CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY
(NOTES omitted)

CHEMISTRY

C07 ORGANIC CHEMISTRY
(NOTES omitted)

C07J STEROIDS (seco-steroids C07C)

NOTE

This subclass covers compounds containing a cyclopenta[a]hydrophenanthrene skeleton or a ring structure derived therefrom:
- by contraction or expansion of one ring by one or two atoms;
- by contraction or expansion of two rings each by one atom;
- by contraction of one ring by one atom and expansion of one ring by one atom;
- by substitution of one or two carbon atoms of the cyclopenta[a]hydrophenanthrene skeleton, which are not shared by rings, by hetero atoms, in combination with the above defined contraction or expansion or not, or;
- by condensation with carbocyclic or heterocyclic rings in combination with one or more of the foregoing alterations or not.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing carbon, hydrogen, halogen or oxygen

1/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 17 beta by a carbon atom, e.g. estrane, androstane

1/0003 . {Androstane derivatives}
1/0007 . . {not substituted in position 17}
1/0011 . . {substituted in position 17 by a keto group}
1/0014 . . {substituted in position 17 alfa, not substituted in position 17 beta}
1/0018 . . {substituted in position 17 beta, not substituted in position 17 alfa}
1/0022 . . . {the substituent being an OH group free esterified or etherified}
1/0025 . . . . {Esters}
1/0029 . . . . {Ethers}
1/0033 . . {substituted in position 17 alfa and 17 beta}
1/0037 . . . {the substituent in position 17 alfa being a saturated hydrocarbon group}
1/004 . . . {the substituent in position 17 alfa being an unsaturated hydrocarbon group}
1/0044 . . . . {Alkenyl derivatives}
1/0048 . . . . {Alkynyl derivatives}
1/0051 . {Estrane derivatives}
1/0055 . . {not substituted in position 17}
1/0059 . . {substituted in position 17 by a keto group}
1/0062 . . {substituted in position 17 alfa not substituted in position 17 beta}
1/0066 . . {substituted in position 17 beta not substituted in position 17 alfa}
1/007 . . . {the substituent being an OH group free esterified or etherified}
1/0074 . . . . {Esters}
1/0077 . . . . {Ethers}
1/0081 . . {Substituted in position 17 alfa and 17 beta}
1/0085 . . . {the substituent in position 17 alfa being a saturated hydrocarbon group}
1/0088 . . . {the substituent in position 17 alfa being an unsaturated hydrocarbon group}
1/0092 . . . . {Alkenyl derivatives}
1/0096 . . . . {Alkynyl derivatives}

3/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 beta by one carbon atom

3/005 . {the carbon atom being part of a carboxylic function}

5/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 beta by a chain of two carbon atoms, e.g. pregnane and substituted in position 21 by only one singly bound oxygen atom, {i.e. only one oxygen bound to position 21 by a single bond}

5/0007 . {not substituted in position 17 alfa}
5/0015 . . {not substituted in position 16}
5/0023 . . {substituted in position 16}
5/003 . . . {by a saturated or unsaturated hydrocarbon group including 16-alkylidene substitutes}
5/0038 . . . . {by an alkyl group}
5/0046 . {substituted in position 17 alfa}
5/0053 . . {not substituted in position 16}
5/0061 . . {substituted in position 16}
5/0069 . . . {by a saturated or unsaturated hydrocarbon group}
5/0076 . . . . {by an alkyl group}
5/0084 . . . . {by an alkylene group}
5/0092 . . . {by an OH group free esterified or etherified}

7/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen substituted in position 17 beta by a chain of two carbon atoms** (C07J 5/00 takes precedence)

7/0005 . {not substituted in position 21}
7/001 . . {substituted in position 20 by a keto group}
7/0015 . . . {not substituted in position 17 alfa}
7/002 . . . . {not substituted in position 16}
7/0025 . . . . {substituted in position 16}
7/003 . . . . . {by a saturated or unsaturated hydrocarbon group}
7/0035 . . . . . {by a hydroxy group free esterified or etherified}
7/004 . . . {substituted in position 17 alfa}
7/0045 . . . . {not substituted in position 16}
7/005 . . . . {substituted in position 16}
7/0055 . . . . . {by a saturated or unsaturated hydrocarbon group}
7/006 . . . . . {by a hydroxy group free esterified or etherified}
7/0065 . . {substituted in position 20 by an OH group free esterified or etherified}
7/007 . . . {not substituted in position 17 alfa}
7/0075 . . . {substituted in position 17 alfa}
7/008 . {substituted in position 21}
7/0085 . . {by an halogen atom}
7/009 . . {by only one oxygen atom doubly bound}
7/0095 . . {carbon in position 21 is part of carboxylic group}

9/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen substituted in position 17 beta by a chain of more than two carbon atoms, e.g. cholane, cholestane, coprostane**

9/005 . {containing a carboxylic function directly attached or attached by a chain containing only carbon atoms to the cyclopenta[a]hydrophenanthrene skeleton}

11/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 3**

13/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen having a carbon-to-carbon double bond from or to position 17 {**(for carbonyl groups C07J 1/00)**}**

13/002 . {with double bond in position 13 (17)}
13/005 . {with double bond in position 16 (17)}
13/007 . {with double bond in position 17 (20)}

15/00 **Stereochemically pure steroids containing carbon, hydrogen, halogen or oxygen having a partially or totally inverted skeleton, e.g. retrosteroids, L-isomers**

15/005 . {Retrosteroids (9 beta 10 alfa)}

17/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, having an oxygen-containing hetero ring not condensed with the cyclopenta(a)hydrophenanthrene skeleton** (cardanolide, bufanolide C07J 19/00)

