109 ..Aspartic acid (asparaginic acid); asparagine

110 ..Glutamic acid; glutamine

111 ...Utilizing biotin or its derivatives

112 ...Utilizing surfactant fatty acids or fatty acid esters (i.e., having seven or more atoms)

113 ..Methionine; cysteine; cystine

114 ..Citrulline; arginine; ornithine

115 ..Lysine; diaminopimelic acid; threonine; valine

116 ..Alanine; leucine; isoleucine; serine; homoserine

117 .Preparing heterocyclic carbon compound having only O, N, S, Se, or Te as ring hetero atoms

118 ..Containing two or more hetero rings

119 ...Containing at least two hetero rings bridged or fused among themselves or bridged or fused with a common carbocyclic ring system, (e.g., rifamycin, etc.)

MICRO-ORGANISM, TISSUE CELL CULTURE OR ENZYME USING PROCESS TO SYNTHESIZE A DESIRED CHEMICAL COMPOUND OR COMPOSITION

.Preparing heterocyclic carbon compound having only O, N, S, Se, or Te as ring hetero atoms

120 ..Nitrogen or oxygen hetero atom and at least one other diverse hetero ring atom in the same ring

121 ..Nitrogen as only ring hetero atom

122 ...Containing six-membered hetero ring

123 ..Oxygen as only ring hetero atom

124 ...Containing a hetero ring of at least seven ring members (e.g., zearalenone, macrocyclic lactones, etc.)

125 ...Containing six-membered hetero ring (e.g., fluorescein, etc.)

126 ...Containing five-membered hetero ring (e.g., griseofulvin, etc.)

127 .Preparing compound containing at least three carbocyclic rings

128 .Preparing nitrogen-containing organic compound

129 ..Amide (e.g., chloramphenicol, etc.)

130 .Preparing sulfur-containing organic compound

131 .Preparing organic compound containing a metal or atom other than H, N, C, O, or halogen

132 .Preparing oxygen-containing organic compound

133 ..Containing quinone nucleus (i.e., quinoid structure)

134 ..Fat; fatty oil; ester-type wax; higher fatty acid (i.e., having at least seven carbon atoms in an unbroken chain bound to a carboxyl group); oxidized oil or fat

135 ..Carboxylic acid ester

136 ..Containing a carboxyl group

137 ...Sugar acid having five or more carbon atoms (i.e., aldonic, keto-aldonic, or saccharic acid)

138 ....Alpha-ketogulonic acid (i.e., 2-ketogulonic acid)

139 ...Lactic acid

140 ...Acetic acid

141 ...Propionic or butyric acid

142 ...Polycarboxylic acid

143 ....Having keto group (e.g., alpha-ketoglutaric acid, etc.)

144 ....Tricarboxylic acid (e.g., citric acid, etc.)

145 ....Dicarboxylic acid having four or less carbon atoms (e.g., fumaric, maleic, etc.)

146 ...Hydroxy carboxylic acid

147 ..Containing carbonyl group

148 ...Ketone

149 ....Cyclopentanone or cyclopentadione containing compound

150 ....Acetone containing product

151 .....Substrate contains grain or cereal material

152 .....Substrate contains protein as nitrogen source

153 .....Substrate contains inorganic nitrogen source

154 .....Substrate contains inorganic compound, other than water

155 ..Containing hydroxy group

156 ...Aromatic

157 ...Acyclic

158 ....Polyhydric

159 .....Glycerol

160 ....Butanol

161 ....Ethanol

162 .....Multiple stages of fermentation; multiple types of micro-organisms or reuse of micro-organisms

163 .....Produced as by-product, or from waste, or from cellulosic material substrate

164 ......Substrate contains sulphite waste liquor or citrus waste

165 ......Substrate contains cellulosic material

166 .Preparing hydrocarbon

167 ..Only acyclic

168 .Preparing element or inorganic compound except carbon dioxide

169 .Using actinomycetales

170 .Using bacteria

171 .Using fungi

440 PROCESS OF MUTATION, CELL FUSION, OR GENETIC MODIFICATION

441 .Mutation employing a chemical mutagenic agent

442 ..By replacement of standard nucleic acid base with base analog (e.g., 5-bromouracil, etc.)

443 ..By use of intercalating agent (e.g., acridine orange, etc.)

444 ..By use of alkylating agent (e.g., nitrosoguanidine, etc.)

445 ..By use of oxidative deamination agent (e.g., nitrous acid, etc.)

446 .Mutation employing radiation or electricity

447 ..X-ray irradiation

448 ..Ultraviolet irradiation

449 .Fusion of cells

450 ..Employing electric current

451 ..One of the fusing cells is a human antibody-producing cell

452 ..One of the fusing cells is a mouse antibody-producing cell

453 ..One of the fusing cells is a plant cell

454 ..One of the fusing cells is a microorganism (e.g., prokaryote, fungus, etc.)

PROCESS OF MUTATION, CELL FUSION, OR GENETIC MODIFICATION

455 .Introduction of a polynucleotide molecule into or rearrangement of nucleic acid within an animal cell

456 ..The polynucleotide is encapsidated within a virus or viral coat

457 ...Helper virus is present

458 ..The polynucleotide is coated with or encapsulated within a lipid containing material (e.g., liposome, etc.)

459 ..Involving particle-mediated transfection (i.e., biolistic transfection)

460 ..Involving laser treatment of the cell before or during transfection

461 ..Involving electroporation

462 ..Involving site-specific recombination (e.g., Cre-lox, etc.)

463 ..Involving general or homologous recombination (e.g., gene targeting, etc.)

464 ..Involving gene duplication within the cell (e.g., amplification, co-amplification, etc.)

465 ..Involving co-transfection

466 ..The polynucleotide is a shuttle vector or a transiently replicating hybrid vector

467 ..Introducing an oncogene to establish a cell line

468 .Introduction of a polynucleotide molecule into or rearrangement of a nucleic acid within a plant cell

469 ..Introduction via Agrobacterium

470 ..Introduction via electroporation, particle, fiber or microprojectile mediated insertion, or injection

471 .Introduction of a polynucleotide molecule into or rearrangement of nucleic acid within a microorganism (e.g., bacteria, protozoa, bacteriophage, etc.)

472 ..The polynucleotide is encapsidated within a bacteriophage, bacteriophage coat, or transducing particle

473 ..The polynucleotide contains a transposon

474 ..The polynucleotide is a cosmid

475 ..The polynucleotide is unencapsidated bacteriophage or viral nucleic acid

476 ..The polynucleotide is a plasmid or episome

477 ...Plasmid or episome contains DNA targeting homologous recombination to bacteriophage, viral, or chromosomal DNA within a microorganism

478 ...Plasmid or episome contains at least part of a gene encoding a restriction endonuclease or modification enzyme

479 ...Plasmid or episome confers the ability to utilize directly a compound which a wild type microorganism is unable to utilize

480 ...Plasmid or episome contains at least part of a gene encoding a toxin or encoding for virulence or pathogenicity

481 ...Plasmid or episome contains a gene which complements a nutritional deficiency mutation

482 ...Plasmid or episome contains a gene which confers resistance to metal, silicon, selenium, or tellurium toxicity

483 ...Yeast is a host for the plasmid or episome

484 ...Mycelial fungus is a host for the plasmid or episome

485 ...Microorganism of the genus Bacillus is a host for the plasmid or episome

486 ...Microorganism of the genus Streptomyces is a host for the plasmid or episome

487 ...Microorganism of the genus Brevibacterium or the genus Corynebacterium is a host for the plasmid or episome

488 ...Microorganism of the genus Escherichia is a host for the plasmid or episome

489 ...Plural nonidentical plasmids are introduced into a host microorganism or culture thereof (e.g., plasmid is part of a library, etc.)

490 ..The polynucleotide is an unbranched linear fragment

173.1 TREATMENT OF MICRO-ORGANISMS OR ENZYMES WITH ELECTRICAL OR WAVE ENERGY (E.G., MAGNETISM, SONIC WAVES, ETC.)

173.2 .Enzyme treated

173.3 .Modification of viruses (e.g., attenuation, etc.)

173.4 .Cell membrane or cell surface is target

173.5 ..Membrane permeability increased

173.6 ...Electroporation

173.7 ..Lytic effect produced (e.g., disruption of cell membrane for release of subcellular parts; e.g., nucleic acids, etc.)

173.8 .Metabolism of micro-organism enhanced (e.g., growth enhancement or increased production of microbial product)

173.9 .Concentration, separation, or purification of micro-organisms

174 CARRIER-BOUND OR IMMOBILIZED ENZYME OR MICROBIAL CELL; CARRIER-BOUND OR IMMOBILIZED CELL; PREPARATION THEREOF

175 .Multi-enzyme system

176 .Enzyme or microbial cell is immobilized on or in an inorganic carrier

177 .Enzyme or microbial cell is immobilized on or in an organic carrier

CARRIER-BOUND OR IMMOBILIZED ENZYME OR MICROBIAL CELL; CARRIER-BOUND OR IMMOBILIZED CELL; PREPARATION THEREOF

.Enzyme or microbial cell is immobilized on or in an organic carrier

178 ..Carrier is carbohydrate

179 ...Carbohydrate is cellulose or derivative thereof

180 ..Carrier is synthetic polymer

181 ...Attached to the carrier via a bridging agent

182 ...Enzyme or microbial cell is entrapped within the carrier (e.g., gel, hollow fibre)

183 ENZYME (E.G., LIGASES (6.), ETC.), PROENZYME; COMPOSITIONS THEREOF; PROCESS FOR PREPARING, ACTIVATING, INHIBITING, SEPARATING, OR PURIFYING ENZYMES

184 .Enzyme inactivation by chemical treatment

185 .Malt

186 .Pancreatin

187 .Preparing granular- or free-flowing enzyme composition

188 .Stablizing an enzyme by forming a mixture, an adduct or a composition, or formation of an adduct or enzyme conjugate

188.5 .Catalytic antibody

189 .Oxidoreductase (1.) (e.g., luciferase)

190 ..Acting on CHOH group as donor (e.g., glucose oxidase, lactate dehydrogenase (1.1))

191 ..Acting on nitrogen-containing compound as donor (1.2, 1.5, 1.7)

192 ..Acting on hydrogen peroxide as acceptor (1.11)

193 .Transferase other than ribonuclease (2.)

194 ..Transferring phosphorus containing group (e.g., kineases, etc.(2.7))

195 .Hydrolase (3.)

196 ..Acting on ester bond (3.1)

197 ...Carboxylic ester hydrolase (3.1.1)

198 ....Triglyceride splitting (e.g., lipase, etc. (3.1.1.3))

199 ...Ribonuclease (3.1.4)

200 ..Acting on glycosyl compound (3.2)

201 ...Acting on alpha-1, 4-glucosidic bond, (e.g., hyaluronidase, invertase, amylase, etc. (some 3.2.1))

202 ....Alpha-amylase, microbial source

203 .....Fungal source

204 ....Alpha-amylase, plant source (3.2.1.1)

205 ....Glucoamylase (3.2.1.3)

206 ...Acting on beta-1, 4 link between N-acetylmuramic acid and 2-acetylamino 2 deoxy-D-glucose (e.g., lysozyme, etc.)

207 ...Acting on beta-galatose-glycoside bond (e.g., beta-galactosidase, etc.)

208 ...Acting on alpha-galatose-glycoside bond (e.g., alpha-galactosidase, etc.)

209 ...Acting on beta-1, 4-glucosidic bond (e.g., cellulase, etc. (3.2.1.4))

210 ...Acting on alpha-1, 6-glucosidic bond (e.g., isoamylase, pullulanase, etc.)

