

CPC COOPERATIVE PATENT CLASSIFICATION

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.

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}	Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing nitrogen	
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, coprostanane	41/00	Normal steroids containing one or more nitrogen atoms not belonging to a hetero ring
9/005	. {containing a carboxylic function directly attached or attached by a chain containing only carbon atoms to the cyclopenta[a]hydrophenanthrene skeleton}	41/0005	. {the nitrogen atom being directly linked to the cyclopenta(a)hydro phenanthrene skeleton}
11/00	Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 3	41/0011	. . {Unsubstituted amino radicals}
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)}	41/0016	. . {Oximes}
13/002	. {with double bond in position 13 (17)}	41/0022	. . {Isocyanates; Isothiocyanates}
13/005	. {with double bond in position 16 (17)}	41/0027	. . {Azides}
13/007	. {with double bond in position 17 (20)}	41/0033	. {not covered by C07J 41/0005}
15/00	Stereochemically pure steroids containing carbon, hydrogen, halogen or oxygen having a partially or totally inverted skeleton, e.g. retrosteroids, L-isomers	NOTE	
15/005	. {Retrosteroids (9 beta 10 alfa)}	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	
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)	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}
17/005	. {Glycosides}	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}
19/00	Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 by a lactone ring	41/005	. . {the 17-beta position being substituted by an uninterrupted chain of only two carbon atoms, e.g. pregnane derivatives}
19/005	. {Glycosides}	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}
21/00	Normal steroids containing carbon, hydrogen, halogen or oxygen having an oxygen-containing hetero ring spiro-condensed with the cyclopenta(a)hydrophenanthrene skeleton	41/0061	. . . {one of the carbon atoms being part of an amide group}
21/001	. {Lactones}	41/0066	. . {the 17-beta position being substituted by a carbon atom forming part of an amide group}
21/003	. . {at position 17}	41/0072	. . {the A ring of the steroid being aromatic}
21/005	. {Ketals}	41/0077	. . {substituted in position 11-beta by a carbon atom, further substituted by a group comprising at least one further carbon atom}
21/006	. . {at position 3}	41/0083	. . . {substituted in position 11-beta by an optionally substituted phenyl group not further condensed with other rings}
21/008	. . {at position 17}	41/0088	. . {containing unsubstituted amino radicals}
Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing sulfur		41/0094	. . {containing nitrile radicals, including thiocyanide radicals}
31/00	Normal steroids containing one or more sulfur atoms not belonging to a hetero ring	43/00	Normal steroids having a nitrogen-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton
31/003	. {the S atom directly linked to a ring carbon atom of the cyclopenta(a)hydrophenanthrene skeleton}	43/003	. {not condensed}
31/006	. {not covered by C07J 31/003}	43/006	. {spiro-condensed}
33/00	Normal steroids having a sulfur-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton	51/00	Normal steroids with unmodified cyclopenta(a)hydrophenanthrene skeleton not provided for in groups C07J 1/00 - C07J 43/00
33/002	. {not condensed}		
33/005	. {spiro-condensed}		
33/007	. . {Cyclic thioketals}		

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 carboxylic 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}