17/005 . {Glycosides}

19/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 by a lactone ring**

19/005 . {Glycosides}

21/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen having an oxygen-containing hetero ring spiro-condensed with the cyclopenta(a)hydrophenanthrene skeleton**

21/001 . {Lactones}
21/003 . . {at position 17}
21/005 . {Ketals}
21/006 . . {at position 3}
21/008 . . {at position 17}

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing sulfur

31/00 **Normal steroids containing one or more sulfur atoms not belonging to a hetero ring**

31/003 . {the S atom directly linked to a ring carbon atom of the cyclopenta(a)hydrophenanthrene skeleton}
31/006 . {not covered by C07J 31/003}

33/00 **Normal steroids having a sulfur-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton**

33/002 . {not condensed}
33/005 . {spiro-condensed}
33/007 . . {Cyclic thioketals}

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing nitrogen

41/00 **Normal steroids containing one or more nitrogen atoms not belonging to a hetero ring**

41/0005 . {the nitrogen atom being directly linked to the cyclopenta(a)hydro phenanthrene skeleton}
41/0011 . . {Unsubstituted amino radicals}
41/0016 . . {Oximes}
41/0022 . . {Isocyanates; Isothiocyanates}
41/0027 . . {Azides}
41/0033 . {not covered by C07J 41/0005}

NOTE

In groups C07J 41/0038 - C07J 41/0094 all references to substituents in position 17-beta of the steroid skeleton include substituents at the 17-position when there is a double bond to or from position 17, and all references to an amide group include all nitrogen substituted carbonyl groups

41/0038 . . {with an androstane skeleton, including 18- or 19-substituted derivatives, 18-nor derivatives and also derivatives where position 17-beta is substituted by a carbon atom not directly bonded to a further carbon atom and not being part of an amide group}
41/0044 . . {with an estrane or gonane skeleton, including 18-substituted derivatives and derivatives where position 17-beta is substituted by a carbon atom not directly bonded to another carbon atom and not being part of an amide group}
41/005 . . {the 17-beta position being substituted by an uninterrupted chain of only two carbon atoms, e.g. pregnane derivatives}
41/0055 . . {the 17-beta position being substituted by an uninterrupted chain of at least three carbon atoms which may or may not be branched, e.g. cholane or cholestane derivatives, optionally cyclised, e.g. 17-beta-phenyl or 17-beta-furyl derivatives}

41/0061 . . . {one of the carbon atoms being part of an amide group}
41/0066 . . {the 17-beta position being substituted by a carbon atom forming part of an amide group}
41/0072 . . {the A ring of the steroid being aromatic}
41/0077 . . {substituted in position 11-beta by a carbon atom, further substituted by a group comprising at least one further carbon atom}
41/0083 . . . {substituted in position 11-beta by an optionally substituted phenyl group not further condensed with other rings}
41/0088 . . {containing unsubstituted amino radicals}
41/0094 . . {containing nitrile radicals, including thiocyanide radicals}

43/00 Normal steroids having a nitrogen-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton
43/003 . {not condensed}
43/006 . {spiro-condensed}

51/00 Normal steroids with unmodified cyclopenta(a)hydrophenanthrene skeleton not provided for in groups C07J 1/00 - C07J 43/00

53/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by condensation with a carbocyclic rings or by formation of an additional ring by means of a direct link between two ring carbon atoms, {including carboxyclic rings fused to the cyclopenta(a)hydrophenanthrene skeleton are included in this class}
53/001 . {spiro-linked}
53/002 . {Carbocyclic rings fused}
53/004 . . {3 membered carbocyclic rings}
53/005 . . . {in position 12}
53/007 . . . {in position 6-7}
53/008 . . . {in position 15/16}

Nor- or homo steroids

61/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of only one ring by one or two atoms

63/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of only one ring by one or two atoms
63/002 . {Expansion of ring A by one atom, e.g. A homo steroids}
63/004 . {Expansion of ring B by one atom, e.g. B homo steroids}
63/006 . {Expansion of ring C by one atom, e.g. C homo steroids}
63/008 . {Expansion of ring D by one atom, e.g. D homo steroids}

65/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of two rings, each by one atom

67/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of two rings, each by one atom

69/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of only one ring by one atom and expansion of only one ring by one atom

71/00 Steroids in which the cyclopenta(a)hydrophenanthrene skeleton is condensed with a heterocyclic ring (spiro-condensed heterocyclic rings C07J 21/00, C07J 33/00, C07J 43/00)
71/0005 . {Oxygen-containing hetero ring}
71/001 . . {Oxiranes}
71/0015 . . . {at position 9(11)}
71/0021 . . . {at position 14(15)}
71/0026 . . {cyclic ketals}
71/0031 . . . {at positions 16, 17}
71/0036 . {Nitrogen-containing hetero ring}
71/0042 . . {Nitrogen only}
71/0047 . . . {at position 2(3)}
71/0052 . . . {at position 16(17)}
71/0057 . . {Nitrogen and oxygen}
71/0063 . . . {at position 2(3)}
71/0068 . . . {at position 16(17)}
71/0073 . {Sulfur-containing hetero ring}
71/0078 . . {containing only sulfur}
71/0084 . . . {Episulfides}
71/0089 . . {containing sulfur and oxygen}
71/0094 . . {containing sulfur and nitrogen}

73/00 Steroids in which the cyclopenta[a]hydrophenanthrene skeleton has been modified by substitution of one or two carbon atoms by hetero atoms
73/001 . {by one hetero atom}
73/003 . . {by oxygen as hetero atom}
73/005 . . {by nitrogen as hetero atom}
73/006 . . {by sulfur as hetero atom}
73/008 . {by two hetero atoms}

75/00 Processes for the preparation of steroids in general
75/005 . {Preparation of steroids by cyclization of non-steroid compounds}