211 ....Dextranase (3.2.1.11)

212 ..Acting on peptide bond (e.g., thromboplastin, leucine amino-peptidase, etc., (3.4))

213 ...Trypsin; chymotrypsin

214 ...Thrombin

215 ...Urokinase

216 ...Streptokinase

217 ...Plasmin (i.e., fibrinolysin)

218 ...Elastase

219 ...Proteinase

220 ....Derived from bacteria

221 .....Bacteria is bacillus

222 ......Bacillus subtilus or bacillus lichenoformis

223 ....Derived from fungi

224 .....From yeast

225 .....From aspergillus

226 ....Derived from animal tissue (e.g., rennin, etc.)

227 ..Acting on carbon to nitrogen bond other than peptide bond (3.5)

228 ...Acting on a linear amide linkage in linear amide

229 ....Asparaginase

230 ....Penicillin amidase

231 ...Acting on amide linkage in cyclic amides (e.g., penicillinase, etc.) (3.5.2)

232 .Lyase (4.)

233 .Isomerase (5.)

234 ..Glucose isomerase

235.1 VIRUS OR BACTERIOPHAGE, EXCEPT FOR VIRAL VECTOR OR BACTERIOPHAGE VECTOR; COMPOSITION THEREOF; PREPARATION OR PURIFICATION THEREOF; PRODUCTION OF VIRAL SUBUNITS; MEDIA FOR PROPAGATING

236 .Inactivation or attenuation; producing viral subunits

237 ..By serial passage of virus

238 ..By chemical treatment

239 .Recovery or purification

325 ANIMAL CELL, PER SE (E.G., CELL LINES, ETC.); COMPOSITION THEREOF; PROCESS OF PROPAGATING, MAINTAINING OR PRESERVING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF ISOLATING OR SEPARATING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF PREPARING A COMPOSITION CONTAINING AN ANIMAL CELL; CULTURE MEDIA THEREFORE

326 .Animal cell, per se, expressing immunoglobulin, antibody, or fragment thereof

ANIMAL CELL, PER SE (E.G., CELL LINES, ETC.); COMPOSITION THEREOF; PROCESS OF PROPAGATING, MAINTAINING OR PRESERVING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF ISOLATING OR SEPARATING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF PREPARING A COMPOSITION CONTAINING AN ANIMAL CELL; CULTURE MEDIA THEREFORE

.Animal cell, per se, expressing immunoglobulin, antibody, or fragment thereof

327 ..Immunoglobulin or antibody is anti-idiotypic

328 ..Immunoglobulin or antibody is chimeric, mutated, or a recombined hybrid (e.g., bifunctional, bispecific, rodent-human chimeric, single chain, rFv, immunoglobuin fusion protein, etc.)

329 ..Immunoglobulin or antibody binds an oligosaccharide structure other than nucleic acid

330 ..Immunoglobulin or antibody binds an expression product of a cancer related gene or fragment thereof (e.g., oncogene, proto-oncogene, etc.)

331 ..Immunoglobulin or antibody binds a specifically identified amino acid sequence

332 ..Immunoglobulin or antibody binds a microorganism or normal or mutant component or product thereof (e.g., animal cell, cell surface antigen, secretory product, etc.)

333 ...Binds a nucleic acid or derivative or component thereof (e.g., DNA, RNA, DNA-RNA, hybrid, nucleotide, nucleoside, carcinogen-DNA adduct, etc.)

334 ...Binds a receptor (e.g., transferrin receptor, Fc receptor, dihydropyridine receptor, IL-2 receptor, etc.)

335 ...Binds a lymphokine, cytokine, or other secreted growth regulatory factor, differentiation factor, intercellular mediator specific for a hematopoietic cell (e.g., interleukin, interferon, erythropoietin, etc.)

336 ...Binds a hormone or other secreted growth regulatory factor, differentiation factor, intercellular mediator, or neurotransmitter (e.g., insulin, human chorionic gonadotropin, intragonadal regulatory protein, Mullerian inhibiting substance, inhibin, epidermal growth factor, nerve growth factor, dopamine, norepinephrine, etc.)

337 ...Binds a plasma protein, serum protein, or fibrin (e.g., clotting factor fibrinolytic factor, complement factor, immunoglobulin, apolipoprotein, etc.)

338 ...Binds an enzyme

339 ...Binds a virus or component or product thereof (e.g., virus associated antigen, etc.)

339.1 ....Binds a retrovirus or component or product thereof (e.g., HIV, LAV, HTLV, etc.)

340 ...Binds a bacterium or similar microorganism or component or product thereof (e.g., Streptococcus, Legionella, Mycoplasma, bacterium associated antigen, exotoxin, etc.)

341 ...Binds a fungus or plant cell or component or product thereof (e.g., fungus associated antigen, etc.)

342 ...Binds a parasitic protozoan or metazoan cell or component or product thereof; (e.g., Dirofilaria, Eimeria, Coccidia, Trichinella, parasite cell surface antigen, etc.)

343 ...Binds a hematopoietic cell or component or product thereof (e.g., erythrocyte, granulocyte, macrophage, monocyte, platelet, myelogenous leukemia cell, bone marrow stem cell, granulocytic cell surface antigen, hemoglobin, thrombospondin, glycophorin, etc.)

343.1 ....Binds a lymphocytic or lymphocytic-like cell or component or product thereof (e.g., B cell, B-lineage bone marrow cell, null cell, natural killer cell, B-lymphoblastoid cell, B-lineage, acute lymphoblastic leukemia cell, B-lymphocytic cell surface antigen, etc.)

343.2 .....Binds a T-lymphocytic cell or component or product thereof (e.g., T-cell, thymocyte, T-lineage bone marrow cell, T-lymphoblastoid cell, T-lineage acute lymphoblastic leukemia cell, T-lymphocytic cell surface antigen, etc.)

344 ...Binds a cancer cell or component or product thereof (e.g., cell surface antigen, etc.)

344.1 ....Binds an antigen characterized by name or molecular weight (e.g., CEA, NCA, CC glycoprotein, melanoma gp 150 antigen, etc.)

345 ..Immunoglobulin or antibody binds a drug, hapten, hapten-carrier complex, or specifically identified chemical structure (e.g., theophylline, digoxin, etc.)

346 .Fused or hybrid cell, per se

347 .Two or more cell types, per se, in co-culture

348 .Insect cell, per se

ANIMAL CELL, PER SE (E.G., CELL LINES, ETC.); COMPOSITION THEREOF; PROCESS OF PROPAGATING, MAINTAINING OR PRESERVING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF ISOLATING OR SEPARATING AN ANIMAL CELL OR COMPOSITION THEREOF; PROCESS OF PREPARING A COMPOSITION CONTAINING AN ANIMAL CELL; CULTURE MEDIA THEREFORE

349 .Avian cell, per se
350 .Canine cell, per se
351 .Feline cell, per se
352 .Rodent cell, per se
353 ..Rat (i.e., Rattus)
354 ..Mouse (i.e., Mus)
355 ...Blood or lymphatic origin or derivative
356 ...L cell or derivative (e.g., Ltk(-), etc.)
357 ...Fibroblast, fibroblast-like cell or derivative (e.g., NIH 3T3, etc.)
358 ..Chinese hamster ovary (i.e., CHO)
359 ...Expressing recombinant tPA
360 ...Expressing recombinant hormone or growth factor
361 ...Expressing recombinant receptor
362 ...Expressing recombinant antigen
363 .Primate cell, per se
364 ..Monkey kidney
365 ...COS (e.g., COS-7, etc.)
365.1 ....Expressing recombinant lymphokine, interferon, hormone, growth factor or morphogen
366 ..Human
367 ...HeLa cell or derivative
368 ...Nervous system origin or derivative
369 ...Renal origin or derivative
370 ...Hepatic origin or derivative
371 ...Epithelial origin or derivative
372 ...Blood, lymphatic, or bone marrow origin or derivative
372.1 ....Myeloma origin or derivative
372.2 ....B-cell or derivative
372.3 ....T-cell or derivative
373 .Method of co-culturing cells
374 .Method of storing cells in a viable state
375 .Method of regulating cell metabolism or physiology
376 ..Method of synchronizing cell division
377 ..Method of altering the differentiation state of the cell
378 .Method of detaching cells, digesting tissue or establishing a primary culture
379 ..Using mechanical means (e.g., trituration, etc.)
380 ..Releasing bound or adhered cell using protease
381 ..Digesting tissue with protease
382 .Method of culturing encapsulated cells
383 .Method of culturing cells in suspension
384 ..Culture medium contains a growth factor or growth regulator
385 ...Medium contains a colony stimulating factor
386 ...Medium contains an interleukin
387 ...Medium contains a polypeptide hormone
388 ..Culture medium contains an albumin
389 ..Culture medium contains a transferrin
390 ..Culture medium contains an incompletely defined plant or microbial extract excluding animal extract
391 ..Culture medium contains an animal extract
392 ...Serum
393 ..Using airlift or laminar flow aeration or foam culture
394 ..Wherein culture vessel is rotated or oscillated or culture is agitated
395 .Solid support and method of culturing cells on said solid support
396 ..Support is a resin
397 ..Support is a gel surface
398 ..Support is a fiber
399 ...Fabric, mat, gauze, or fibrous coating
400 ...Hollow
401 ..Support is a membrane
402 ..Support is a coated or treated surface
403 ..Support is a suspendable particle
404 .Culture medium, per se
405 ..Contains a growth factor or growth regulator
406 ...Contains a polypeptide hormone
407 ..Contains an albumin
408 ..Contains an animal extract

410 PLANT CELL OR CELL LINE, PER SE (E.G., TRANSGENIC, MUTANT, ETC.); COMPOSITION THEREOF; PROCESS OF PROPAGATING, MAINTAINING, OR PRESERVING PLANT CELL OR CELL LINE; PROCESS OF ISOLATING OR SEPARATING A PLANT CELL OR CELL LINE; PROCESS OF REGENERATING PLANT CELLS INTO TISSUE, PLANT PART, OR PLANT, PER SE, WHERE NO GENOTYPIC CHANGE OCCURS; MEDIUM THEREFORE

411 .Tomato cell or cell line, per se
412 .Corn cell or cell line, per se
413 ..Herbicide resistant
414 .Tobacco cell or cell line, per se
415 .Soybean cell or cell line, per se
416 .Sunflower cell or cell line, per se
417 .Potato cell or cell line, per se
418 .Plant cell or cell line, per se, is pest or herbicide resistant or pest lethal
419 .Plant cell or cell line, per se, contains exogenous or foreign nucleic acid
420 .Culture, maintenance, or preservation techniques, per se
421 ..Involving protoplast
422 ..Involving conifer cell or tissue (e.g., pine, spruce, fir, cedar, etc.)

PLANT CELL OR CELL LINE, PER SE (E.G., TRANSGENIC, MUTANT, ETC.); COMPOSITION THEREOF; PROCESS OF PROPAGATING, MAINTAINING, OR PRESERVING PLANT CELL OR CELL LINE; PROCESS OF ISOLATING OR SEPARATING A PLANT CELL OR CELL LINE; PROCESS OF REGENERATING PLANT CELLS INTO TISSUE, PLANT PART, OR PLANT, PER SE, WHERE NO GENOTYPIC CHANGE OCCURS; MEDIUM THEREFORE

.Culture, maintenance, or preservation techniques, per se

423 ..Involving tomato cell or tissue
424 ..Involving corn cell or tissue
425 ..Involving tobacco cell or tissue
426 ..Involving soybean cell or tissue
427 ..Involving cotton cell or tissue
428 ..Involving sunflower cell or tissue
429 ..Involving potato cell or tissue
430 ..Involving regeneration or propagation into a plant or plant part
430.1 ...Involving callus or embryonic stage
431 .Medium, per se, for culture, maintenance, regeneration, etc.
242 SPORE FORMING OR ISOLATING PROCESS
243 MICRO-ORGANISM, PER SE (E.G., PROTOZOA, ETC.); COMPOSITIONS THEREOF; PROCES OF PROPAGATING, MAINTAINING OR PRESERVING MICRO-ORGANISMS OR COMPOSITIONS THEREOF; PROCESS OF PREPARING OR ISOLATING A COMPOSITION CONTAINING A MICRO-ORGANISM; CULTURE MEDIA THEREFOR
244 .Chemical stimulation of growth or activity by addition of chemical compound which is not an essential growth factor; stimulation of growth by removal of a chemical compound
245 .Adaptation or attenuation of cells
246 .Foam culture
247 .Utilizing media containing lower alkanol (i.e., having one to six carbon atoms)
248 .Utilizing media containing hydrocarbon
249 ..Aliphatic
250 ...Having five or less carbon atoms
251 .Utilizing media containing waste sulphite liquor
252 .Utilizing media containing cellulose or hydrolysates thereof
252.1 .Bacteria or actinomycetales; media therefor
252.2 ..Rhizobium or agrobacterium
252.3 ..Transformants (e.g., recombinant DNA or vector or foreign or exogenous gene containing, fused bacteria, etc.)
252.31 ...Bacillus (e.g., B. subtilis, B. thuringiensis, etc.)
252.32 ...Brevibacterium or corynebacterium
252.33 ...Escherichia (e.g., E. coli, etc.)
252.34 ...Pseudomonas
252.35 ...Streptomyces
252.4 ..Mixed culture
252.5 ..Bacillus (e.g., B. subtilis, B. thuringiensis, etc.)
252.6 ..Actinoplanes
252.7 ..Clostridium
252.8 ..Escherichia (e.g., E. coli, etc.) or salmonella
252.9 ..Lactobacillus, pediococcus, or leuconostoc
253.1 ..Mycobacterium
253.2 ..Nocardia
253.3 ..Pseudomonas
253.4 ..Streptococcus
253.5 ..Streptomyces
253.6 ..Culture media, per se
254.1 .Fungi
254.11 ..Transformants
254.2 ...Yeast; media therefor
254.21 ....Saccharomyces
254.22 ....Candida
254.23 ....Pichia
254.3 ...Aspergillus
254.4 ...Neurospora
254.5 ...Penicillium
254.6 ...Trichoderma
254.7 ...Fusarium
254.8 ...Mucor
254.9 ...Rhizopus
255.1 ..Yeast
255.2 ...Saccharomyces
255.21 ....Culture media, per se, or technique
255.3 ...Cryptococcus
255.4 ...Candida or torulopsis
255.5 ...Pichia
255.6 ...Hansenula
255.7 ...Culture media, per se, or technique
256.1 ..Aspergillus
256.2 ..Mucor
256.3 ..Penicillium
256.4 ..Cephalosporium or acremonium
256.5 ..Fusarium
256.6 ..Rhizopus
256.7 ..Trichoderma
256.8 ..Culture media, per se, or technique
257.1 .Algae, media therefor
257.2 ..Transformants
257.3 ..Chlorella
257.4 ..Euglena
257.5 ..Scenedesmus
257.6 ..Chlamydomonas
258.1 .Protozoa, media therefor
258.2 ..Plasmodium
258.3 ..Leishmania
258.4 ..Eimeria
259 .Lysis of micro-organism
260 .Preserving or maintaining micro-organism
261 .Separation of micro-organism from culture media

320.1 VECTOR, PER SE (E.G., PLASMID, HYBRID PLASMID, COSMID, VIRAL VECTOR, BACTERIOPHAGE VECTOR, ETC.) BACTERIOPHAGE VECTOR, ETC.)

262 PROCESS OF UTILIZING AN ENZYME OR MICRO-ORGANISM TO DESTROY HAZARDOUS OR TOXIC WASTE, LIBERATE, SEPARATE, OR PURIFY A PREEXISTING COMPOUND OR COMPOSITION THEREFORE; CLEANING OBJECTS OR TEXTILES

262.5 .Destruction of hazardous or toxic waste

263 .Textile treating

264 .Cleaning using a micro-organism or enzyme

265 .Depilating hides, bating, or hide treating using enzyme or micro-organism

266 .Treating gas, emulsion, or foam

267 .Treating animal or plant material or micro-organism

268 ..Treating organ or animal secretion

269 ..Treating blood fraction

270 ..Removing nucleic acid from intact or disrupted cell

271 ..Glyceridic oil, fat, ester-type wax, or higher fatty acid recovered or purified

272 ..Proteinaceous material recovered or purified

273 ...Collagen or gelatin

274 ..Carbohydrate material recovered or purified

275 ...Pectin or starch

276 ...Sugar (e.g., molasses treatment, etc.)

277 ...Cellulose (e.g., plant fibers, etc.)

278 ....Producing paper pulp

279 ....Hemp or flax treating

280 .Resolution of optical isomers or purification of organic compounds or composition containing same

281 .Petroleum oil or shale oil treating

282 ..Desulfurizing

283.1 APPARATUS

284.1 .Differentiated tissue (e.g., organ) perfusion or preservation apparatus

285.1 .Mutation or genetic engineering apparatus

285.2 ..With means for applying an electric current or charge (e.g., electrofusion, electroporation, etc.)

285.3 ..Including projectile means

286.1 .Including condition or time responsive control means

286.2 ..Including position control

286.3 ...Plater, streaker, or spreader

286.4 ...Including liquid dispenser means

286.5 ..Including liquid flow, level, or volume control

286.6 ..Including gas flow or pressure control

286.7 ..Including mixing or agitation control

287.1 .Including measuring or testing

287.2 ..Measuring or testing for antibody or nucleic acid, or measuring or testing using antibody or nucleic acid

287.3 ..With sample or reagent mechanical transport means

287.4 ..Sterility testing means

287.5 ..Means for measuring gas pressure or gas volume of gas evolved from or consumed in an enzymatic or microbial reaction

287.6 ..Including frangible means for introducing a sample or reagent

287.7 ..Including bibulous or absorbent layer

287.8 ...Including multiple, stacked layers

287.9 ..Including a coated reagent or sample layer

288.1 ..Including a bottle, tube, flask, or jar

288.2 ...Including multiple internal compartments or baffles

288.3 ..Including a dish, plate, slide, or tray

288.4 ...Including multiple compartments (e.g., wells, etc.)

288.5 ....Including means for fluid passage between compartments (e.g., between wells, etc.)

288.6 ..Including column separation means

288.7 ..Including optical measuring or testing means

289.1 .Bioreactor

290.1 ..Composting apparatus

290.2 ...Including agitation means

290.3 ....Compostor is rotatably mounted

290.4 ...Including solid or liquid transport means into or out of a compostor

291.1 ..Malting or mashing apparatus

291.2 ...Movable floor to facilitate maintenance (e.g., cleaning)

291.3 ...Vertically spaced stages, levels, or floors

291.4 ....Cascading

291.5 ...With agitator or mash turner

291.6 ....With vertical axis of rotation

291.7 ....With horizontal axis of rotation

291.8 .....Rotating vessel

292.1 ..Including means to transmit light into a bioreactor to facilitate photo-bioreaction (e.g., photosynthesis)

293.1 ..Tubular or plug flow bioreactor

293.2 ...Radial or spiral flow bioreactor

294.1 ..Vessels or trays in series

295.1 ..Including a draft tube for agitation

295.2 ...Airlift bioreactor

295.3 ...Including a semi-permeable membrane or filter

296.1 ..Bubble bioreactor

297.1 ..Including semipermeable membrane or filter

297.2 ...Including perfusion means

297.3 ....Including a spinning semipermeable membrane or filter

297.4 ....Including hollow fiber or capillary

APPARATUS
.Bioreactor
..Including semipermeable membrane or filter
297.5 ...In combination with a dish, plate, or tray
298.1 ..Cylindrical reaction tank or vessel horizontally disposed with respect to its central axis
298.2 ...With a rotatably mounted tank or vessel
299.1 ..Including solid extended fluid contact reaction surface
299.2 ...Including a bottle, tube, jar, or flask
300.1 ..Including off-gas trapping means
301.1 ..Including foam breaking means
302.1 ..Including magnetically coupled agitation means
303.1 ..Incubator
303.2 ...Specifically adapted for an anaerobic microorganism or enzyme (e.g., anaerobe jars)
303.3 ...Including an agitator
304.1 ..Bottle, tube, jar, or flask
304.2 ...Including multiple internal compartments for baffles
304.3 ...Flat culture flask
305.1 ..Dish, plate, or tray
305.2 ...Multicompartmented
305.3 ....Including cover seal
305.4 ...Including cover seal
306.1 .Involving lysis of a microorganism by means other than comminution
307.1 .Microorganism preservation, storage, or transport apparatus
308.1 .Means for separation or recovery of a microorganism from culture media
309.1 .Inoculator, streaker, or sampler
309.2 ..Means for inoculation or sampling of a closed vessel
309.3 ..Loop or wire streaker
309.4 ..Replica plate
317.1 MISCELLANEOUS (E.G., SUBCELLULAR PARTS OF MICRO-ORGANISMS, ETC.)

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CROSS-REFERENCE ART COLLECTIONS

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800 ELIMINATION OR REDUCTION OF CONTAMINATION BY UNDERSIRED FERMENTS (E.G., ASEPTIC CULTIVATION)
801 ANEROBIC CULTIVATION
802 LOGARITHMIC GROWTH PHASE
803 PHYSICAL RECOVERY METHODS (E.G., CHROMATOGRAPHY, GRINDING)
804 SINGLE CELL PROTEIN
805 TEST PAPERS
806 FERTILITY TESTS
807 GAS DETECTION APPARATUS
808 OPTICAL SENSING APPARATUS
809 INCUBATORS OR RACKS OR HOLDERS FOR CULTURE PLATES OR CONTAINERS
810 PACKAGED DEVICE OR KIT
811 INTERFERON
812 FOAM CONTROL
813 CONTINUOUS FERMENTATION
814 ENZYME SEPARATION OR PURIFICATION
815 .By sorption
816 .By solubility
817 ENZYME OR MICROBE ELECTRODE
818 AERATION OR OXYGEN TRANSFER TECHNIQUE
819 FERMENTATION VESSELS IN SERIES
820 SUBCELLULAR PARTS OF MICRO-ORGANISMS
821 MICRO-ORGANISMS USED IN THE DESTRUCTION OF HAZARDOUS OR TOXIC WASTE

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MICRO-ORGANISM CROSS-REFERENCE ART COLLECTIONS

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822 .Using bacteria or actinomycetales
823 ..Acetobacter
824 ..Achromobacter
825 ..Actinomadura
826 ..Actinomyces
827 ..Actinoplanes
828 ..Aerobacter
829 ..Alcaligenes
830 ..Arthrobacter
831 ..Azotobacter
832 ..Bacillus
833 ...Bacillus brevis
834 ...Bacillus cereus
835 ...Bacillus circulans
836 ...Bacillus licheniformis
837 ...Bacillus megaterium
838 ...Bacillus polymyxa
839 ...Bacillus subtilis
840 ..Brevibacterium
841 ..Chainia
842 ..Clostridium
843 ..Corynebacterium
844 ...Corynebacterium diphtheriae
845 ...Corynebacterium poinsettiae
846 ...Corynebacterium pyogenes
847 ..Erwinia
848 ..Escherichia
849 ...Escherichia coli
850 ..Flavobacterium
851 ..Haemophilus
852 ..Klebsiella
853 ..Lactobacillus
854 ...Lactobacillus acidophilus
855 ...Lactobacillus brevis
856 ...Lactobacillus casei
857 ...Lactobacillus plantarum
858 ..Methylomonas
859 ..Micrococcus
860 ...Micrococcus flavus
861 ...Micrococcus glutamicus
862 ...Micrococcus lysodeikticus
863 ..Mycobacterium
864 ...Mycobacterium avium
865 ...Mycobacterium fortuitum
866 ...Mycobacterium smegmatis

MICRO-ORGANISM CROSS-REFERENCE ART COLLECTIONS

.Using bacteria or actinomycetales
867 ..Micromonospora
868 ...Micromonospora chalcea
869 ...Micromonospora purpurea
870 ..Mycoplasma
871 ..Neisseria
872 ..Nocardia
873 ..Proteus
874 ..Pseudomonas
875 ...Pseudomonas aeruginosa
876 ...Pseudomonas fluorescens
877 ...Pseudomonas putida
878 ..Rhizobium
879 ..Salmonella
880 ..Serratia
881 ...Serratia marcescens
882 ..Staphylococcus
883 ...Staphylococcus aureus
884 ...Staphylococcus epidermidis
885 ..Streptococcus
886 ..Streptomyces
887 ...Streptomyces albus
888 ...Streptomyces antibioticus
889 ...Streptomyces aureofaciens
890 ...Streptomyces aureus
891 ...Streptomyces bikiniensis
892 ...Streptomyces candidus
893 ...Streptomyces chartreusis
894 ...Streptomyces diastatochromogenes
895 ...Streptomyces filipinensis
896 ...Streptomyces fradiae
897 ...Streptomyces griseus
898 ...Streptomyces hygroscopicus
899 ...Streptomyces lavendulae
900 ...Streptomyces lincolnensis
901 ...Streptomyces noursei
902 ...Streptomyces olivaceus
903 ...Streptomyces platensis
904 ...Streptomyces rimosus
905 ...Streptomyces sparogenes
906 ...Streptomyces venezuelae
907 ..Streptosporangium
908 ..Streptovirticillium
909 ..Vibrio
910 ..Xanthomonas
911 .Using fungi
912 ..Absidia
913 ..Aspergillus
914 ...Aspergillus awamori
915 ...Aspergillus flavus
916 ...Aspergillus fumigatus
917 ...Aspergillus niger
918 ...Aspergillus oryzae
919 ...Aspergillus ustus
920 ...Aspergillus wenti
921 ..Candida
922 ...Candida albicans
923 ...Candida lipolytica
924 ...Candida tropicalis
925 ..Cephalosporium
926 ...Cephalosporium acremonium
927 ...Cephalosporium caerulens
928 ...Cephalosporium crotocinigenium
929 ..Fusarium
930 ..Hansenula
931 ..Mucor
932 ..Paecilomyces
933 ..Penicillium
934 ...Penicillium brevi
935 ...Penicillium chrysogenum
936 ...Penicillium notatium
937 ...Penicillium patulum
938 ..Pichia
939 ..Rhizopus
940 ..Saccharomyces
941 ...Saccharomyces carlsbergensis
942 ...Saccharomyces cerevisiae
943 ...Saccharomyces lactis
944 ..Torulopsis
945 ..Trichoderma
946 .Using algae
947 .Using protozoa
948 .Using viruses or cell lines

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CROSS-REFERENCE ART COLLECTIONS
RELATED TO SUBCLASSES
7.1 THROUGH 7.95

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960 IMMUNOHISTOCHEMICAL ASSAY
961 INCLUDING A STEP OF FORMING, RELEASING, OR EXPOSING THE ANTIGEN OR FORMING THE HAPTEN-IMMUNOGENIC CARRIER COMPLEX OR THE ANTIGEN, PER SE
962 PREVENTION OR REMOVAL OF INTERFERING MATERIALS OR REACTANTS OR OTHER TREATMENT TO ENHANCE RESULTS (E.G., DETERMINING OR PREVENTING NONSPECIFIC BINDING, ETC.)
963 METHODS OF STOPPING AN ENZYME REACTION OR STABILIZING THE TEST MATERIALS
964 INCLUDING ENZYME-LIGAND CONJUGATE PRODUCTION (E.G., REDUCING RATE OF NONPRODUCTIVE LINKAGE, ETC.)
965 INVOLVING IDIOTYPE OR ANTI-IDIOTYPE ANTIBODY
966 INVOLVING AN ENZYME SYSTEM WITH HIGH TURNOVER RATE OR COMPLEMENT MAGNIFIED ASSAY (E.G., MULTI-ENZYME SYSTEMS, ETC.)
967 STANDARDS, CONTROLS, MATERIALS (E.G., VALIDATION STUDIES, BUFFER SYSTEMS, ETC.)
968 HIGH ENERGY SUBSTRATES (E.G., FLUORESCENT, CHEMILUMINESCENT, RADIOACTIVE, ETC.)
969 MULTIPLE LAYERING OF REACTANTS
970 TEST STRIP OR TEST SLIDE
971 CAPTURE OF COMPLEX AFTER ANTIGEN-ANTIBODY REACTION
972 MODIFIED ANTIBODY (E.G., HYBRID, BIFUNCTIONAL, ETC.)

973 SIMULTANEOUS DETERMINATION OF MORE THAN ONE ANALYTE

974 AIDS RELATED TEST

975 KIT

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FOREIGN ART COLLECTIONS

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FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 100 ANIMAL OR PLANT CELL (E.G., CELL LINES, ETC.); COMPOSITIONS THEREOF; PROCESS OF PROPAGATING, MAINTAINING OR PRESERVING ANIMAL OR PLANT CELL OR COMPOSITION THEREOF; PROCESS OF ISOLATING OR SEPARATING AN ANIMAL OR PLANT CELL OR COMPOSITION THEREOF; PROCESS OF PREPARING A COMPOSITION CONTAINING ANIMAL OR PLANT CELL; CULTURE MEDIA THEREFORE (435/240.1)

FOR 101 .Animal cells, per se, culture techniques and media (435/240.2)

FOR 102 ..Techniques of establishing a primary culture (435/240.21)

FOR 103 ..Culture of encapsulated cells (435/240.22)

FOR 104 ..Culture of cells on solid support (e.g., anchorage dependent cells) (435/240.23)

FOR 105 ...Support is suspendable particle (435.240.24)

FOR 106 ...Culture of cells on membrane (435/240.241)

FOR 107 ....Hollow fiber membrane (435/240.242)

FOR 108 ...Solid support treated or coated to enhance attachment or growth (435/240.243)

FOR 109 ..Culture in suspension (435/240.25)

FOR 110 ..Fused or hybrid cells (435/240.26)

FOR 111 ...Ab or Ig fragments producing cells (435/240.27)

FOR 112 ..Culture medium, per se (435/240.3)

FOR 113 ...Defined medium (435/240.31)

FOR 114 .Plant cells, per se, culture techniques and media (435/240.4)

FOR 115 ..Culture techniques (e.g., meristem culture, etc.) (435/240.45)

FOR 116 ...Culture in suspension (435/240.46)

FOR 117 ....Protoplasts (435/240.47)

FOR 118 ...Callus culture (435/240.48)

FOR 119 ....Regeneration (includes nonflowering ornamentals (435/240.49)

FOR 120 .....Agronomic crops (e.g., tobacco, grains, etc.) (435/240.5)

FOR 121 .....Fruit and vegetable crops (e.g., tomato, etc.) (435/240.51)

FOR 122 ..Culture medium, per se, or regeneration medium, per se (435/240.54)

FOR 123 MUTATION OR GENETIC ENGINEERING (435/172.1)

FOR 124 .Fused or hybrid cell formation (435/172.2)

FOR 125 .Recombination (435/172.3)

FOR 126 OBTAINING THE DESIRED GENE; DNA, RNA PER SE AND THE MODIFICATION THEREOF OTHER THAN VECTOR MODIFICATION (935/1)

FOR 127 .DNA-RNA hybrid (935/2)

FOR 128 .RNA (935/3)

FOR 129 ..mRNA (935/4)

FOR 130 ..2-100 nucleotides in length, e.g., t-RNA, etc. (935/5)

FOR 131 .DNA, e.g., regulatory sequences, etc. (935/6)

FOR 132 ..Homopolymeric, e.g., poly d(A) sequence, etc. (935/7)

FOR 133 ..12-75 nucleotides in length, e.g., primers, etc. (935/8)

FOR 134 ..Structural gene sequence (935/9)

FOR 135 ...Modified structural gene, e.g., nonnaturally occurring sequence, etc. (935/10)

FOR 136 ...Polypeptide (935/11)

FOR 137 ....Antigenic material (935/12)

FOR 138 ....Hormone, e.g., human growth factor, insulin, etc. (935/13)

FOR 139 ....Enzyme (935/14)

FOR 140 ....Antibody (935/15)

FOR 141 .Methods of producing DNA or RNA other than by expression vectors, e.g., culture of cells high in DNA, etc. (935/16)

FOR 142 ..Cell free production (935/17)

FOR 143 ...cDNA synthesis (935/18)

FOR 144 .Isolation or purification of DNA or RNA (935/19)

FOR 145 ..RNA (935/20)

FOR 146 ...mRNA (935/21)

FOR 147 VECTORS AND METHODS OF MODIFYING VECTORS (935/22)

FOR 148 .Inserting gene into vector to form recombinant vector, i.e., cleavage and ligation (935/23)

FOR 149 ..Vector utilized, e.g., episomes, etc. (935/24)

FOR 150 ...Plant virus (935/25)

FOR 151 ...Cosmid (935/26)

FOR 152 ...Plasmid (935/27)

FOR 153 ....Yeast (935/28)

FOR 154 ....Prokaryotic (935/29)

FOR 155 ....Plant (935/30)

FOR 156 ...Bacteriophage (935/31)

FOR 157 ...Animal virus, e.g., SV40, etc. (935/32)

FOR 158 METHODS OF ENHANCING OR DIMINISHING EXPRESSION (935/33)

METHODS OF ENHANCING OR DIMINISHING EXPRESSION (935/33)
FOR 159 .Eukaryotic cell (935/34)
FOR 160 ..Plant cell (935/35)
FOR 161 ..Transcription (935/36)
FOR 162 ..Yeast cell (935/37)
FOR 163 .Prokaryotic cell (935/38)
FOR 164 ..Transcription (935/39)
FOR 165 ...Operon selection (935/40)
FOR 166 ....Promoter, e.g., portable promoters, etc. (935/41)
FOR 167 ..Gene dosage modification, e.g., copy number amplification, etc. (935/42)
FOR 168 ...Inducible, e.g., temperature inducible, etc. (935/43)
FOR 169 ..Translation (935/44)
FOR 170 ...Ribosome binding site (935/45)
FOR 171 ...Initiation (935/46)
FOR 172 .Fused protein or peptide (435/47)
FOR 173 ..Signal peptide, e.g., secretion, etc. (935/48)
FOR 174 .Post translational modification (935/49)
FOR 175 ..Glycosylation (935/50)
FOR 176 ..Peptide bond cleavage (935/51)
FOR 177 METHODS OF INTRODUCING GENE INTO HOST CELL, E.G., TRANSFORMATION OR TRANSFECTION, ETC. (935/52)
FOR 178 .Microinjection (935/53)
FOR 179 .Microencapsulation, e.g., liposome vesicle, etc. (935/54)
FOR 180 .Using vector, e.g., plasmid, etc. (935/55)
FOR 181 ..Plasmid (935/56)
FOR 182 ..Virus (935/57)
FOR 183 ...Phage, e.g., phage lambda, etc. (935/58)
FOR 184 METHOD OF USE OF GENETICALLY ENGINEERED CELLS, E.G., OIL SPILL CLEANUP, ETC. (935/59)
FOR 185 .To produce an identified chemical product, e.g., amino acid, etc. (935/60)
FOR 186 ..Yield optimization (935/61)
FOR 187 .Control of genetic diseases or defects by use of added gene, e.g., gene therapy (935/62)
FOR 188 .Use in animal husbandry (935/63)
FOR 189 .Use in agriculture (935/64)
FOR 190 .Vaccine production (935/65)
FOR 191 CELLS CONTAINING A VECTOR AND/OR EXOGENOUS GENE, PER SE; PROPAGATION THEREOF; OTHER MEMBRANE ENCAPSULATED DNA, E.G., PROTOPLASTS, ETC. (935/66)
FOR 192 .Plant cells (935/67)
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FOR 201 ASSAY RELATED TO GENETIC ENGINEERING (935/76)
FOR 202 .Methods of analysis of nucleic acids (935/77)
FOR 203 ..Including hybridization (935/78)
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FOR 211 .Analytical, e.g., for autoradiography, etc. (935/86)
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FOR 215 .Method of selection of the desired cell (935/90)
FOR 216 ..Of plant cells, e.g., protoplasts, etc. (935/91)
FOR 217 ..Using positive selection technique (935/92)
FOR 218 .Method of production of hybrid or fused cells, e.g., chromosome or genome transfer techniques, etc. (935/93)
FOR 219 ..Of plant cells (935/94)
FOR 220 .Fused or hybrid cell, per se (935/95)
FOR 221 ..Interspecies fusion (935/96)
FOR 222 ..Fungi, e.g., yeasts, etc. (935/97)
FOR 223 ..Plant cells (935/98)
FOR 224 ..Human cell 935/99)
FOR 225 ...B lymphocyte (935/100)
FOR 226 ...T lymphocyte (935/101)
FOR 227 ..Animal cell (935/102)
FOR 228 ...Murine cell, e.g., mouse cell, etc. (935/103)
FOR 229 ....B lymphocyte (935/104)
FOR 230 ....T lymphocyte (935/105)
FOR 231 .Method of use of the fused or hybrid cell or the product thereof (935/106)
FOR 232 ..In vivo use of product
FOR 233 ..In vitro, e.g., cell cultivation techniques, affinity chromatography, etc. (935/108)
FOR 234 ...Production of non-antibody product (935/109)
FOR 235 ...For use as testing material (935/110)
FOR 236 MISCELLANEOUS (935/111)

CLASS 506 COMBINATORIAL CHEMISTRY TECHNOLOGY: METHOD, LIBRARY, APPARATUS

OCTOBER 2007

* 1 DIRECTED MOLECULAR EVOLUTION OF MACROMOLECULES (E.G., RNA, DNA, PROTEINS, ETC.)
* 2 METHOD SPECIALLY ADAPTED FOR IDENTIFYING A LIBRARY MEMBER
* 3 .Identifying a library member by its fixed physical location on a support or substrate
* 4 .Identifying a library member by means of a tag, label, or other readable or detectable entity associated with the library member (e.g., decoding process, etc.)
* 5 .Using an iterative deconvolution technique
* 6 .Direct analysis of a library member, per se, by a physical method (e.g., spectroscopy, etc.)
* 7 METHOD OF SCREENING A LIBRARY
* 8 .In silico screening
* 9 .By measuring the ability to specifically bind a target molecule (e.g., antibody-antigen binding, receptor-ligand binding, etc.)
* 10 .By measuring the effect on a living organism, tissue, or cell
* 11 .By measuring catalytic activity
* 12 .By measuring a physical property (e.g., mass, etc.)
* 13 LIBRARY, PER SE (E.G., ARRAY, MIXTURE, IN SILICO, ETC.)
* 14 .Library contained in or displayed by a micro-organism (e.g., bacteria, animal cell, etc.) or library contained in or displayed by a vector (e.g., plasmid, etc.) or library containing only micro-organisms or vectors
* 15 .Library containing only organic compounds
* 16 ..Nucleotides or polynucleotides, or derivatives thereof
* 17 ...RNA or DNA which encodes proteins (e.g., gene library, etc.)
* 18 ..Peptides or polypeptides, or derivatives thereof
* 19 ..Saccharides or polysaccharides, or derivatives thereof
* 20 ..Macromolecular compounds (e.g., synthetic resin, rubber, etc.)
* 21 ..Metal-containing organic compounds
* 22 .Library containing only inorganic compounds or inorganic materials
* 23 METHOD OF CREATING A LIBRARY (E.G., COMBINATORIAL SYNTHESIS, ETC.)
* 24 .In silico or mathematical conception of a library
* 25 .Using a dynamic combinatorial chemistry technique
* 26 .Biochemical method (e.g., using an enzyme or whole viable micro-organism, etc.)
* 27 .Liquid-phase synthesis (i.e., wherein all library building blocks are in liquid phase or in solution during library creation) or particular method of cleavage from the liquid support used
* 28 ..Involving an encoding step
* 29 ..Using a particular method of attachment to the liquid support
* 30 .Solid-phase synthesis (i.e., wherein one or more library building blocks are bound to a solid support during library creation) or particular method of cleavage from the solid support used
* 31 ..Involving an encoding step
* 32 ..Using a particular method of attachment to the solid support
* 33 APPARATUS SPECIALLY ADAPTED FOR USE IN COMBINATORIAL CHEMISTRY OR WITH A LIBRARY
* 34 .Integrated apparatus specially adapted for creating a library, screening a library, and identifying a library member
* 35 .Integrated apparatus specially adapted for both screening a library and identifying a library member
* 36 .Integrated apparatus specially adapted for both creating a library and identifying a library member
* 37 .Integrated apparatus specially adapted for both creating and screening a library
* 38 .For identifying a library member
* 39 .For screening a library
* 40 .For creating a library
* 41 TAG OR LABEL SPECIALLY ADAPTED FOR COMBINATORIAL CHEMISTRY OR A LIBRARY (E.G., FLUORESCENT TAG, BAR CODE, ETC.)
* 42 LINK OR SPACER SPECIALLY ADAPTED FOR COMBINATORIAL CHEMISTRY OR A LIBRARY (E.G., TRACELESS LINKER, SAFETY-CATCH LINKER, ETC.)
* 43 MISCELLANEOUS

OCTOBER 2, 2007

PROJECT X-6295

C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

USPC Class	USPC Subclass	IPC Subclass	IPC Notation
506	1	C40B	10/00
	2		20/00
	3		20/02
	4		20/04
	5		20/06
	6		20/08
	7		30/00
	8		30/02
	9		30/04
	10		30/06
	11		30/08
	12		30/10
	13		40/00
	14		40/02
	15		40/04
	16		40/06
	17		40/08
	18		40/10
	19		40/12
	20		40/14
	21		40/16
	22		40/18
	23		50/00
	24		50/02
	25		50/04
	26		50/06
	27		50/08
	28		50/10
	29		50/12
	30		50/14
	31		50/16
	32		50/18
	33		60/00
	34		60/02
	35		60/04
	36		60/06
	37		60/08
	38		60/10
	39		60/12
	40		60/14
	41		70/00
	42		80/00
	43		99/00

D. CHANGES TO THE DEFINITIONS

CLASS 204 – CHEMISTRY: ELECTRICAL AND WAVE ENERGY

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a process of creating a library (e.g., chemical, biological, etc.), process of testing or analyzing a library, or an apparatus specially adapted for such processes.

D. CHANGES TO THE DEFINITIONS

CLASS 260 – CHEMISTRY OF CARBON COMPOUNDS

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 420 – ALLOYS OR METALLIC COMPOSITIONS

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a library (e.g., chemical, biological, etc.) or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 422 – CHEMICAL APPARATUS AND PROCESS DISINFECTING, DEODORIZING, PRESERVING, OR STERILIZING

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, subclasses 33 through 40 for apparatus specially adapted for use in combinatorial chemistry or with a library such as in identifying, screening, or creating a library.

Subclass 50: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, subclasses 33 through 40 for apparatus specially adapted for use in combinatorial chemistry or with a library such as in identifying, screening, or creating a library.

Subclass 129: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, subclasses 33 through 40 for apparatus specially adapted for use in combinatorial chemistry or with a library such as in identifying, screening, or creating a library.

D. CHANGES TO THE DEFINITIONS

CLASS 423 – CHEMISTRY OF INORGANIC COMPOUNDS

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 424 – DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS

Subclass 9.1: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, subclass 10 for a method of screening a library by measuring the effect on a living organism, tissue, or cell.

D. CHANGES TO THE DEFINITIONS

CLASS 435 – CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library, a process of creating said library, a process of testing involving said library, or an apparatus specially adapted for creating or testing involving said library.

Subclass 4: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a process of testing involving a chemical or biological library or an apparatus specially adapted for testing involving said library.

Subclass 6: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a process of testing involving a chemical or biological library or an apparatus specially adapted for testing involving said library.

Subclass 7.1: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a process of testing involving a chemical or biological library or an apparatus specially adapted for testing involving said library.

D. CHANGES TO THE DEFINITIONS

Subclass 283.1: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for apparatus specially adapted for use in combinatorial chemistry technology.

Subclass 287.1: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for apparatus specially adapted for use in combinatorial chemistry technology to screen or identify a library member.

D. CHANGES TO THE DEFINITIONS

CLASS 436 – CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for testing involving a chemical or biological library.

Subclass 37: After the (1) Note

Insert:

SEE OR SEARCH CLASS:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for testing a catalyst library.

Subclass 518: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for testing involving a chemical or biological library.

D. CHANGES TO THE DEFINITIONS

CLASS 502 – CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR: PRODUCT OR PROCESS OF MAKING

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a catalyst library or a method of making said library.

D. CHANGES TO THE DEFINITIONS

CLASS 506 – COMBINATORIAL CHEMISTRY TECHNOLOGY: METHOD, LIBRARY, APPARATUS

SECTION I – CLASS DEFINITION

GENERAL STATEMENT OF THE CLASS SUBJECT MATTER

This is the specific class for combinatorial chemistry technology, which includes the following subject matter:

A. Methods specially adapted for identifying the exact nature (e.g., chemical structure, etc.) of a particular library member.

B. Methods of screening libraries or subsets thereof for a desired activity or property (e.g., binding ability, etc.).

C. Chemical or biological libraries and modifications thereof (i.e., chemically, biologically, or physically modified).

D. In silico or virtual libraries and their conception.

E. Methods of making libraries (e.g., combinatorial synthesis, etc.).

F. Apparatus specially adapted for use in combinatorial chemistry or library technology to identify library members, to screen libraries, or to synthesize libraries; and integrated apparatus specially adapted for performing any combination of these three tasks.

G. Tags, labels, linkers, or spacers specially adapted for use in combinatorial chemistry or library technology.

H. Other processes or products specially adapted for combinatorial chemistry or libraries.

SECTION II – SUBCLASS REFERENCES TO THE CURRENT CLASS

SEE OR SEARCH THIS CLASS, SUBCLASS:

1, for a combinatorial chemistry process involving the process of directed molecular evolution of macromolecules such as RNA, DNA, and proteins.

D. CHANGES TO THE DEFINITIONS

2, through 6, for methods that are specially adapted for identifying the nature of a specific library member.

7, through 12, for methods of screening a library for members that have a particular property or activity of interest.

13, through 22, for libraries, per se, based on their chemical or biological nature.

23, through 32, for methods of creating or synthesizing libraries including in silico, biochemical, and chemical methods.

33, through 40, for apparatus specially adapted for use in identifying, screening, or creating libraries.

41, for a tag or label that is specially adapted for used in a combinatorial chemistry process.

42, for a linker or spacer that is specially adapted for use in a combinatorial chemistry process.

43, for combinatorial chemistry technology not provided for elsewhere.

SECTION III – REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

73, Measuring and Testing, for processes and apparatus for determining a physical property of what is being tested.

204, Chemistry: Electrical and Wave Energy, for a process of preparing compounds or elements involving chemical reactions brought about by electric or wave energy or an electrostatic field or electrical discharge and apparatus therefore.

260, Chemistry of Carbon Compounds, subclass 665 for organic compounds containing a metal other than a heavy metal or aluminum bonded to carbon.

420, Alloys or Metallic Compositions, for alloys containing metal or metallic compositions which contain a continuous phase of metal and methods of making same not provided for elsewhere and elemental metal, per se.

D. CHANGES TO THE DEFINITIONS

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 50 through 104 for apparatus for performing an analysis which involves a chemical or physical reaction not elsewhere provided for and subclasses 129-242 for carrying out chemical reactions.

423, Chemistry of Inorganic Compounds, for inorganic compounds and nonmetallic elements and processes of producing by a chemical reaction.

424, and 514, Drug, Bio-Affecting and Body Treating Compositions, for compositions used for testing of living organisms; preventing, alleviating, treating, or curing abnormal and pathological conditions of the living body; and maintaining, increasing, decreasing, limiting, or destroying a physiologic body function, etc.

435, Chemistry: Molecular Biology and Microbiology, for micro-organisms, vectors, and enzymes, per se; methods of producing them; testing processes involving micro-organisms and enzymes; and apparatus therefor not specially adapted for combinatorial chemistry technology.

436, Chemistry: Analytical and Immunological Testing, subclasses 500 through 542 for immunological tests and related subject matter, and for processes of analysis of chemical properties of a sample, physiological effect of a sample, or chemical determination of a physical property of a sample not specially adapted for combinatorial chemistry technology.

502, Catalyst, Solid Sorbent, or Support Therefor: Product or Process of Making, subclasses 100 through 355 for a catalyst or precursor therefor and subclasses 400-438 for a solid sorbent.

504, Plant Protecting and Regulating Compositions, for compositions for treating living terrestrial and aquatic plants or their habitats for the purpose of stimulating or inhibiting growth or any regulating action on plant growth through chemical modification of plant metabolism.

520, Synthetic Resins or Natural Rubbers, subclass 1 for the residual home for compositions containing a solid synthetic resin or natural rubber, preparation, or treatment thereof.

521, Synthetic Resins or Natural Rubbers, for ion-exchange polymers, processes of reclaiming a solid synthetic resin, and for cellular synthetic resins.

D. CHANGES TO THE DEFINITIONS

522, Synthetic Resins or Natural Rubbers, for processes of preparing or treating a solid polymer utilizing wave energy, for compositions to be polymerized by wave energy wherein said composition contains a rate-affecting material, or for compositions to be modified by wave energy wherein said composition contains a rate-affecting material.

523, and 524, Synthetic Resins or Natural Rubbers, for solid synthetic resins or specified intermediate condensation products admixed with a nonreactant material.

525, Synthetic Resins or Natural Rubbers, for certain combinations of polyesters and certain reactable materials, for blends of solid synthetic resins, and for chemically modified solid synthetic resins.

526, Synthetic Resins or Natural Rubbers, for certain manipulative processes which are generic to both ethylenic polymers and to condensation polymers, and also provides for polymers derived from ethylenic monomers only.

527, Synthetic Resins or Natural Rubbers, for solid synthetic resins derived from at least one saturated material and certain special reactants (e.g., carbohydrates, proteins, natural resins, lignin, tannin, bituminous material, etc.).

528, Synthetic Resins or Natural Rubbers, for solid synthetic resins derived from plant material of unknown constitution or from at least one nonethylenic reactant, and also for processes of treating a polymer either derived from ethylenic or nonethylenic reactants wherein chemical bonds in the polymer are left unaffected.

530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 200 through 233 for natural resins or derivatives, subclasses 300-427 for peptides or proteins, and subclasses 500-507 for lignins or derivatives.

534, Organic Compounds, for noble gases, radioactive or rare earth metal compounds, and azo and diazo compounds.

536, Organic Compounds, for carbohydrates.

540, Organic Compounds, for heterocyclic carbon compounds.

544, Organic Compounds, for six-membered nitrogen hetero rings with two or more hetero atoms.

D. CHANGES TO THE DEFINITIONS

546, Organic Compounds, for six-membered hetero rings with one ring nitrogen.

548, Organic Compounds, for three-, four-, or five-membered nitrogen hetero rings.

549, Organic Compounds, for oxygen or sulfur hetero rings.

552, Organic Compounds, for azides, triphenylmethanes, quinones, hydroquinones, or steroids.

554, Organic Compounds, for fats or fatty derivatives.

556, Organic Compounds, for heavy metal, aluminum, or silicon compounds.

558, and 560, Organic Compounds, for different esters.

562, Organic Compounds, for acids, acid halides, acid anhydrides, or selenium and tellurium compounds.

564, Organic Compounds, for amino nitrogen compounds.

568, Organic Compounds, for boron, phosphorus, sulfur, or oxygen compounds.

570, Organic Compounds, for halogen compounds.

585, Organic Compounds, for hydrocarbons and certain compositions containing hydrocarbons.

702, Data Processing: Measuring, Calibrating, or Testing, subclasses 19 through 32 for apparatus and corresponding methods wherein the data processing system or calculating computer is designed for or utilized in a biological, biochemical, or chemical environment relating to a specific or generic measurement system, a calibration or correction system, or a testing system.

703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, subclasses 11 and 12 for simulating a nonelectrical biological, biochemical, or chemical device or system.

D. CHANGES TO THE DEFINITIONS

977, Nanotechnology, for cross-reference art collections relating to nanostructure; chemical compositions of nanostructure; devices that include at least one nanostructure; mathematical algorithms specifically adapted for modeling configurations or properties of nanostructure; methods or apparatus for making, detecting, analyzing, or treating nanostructure; and specified particular uses of nanostructure.

SECTION IV – GLOSSARY

Terms used throughout the schedule and definitions are to have the meaning ascribed below. Generally accepted or commonly used "art" terms retain their meaning found in their everyday usage and are not found in this glossary. Certain specialized terms are employed in these subclasses and these terms have been given definitions altered to meet the needs of this class. Some or all of the terms may be broader or more restricted, as well as different in meaning compared to normal usage.

ARRAY

Set of compounds maintained in a specified spatial distribution (e.g., in the wells of a 96-well plate, in pins held in a rack, or at the tip of optical fibers arranged in a bunch, etc.).

BIOCHEMICAL METHOD

Process involving the use of micro-organisms, enzymes, vectors, or antibodies.

CHEMICAL EVOLUTION PROCESS

Process using in vitro selection systems that evolve to enrich mixtures of chemical compounds in those components having selected properties. The terminology "directed molecular evolution" is commonly employed when the process is applied to mixtures of macromolecules (e.g., RNA aptamers, etc.). Selected compounds are then amplified ("copied") using biochemical methods (e.g., enzymatic reverse transcription of RNA aptamers to DNA, PCR amplification, and finally retranscription to RNA, etc.). This concept has been adapted to organic chemistry and opened a new branch of combinatorial chemistry named "dynamic combinatorial chemistry" wherein the enrichment in the (usually low-molecular weight) compounds having a selected property results from the equilibration process that carries out a preferential destruction and recycling of unselected compounds.

CODING OR ECODING

Strategy whereby a surrogate analyte is associated with each member of a library in order to record its structure or the reaction sequence used for its preparation. This is usually achieved by the use of tags or labels attached to particles or solid supports on which the library members are assembled.

D. CHANGES TO THE DEFINITIONS

COMBINATORIAL LIBRARY

A set of compounds (a library) prepared by combinatorial synthesis. This set may consist of a collection of pools or sublibraries.

COMBINATORIAL SYNTHESIS

Combinatorial synthesis is the preparation of sets of diverse entities by the combination of sets of chemical building blocks (e.g., reagents, etc.).

CONTAINED IN

A library "contained in" a micro-organism, a cell, or a vector is a library in which the members are present in the respective biological entity (e.g., in a plasmid, etc.).

DECODING

Method enabling the determination of the structure of a library member or the reaction sequence leading to its preparation, which method involves "reading" (e.g., determining the structure of, etc.) a surrogate analyte (e.g., code, tag, label, etc.) associated with said library member.

DECONVOLUTION

Process of fractionating (normally by resynthesis or by elaborating a partial library) a pool with some level of the desired activity to give a set of smaller pools. See also iterative deconvolution.

DIRECTED MOLECULAR EVOLUTION

Directed molecular evolution is a process for enriching a library in members having a property or activity of interest. Directed molecular evolution involves cycles of taking a library, subjecting it to a screen to select for the desired property or activity, and amplifying the "hits" to provide the starting library for the subsequent cycle. "Mutations" may be introduced at the amplification stage in order to increase the diversity of the library. This subject matter involves aspects of creating and screening libraries.

DISPLAYED BY

A library "displayed by" a micro-organism is a library present at the surface of such a micro-organism (e.g., of a bacteria, etc.).

DYNAMIC LIBRARY

Collection of compounds, in solution, in dynamic equilibrium (i.e., constantly changing). If the composition of the library is altered by the presence of a target which selectively binds certain library members, then shifting of the equilibrium will lead to an increase in

D. CHANGES TO THE DEFINITIONS

the amount of those components which bind to the target with relatively high affinity. A dynamic library contains all the potentially possible combinations of the components undergoing dynamic random connection, whether these combinations are or are not actually present in the conditions used. It is a virtual library. A real entity is generated in the presence of the target.

FLUOROUS SYNTHESIS

Approach for solution-phase synthesis which takes advantage of the ability of highly fluorinated groups to partition out of aqueous and most organic solutions into a third phase comprising a fluorinated solvent. The fluorinated side chain can act as a soluble support for synthesis.

IDENTIFYING

Determining the exact nature (e.g., chemical structure or sequence listing, etc.) of a particular library member or of a particular subset of library members.

IN SILICO LIBRARY

A library which has no physical existence, being constructed solely in electronic form or on paper. An in silico library is one type of virtual library. The building blocks required for such a library may not exist, and the chemical steps for creating such a library may not have been tested. These libraries are used in the design and evaluation of possible libraries.

INTEGRATED APPARATUS

Apparatus specifically designed for performing at least two different operations (e.g., synthesis and screening, etc.).

ITERATIVE DECONVOLUTION

Method for the identification of active library members which involves repeating the deconvolution strategy a certain number of times. Usually the initial library is divided into nonoverlapping subsets. The subsets are tested or screened separately, and the one with the greatest activity is identified. This subset is re-synthesized as a collection of simpler subsets which are tested for activity. The process is repeated until a unique library-member with a high level of activity is identified.

LIBRARY

A library is a created collection of a plurality of compounds, micro-organisms, or other substances. The collection is useful as a test vehicle for determining which of its members or its subsets of members possess activities or properties of interest. A library might, for example, exist as (a) a solution, (b) a physical admixture, (c) an ordered or unordered array, or (d) a plurality of members present on a support and affixed thereto (e.g., by chemical bonding, physical attractive forces, coating, etc.).

D. CHANGES TO THE DEFINITIONS

LIQUID-PHASE SYNTHESIS

This terminology covers both solution-phase syntheses (i.e., reactions involving only one liquid phase) as well as syntheses in multiple liquid-phase systems (i.e., involving more than one liquid phase). The latter is concerned with syntheses performed on a liquid macromolecular compound such as polyethylene glycol (PEG), on dendrimers, or wherein a fluorocarbon phase is present in the system (fluorous synthesis).

MICRO-ORGANISMS

Bacteria; actinomycetales; single-celled fungi (e.g., yeast, etc.); virus, human, animal, or plant cells; tissues; protozoa; or unicellular algae.

PARTICULAR ATTACHMENT METHOD

Specific method of attachment focusing on the way molecules are bound to the solid or liquid support (e.g., by means of electrostatic interactions, formation of covalent bonds by cycloaddition reactions, or by irradiation, etc.).

RESIN CAPTURE

Method involving contacting the reaction medium with a solid support after a reaction is performed in solution in order to attach the reaction product to the resin and thus collect the reaction product easily.

SAFETY-CATCH LINKER

A linker which is cleaved by performing two different reactions instead of only one, thus providing greater control over the timing of compound release. In practice, the resin is “activated” before the actual cleavage takes place (e.g., cleavage by nucleophilic displacement of a previously alkylated sulfonamide resin, etc.).

SCREENING

Determining whether a library contains a member or members which have a particular property or activity of interest.

SOLID-PHASE SYNTHESIS

Synthetic process wherein the reactions are performed on a solid support, usually in the presence of a solvent (i.e., wherein one or more library building blocks are bound to a solid support, e.g., polymer, resin, glass beads, etc.) during library creation.

D. CHANGES TO THE DEFINITIONS

SOLID SUPPORT

Insoluble, functionalized, polymeric material to which library members or other reagents may be attached (often via a linker) allowing library members to be readily separated (by filtration, centrifugation, etc.) from excess reagents, soluble reaction by-products, or solvents.

SOLUTION-PHASE SYNTHESIS

Synthesis performed in solution (i.e., wherein the reactants and reagents are all soluble in the reaction medium, irrespective of the fact that, for instance, a supported catalyst is used during the reaction). Solution-phase synthesis is also known as "synthesis in solution."

TRACELESS LINKER

Linker which does not leave any residue on the cleaved compound (i.e., which is replaced by a hydrogen atom).

VIRTUAL LIBRARY

A library which has no physical existence. This terminology encompasses two different types of libraries: in silico libraries and dynamic libraries.

SUBCLASSES

1 DIRECTED MOLECULAR EVOLUTION OF MACROMOLECULES (E.G., RNA, DNA, PROTEINS, ETC.):
Method under the class definition wherein a library of macromolecules, such as nucleic acids or proteins, is enriched in members having a property or activity of interest and involves cycles of taking a library, subjecting it to a screen to select for the desired property or activity, and amplifying the "hits" to provide the starting library for the subsequent cycle.

(1) Note. "Mutations" may be introduced at the amplification stage in order to increase the diversity of the library.

(2) Note. Directed molecular evolution involves aspects of creating and screening libraries.

(3) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 10/00.

D. CHANGES TO THE DEFINITIONS

2 METHOD SPECIALLY ADAPTED FOR IDENTIFYING A LIBRARY MEMBER:

Method under the class definition wherein the method is specially adapted to determine the exact nature (e.g., chemical structure, sequence listing, etc.) of a particular library member or of a particular subset of library members.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 20/00.

SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclasses 4 through 40.52 for testing processes involving micro-organisms and enzymes not specially adapted for combinatorial chemistry technology.

436, Chemistry: Analytical and Immunological Testing, subclasses 500 through 542 for immunological tests and related subject matter, and for processes of analysis of chemical properties of a sample, physiological effect of a sample, or chemical determination of a physical property of a sample not specially adapted for combinatorial chemistry technology.

3 Identifying a library member by its fixed physical location on a support or substrate:

Method under subclass 2 wherein the exact nature of a library member is determined from its physical location in an array or arrangement.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 20/02.

4 Identifying a library member by means of a tag, label, or other readable or detectable entity associated with the library member (e.g., decoding process, etc.):

Method under subclass 2 wherein the exact nature of a library member to which a surrogate analyte (tag, label, etc.) is associated is determined by using the surrogate analyte which is attached to a solid support on which the library members are assembled to define the reaction path to which the solid support was exposed and hence imply the structure of a member of a library or the reaction sequence for its preparation.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 20/04.

D. CHANGES TO THE DEFINITIONS

5 Using an iterative deconvolution technique:
Method under subclass 2 wherein the exact nature of a library member is determined by a method of screening of compound pools, identifying the active pool(s), resynthesizing and rescreening sublibraries (smaller pools), wherein the number of compounds in the sublibraries gets smaller and smaller, until only a single compound is present in each pool, thereby leading to the identification of the active library member(s).

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 20/06.

6 Direct analysis of a library member, per se, by a physical method (e.g., spectroscopy, etc.):
Method under subclass 2 wherein the exact nature of a library member is directly determined by a physical (nonchemical) method.

(1) Note. Physical methods include mass spectroscopy, nuclear magnetic resonance (NMR), etc.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 20/08.

7 METHOD OF SCREENING A LIBRARY:
Method under the class definition for determining whether a member or members of a library have a desired chemical, physical, or biological property or activity, without necessarily identifying the precise nature of the member or members being screened.

(1) Note. A method of screening a library is provided for in this subclass if the method involves screening the library as a whole, and if the method recites a library-specific limitation. The library should be an intentionally created library testing set. The simple repetitive screening of an ordered array of subject materials in individual containers simultaneously or sequentially, without recitation of a library-specific limitation, would not meet this test.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/00.

SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclasses 4 through 40.52 for testing processes involving micro-organisms and enzymes not specially adapted for combinatorial chemistry technology.

D. CHANGES TO THE DEFINITIONS

436, Chemistry: Analytical and Immunological Testing, subclasses 500 through 542 for immunological tests and related subject matter, and for processes of analysis of chemical properties of a sample, physiological effect of a sample, or chemical determination of a physical property of a sample not specially adapted for combinatorial chemistry technology.

8 In silico screening:
Method under subclass 7 wherein the members of a library are selected by evaluating their desireability in a computational model.

(1) Note. In silico screening is also known as virtual screening.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/02.

9 By measuring the ability to specifically bind a target molecule (e.g., antibody-antigen binding, receptor-ligand binding, etc.):
Method under subclass 7 wherein the members of a library are selected for their ability to principally attach to a target entity such as in antibody-antigen binding, biospecific ligand binding, etc.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/04.

10 By measuring the effect on a living organism, tissue, or cell:
Method under subclass 7 wherein members of a library are selected for their ability to produce a change in a living organism, tissue, or cell such as death, increased production of a product, etc.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/06.

11 By measuring catalytic activity:
Method under subclass 7 wherein members of a library are selected for their ability to catalyze reactions.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/08.

12 By measuring a physical property (e.g., mass, etc.):
Method under subclass 7 wherein members of a library are selected for a specific physical (nonchemical) property such as density, refractive index, mass, etc.

D. CHANGES TO THE DEFINITIONS

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 30/10.

13 LIBRARY, PER SE (E.G., ARRAY, MIXTURE, IN SILICO, ETC.):
Subject matter under the class definition which is a created collection of a plurality of chemical compounds, biological entities (e.g., plasmid, bacterium, yeast cell, animal cell, etc.), or other materials wherein the collection is treated as a unit.

(1) Note. The collection is useful as a test vehicle for determining which of its members possess(es) a useful property or activity.

(2) Note. A library may exist as (a) a solution, (b) a physical admixture, (c) an ordered or unordered array, (d) a plurality of members present on a support and affixed thereto by chemical bonding, by physical attractive forces, or by coating, or (e) virtual or in silico (i.e., a library which is constructed solely in electronic form or on paper and has no physical existence).

(3) Note. A natural product (e.g., plant extracts, etc.) is not considered as being a library, per se, for the purposes of this subclass, except where plural natural products are intentionally combined to make a library.

(4) Note. Virtual or in silico libraries are classified as if they are physically existing entities (e.g., a virtual gene library is classified with the gene libraries, etc.).

(5) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/00.

14 Library contained in or displayed by a micro-organism (e.g., bacteria, animal cell, etc.) or library contained in or displayed by a vector (e.g., plasmid, etc.) or library containing only micro-organisms or vectors:
Library under subclass 13 wherein the library members are enclosed in or found on the surface of a micro-organism or a vector such as a plasmid, or the library members are a grouping of micro-organisms or vectors (e.g., virus library, plasmid library, etc.).

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/02.

SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclasses 235.1 through 239 for virus or bacteriophage, per se; subclasses 243-261 for micro-organism, per se; subclass 320.1 for virus vector or bacteriophage vector, per se; subclasses 325-408 for animal cell, per se; and subclasses 410-431 for plant cell, per se.

D. CHANGES TO THE DEFINITIONS

15 Library containing only organic compounds:
Library under subclass 13 wherein the library members are solely organic compounds.

(1) Note. An organic compound is defined as satisfying one of the following criteria: (a) at least two carbon atoms bonded to each other, or (b) one carbon atom bonded to at least one hydrogen atom or halogen atom, or (c) one carbon atom bonded to at least one nitrogen atom by a single or double bond. Exceptions to the above criteria are compounds consisting of only carbon atoms (e.g., fullerenes, etc.), cyanogen, cyanogen halides, cyanamide, metal carbides, hydrocyanic acid, isocyanic acid, isothiocyanic acid, fulminic acid, and salts of the previously mentioned acids. These exceptions are considered to be inorganic compounds for classification purposes.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/04.

16 Nucleotides or polynucleotides, or derivatives thereof:
Library under subclass 15 wherein the library members are nucleotides or polynucleotides (e.g., nucleic acids, oligonucleotides, etc.).

(1) Note. A nucleotide is a phosphorylated nucleoside.

(2) Note. Polynucleotides, also called nucleic acids, are covalently linked series of nucleotides in which the 3i position of the pentose of one nucleotide is joined by a phosphodiester group to the 5i position of the next.

(3) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/06.

SEE OR SEARCH CLASS:

536, Organic Compounds, subclasses 22.1 through 29.13 for N-glycosides, per se, including nucleotides, nucleic acids, oligonucleotides, etc.

17 RNA or DNA which encodes proteins (e.g., gene library, etc.):
Library under subclass 16 wherein the library members are ribonucleic acids or deoxyribonucleic acids which carry the genetic code for making a specific protein.

(1) Note. An example of an encoding nucleic acid library is a gene library.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/08.

D. CHANGES TO THE DEFINITIONS

18 Peptides or polypeptides, or derivatives thereof:
Library under subclass 15 wherein the library members are compounds containing two or more amino acids joined covalently by peptide bonds (e.g., dipeptides, proteins, etc.).

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/10.

SEE OR SEARCH CLASS:

530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 300 through 427 for peptides or proteins, per se.

19 Saccharides or polysaccharides, or derivatives thereof:
Library under subclass 15 wherein the library members are carbohydrates.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/12.

SEE OR SEARCH CLASS:

536, Organic Compounds, for carbohydrates, per se.

20 Macromolecular compounds (e.g., synthetic resins, rubber, etc.):
Library under subclass 15 wherein the library members are polymer compounds which are made up of many smaller monomer units joined together chemically.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/14.

21 Metal-containing organic compounds:
Library under subclass 15 wherein the library members are organic compounds which contain a metal.

(1) Note. A metal is an element other than hydrogen (H), boron (B), carbon (C), silicon (Si), nitrogen (N), phosphorus (P), oxygen (O), sulfur (S), selenium (Se), tellurium (Te), fluorine (F), chlorine (Cl), bromine (Br), iodine (I), astatine (At), helium (He), neon (Ne), argon (Ar), krypton (Kr), xenon (Xe), and radon (Rd).

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/16.

22 Library containing only inorganic compounds or inorganic materials:
Library under subclass 13 wherein the library members are solely inorganic in nature.

D. CHANGES TO THE DEFINITIONS

(1) Note. Inorganic compounds include compounds consisting of only carbon atoms (e.g., fullerenes, etc.), cyanogen, cyanogen halides, cyanamide, metal carbides, hydrocyanic acid, isocyanic acid, isothiocyanic acid, fulminic acid, and salts of the previously mentioned acids. They do not include compounds satisfying one of the following criteria: (a) at least two carbon atoms bonded to each other, or (b) one carbon atom bonded to at least one hydrogen atom or halogen atom, or (c) one carbon atom bonded to at least one nitrogen atom by a single or double bond.

(2) Note. An inorganic material includes alloys composed of two or more metals which may be (a) chemically united, (b) in the form of a mixture, or (c) in solid solution.

(3) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 40/18.

SEE OR SEARCH CLASS:

420, Alloys or Metallic Compositions, for alloys, per se, containing metal or metallic compositions which contain a continuous phase of metal and methods of making same not provided for elsewhere. This class will also take elemental metal, per se.

423, Chemistry of Inorganic Compounds, for inorganic compounds, per se, and nonmetallic elements, per se, and processes of producing by a chemical reaction.

23 METHOD OF CREATING A LIBRARY (E.G., COMBINATORIAL SYNTHESIS, ETC.):

Method under the class definition which is directed to the preparation of a library, which method may include simple physical admixture of components, synthesis via chemical reaction, synthesis via a biological process (e.g., microbial, enzymatic, etc.), or any other synthetic means.

(1) Note. Combinatorial synthesis is the preparation of sets of diverse entities by the combination of sets of chemical building blocks (e.g., reagents, etc.).

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/00.

24 In silico or mathematical conception of a library:

Method under subclass 23 involving preparation of a library in electronic form or on paper to be used in the design and evaluation of potential libraries.

(1) Note. The building blocks for preparing an in silico library may not exist, and the chemical steps for creating such a library may not have been tested.

D. CHANGES TO THE DEFINITIONS

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/02.

25 Using a dynamic combinatorial chemistry technique:
Method under subclass 23 for preparing a library involving a technique in which a target compound is introduced into a mixture of library constituents that are able to interconvert with each other chemically, wherein some of the library constituents bind to the target compound selectively and are therefore removed from the pool of interconverting species, thereby causing the equilibrium of the library solution to shift, favoring the production of species that bind to the target and minimizing the concentration of poorly binding library compounds.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/04.

26 Biochemical method (e.g., using an enzyme or whole viable micro-organism, etc.):
Method under subclass 23 for preparing a library involving the use of enzymes, vectors, micro-organisms, or antibodies.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/06.

27 Liquid-phase synthesis (i.e., wherein all library building blocks are in liquid phase or in solution during library creation) or particular method of cleavage from the liquid support used:
Method under subclass 23 wherein building blocks of a library are in a liquid phase during library creation or a specifically recited method of cleaving the library from the liquid support is used.

(1) Note. For the purposes of this subclass, liquid-phase synthesis includes both solution-phase synthesis (i.e., synthesis involving only one liquid phase) and multiple liquid-phase synthesis (i.e., synthesis involving more than one liquid phase). The latter synthesis may involve synthesis performed on a liquid macromolecular compound (soluble support) such as polyethylene glycol (PEG), a dendrimers, or wherein a fluorocarbon phase is present in the system (i.e., fluorous synthesis).

(2) Note. A soluble support is an attachment, common to all library members, which renders the library components soluble under conditions for library synthesis, but which can be readily separated from most other soluble components when desired by some simple physical process.

D. CHANGES TO THE DEFINITIONS

(3) Note. Fluorous synthesis is a type of solution-phase synthesis which takes advantage of the ability of highly fluorinated groups to partition out of aqueous and most organic solutions into a third phase comprising a fluorinated solvent.

(4) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/08.

28 Involving an encoding step:
Method under subclass 27 wherein the method of preparing a library involves associating a unique tag (chemical or nonchemical) sequentially with each support when each library building block is added, therefore recording a history of building block additions which each support has been subjected to, during the entire synthesis.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/10.

29 Using a particular method of attachment to the liquid support:
Method under subclass 27 wherein a specific method of attachment of the library building blocks focuses on the way the building blocks are bound to the liquid support (e.g., by means of electrostatic interactions, formation of covalent bonds by cycloaddition reactions, irradiation, etc.).

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/12.

30 Solid-phase synthesis (i.e., wherein one or more library building blocks are bound to a solid support during library creation) or particular method of cleavage from the solid support used:
Method under subclass 23 wherein one or more of the building blocks of a library bound to a solid support (e.g., resin bead, etc.) during library creation or a specifically recited method of cleaving the library from the solid support is used.

(1) Note. A solid support is an insoluble, functionalized, polymeric material to which library members or reagents may be attached (often via a linker) allowing them to be readily separated (by filtration, centrifugation, etc.) from excess reagents, soluble reaction by-products, or solvents.

(2) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/14.

D. CHANGES TO THE DEFINITIONS

31 Involving an encoding step:
Method under subclass 30 wherein the method of preparing a library involves associating a unique tag (chemical or nonchemical) sequentially with each solid support (e.g., bead, etc.) when each library building block is added, therefore recording a history of building block additions which each solid support has been subjected to, during the entire synthesis.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/16.

32 Using a particular method of attachment to the solid support:
Method under subclass 30 wherein a specific method of attachment of the library building blocks focuses on the way the building blocks are bound to the solid support (e.g., by means of electrostatic interactions, formation of covalent bonds by cycloaddition reactions, irradiation, etc.).

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 50/18.

33 APPARATUS SPECIALLY ADAPTED FOR USE IN COMBINATORIAL CHEMISTRY OR WITH A LIBRARY:
Apparatus under the class definition which is uniquely designed or specially adapted for use in combinatorial chemistry technology.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/00.

SEE OR SEARCH CLASS:

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 50 through 104 for apparatus for performing an analysis which involves a chemical or physical reaction not elsewhere provided for and subclasses 129-242 for carrying out chemical reactions.

435, Chemistry: Molecular Biology and Microbiology, subclasses 283.1 through 309.4 for apparatus for fermentation, enzymology, organ or tissue maintenance, or genetic engineering.

34 Integrated apparatus specially adapted for creating a library, screening a library, and for identifying a library member:
Apparatus under subclass 33 which is specifically designed for performing the preparation of a library, the screening of library members for certain activities or properties, and the identification of the exact nature of particular library members.

D. CHANGES TO THE DEFINITIONS

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/02.

35 Integrated apparatus specially adapted for both screening a library and identifying a library member:
Apparatus under subclass 33 which is specifically designed for performing the screening of library members for certain activities or properties and the identification of the exact nature of particular library members.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/04.

36 Integrated apparatus specially adapted for both creating a library and identifying a library member:
Apparatus under subclass 33 which is specifically designed for performing the preparation of a library and the identification of the exact nature of particular library members.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/06.

37 Integrated apparatus specially adapted for both creating and screening a library:
Apparatus under subclass 33 which is specifically designed for performing the preparation of a library and the screening of library members for certain activities or properties.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/08.

38 For identifying a library member:
Apparatus under subclass 33 which is specifically designed for performing the identification of the exact nature of particular library members.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/10.

39 For screening a library:
Apparatus under subclass 33 which is specifically designed for performing the screening of library members for certain activities or properties.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/12.

D. CHANGES TO THE DEFINITIONS

40 For creating a library:
Apparatus under subclass 33 which is specifically designed for performing the preparation of a library.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 60/14.

41 TAG OR LABEL SPECIALLY ADAPTED FOR COMBINATORIAL CHEMISTRY OR A LIBRARY (E.G., FLUORESCENT TAG, BAR CODE, ETC.):
Subject matter under the class definition which is a tag or label unique for use in combinatorial chemistry techniques or unique as an identifier of a library or library members.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 70/00.

42 LINKER OR SPACER SPECIALLY ADAPTED FOR COMBINATORIAL CHEMISTRY OR A LIBRARY (E.G., TRACELESS LINKER, SAFETY-CATCH LINKER, ETC.):
Subject matter under the class definition for use in combinatorial chemistry techniques which involves a chemical constituent which is used to connect a compound to a support or another compound in order to enhance a reaction outcome.

(1) Note. A linker is a bifunctional molecule attaching a compound or first building block of a synthesis to a solid or soluble support which can be cleaved to release compounds from the support.

(2) Note. A traceless linker is one which does not leave any residue on a compound after cleavage from a support (i.e., linker is replaced by a hydrogen atom).

(3) Note. A safety-catch linker is cleaved by performing two different reactions instead of only one, thus providing greater control over the timing of compound release. For example, a sulfonamide resin is “activated” before the actual cleavage takes place (e.g., cleavage by nucleophilic displacement of a previously alkylated sulfonamide resin).

(4) Note. A spacer is a chemical moiety used in solid-phase synthesis to influence reaction conditions, reduce steric hindrance, modify hydrophobicity, etc.

(5) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 80/00.

43 MISCELLANEOUS:

D. CHANGES TO THE DEFINITIONS

Subject matter under the class definition which is not provided for in other subclasses.

(1) Note. The subject matter in this subclass is substantially the same in scope as IPC C40B 99/00.

D. CHANGES TO THE DEFINITIONS

CLASS 520 – SYNTHETIC RESINS OR NATURAL RUBBERS – PART OF THE CLASS 520 SERIES

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 530 – CHEMISTRY: NATURAL RESINS OR DERIVATIVES; PEPTIDES OR PROTEINS; LIGNINS OR REACTION PRODUCTS THEREOF

Subclass 200: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

Subclass 300: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a peptide library or a method of making said library.

Subclass 350: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a protein library or a method of making said library.

Subclass 500: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 532 – ORGANIC COMPOUNDS – PART OF THE CLASS 532 – 570 SERIES

Class Definition: After the last entry under SECTION II – LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Delete:

SECTION III – GLOSSARY

Insert:

SECTION III – REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

SECTION IV – GLOSSARY

D. CHANGES TO THE DEFINITIONS

CLASS 536 – ORGANIC COMPOUNDS – PART OF THE CLASS 532 – 570 SERIES

Subclass 1.11: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a carbohydrate library and a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 540 – ORGANIC COMPOUNDS – PART OF THE CLASS 532 – 570 SERIES

Subclass 1: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 585 – CHEMISTRY OF HYDROCARBON COMPOUNDS

Class Definition: After the last entry under SECTION II – LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Insert:

SECTION III – REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.

D. CHANGES TO THE DEFINITIONS

CLASS 702 – DATA PROCESSING: MEASURING, CALIBRATING, OR TESTING

Class Definition: Under SECTION III – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico screening of a chemical or biological library.

Subclass 19: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico screening of a chemical or biological library.

Subclass 22: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico screening of a chemical or biological library.

D. CHANGES TO THE DEFINITIONS

CLASS 703 – DATA PROCESSING: STRUCTURAL DESIGN, MODELING, SIMULATION, AND EMULATION

Class Definition: Under SECTION II – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico or mathematical conception of a chemical or biological library.

Subclass 11: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico or mathematical conception of a chemical or biological library.

Subclass 12: Under SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for in silico or mathematical conception of a chemical or biological library.

D. CHANGES TO THE DEFINITIONS

CLASS 977 – NANOTECHNOLOGY

Class Definition: Under SECTION II – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Insert:

506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library, a process of creating said library, a process of testing involving said library, an apparatus specially adapted for creating or testing involving said library, or tags, labels, or linkers specially adapted for use in combinatorial chemistry techniques.