

**CPC****COOPERATIVE PATENT CLASSIFICATION****C07J****STERIODS**(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.

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

**C07J 1/00**

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

- C07J 1/0003 . {Androstane derivatives}
- C07J 1/0007 .. {not substituted in position 17}
- C07J 1/0011 .. {substituted in position 17 by a keto group}
- C07J 1/0014 .. {substituted in position 17 alfa, not substituted in position 17 beta}
- C07J 1/0018 .. {substituted in position 17 beta, not substituted in position 17 alfa}
- C07J 1/0022 ... {the substituent being an OH group free esterified or etherified}
- C07J 1/0025 .... {Esters}
- C07J 1/0029 .... {Ethers}
- C07J 1/0033 .. {substituted in position 17 alfa and 17 beta}
- C07J 1/0037 ... {the substituent in position 17 alfa being a saturated hydrocarbon group}
- C07J 1/004 ... {the substituent in position 17 alfa being an unsaturated hydrocarbon group}
- C07J 1/0044 .... {Alkenyl derivatives}
- C07J 1/0048 .... {Alkynyl derivatives}
- C07J 1/0051 . {Estrane derivatives}
- C07J 1/0055 .. {not substituted in position 17}
- C07J 1/0059 .. {substituted in position 17 by a keto group}
- C07J 1/0062 .. {substituted in position 17 alfa not substituted in position 17 beta}

C07J 1/0066	..	{substituted in position 17 beta not substituted in position 17 alfa}
C07J 1/007	...	{the substituent being an OH group free esterified or etherified}
C07J 1/0074	....	{Esters}
C07J 1/0077	....	{Ethers}
C07J 1/0081	..	{Substituted in position 17 alfa and 17 beta}
C07J 1/0085	...	{the substituent in position 17 alfa being a saturated hydrocarbon group}
C07J 1/0088	...	{the substituent in position 17 alfa being an unsaturated hydrocarbon group}
C07J 1/0092	....	{Alkenyl derivatives}
C07J 1/0096	....	{Alkynyl derivatives}
<b>C07J 3/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 beta by one carbon atom</b>	
C07J 3/005	.	{the carbon atom being part of a carboxylic function}
<b>C07J 5/00</b>	<b>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}</b>	
C07J 5/0007	.	{not substituted in position 17 alfa}
C07J 5/0015	..	{not substituted in position 16}
C07J 5/0023	..	{substituted in position 16}
C07J 5/003	...	{by a saturated or unsaturated hydrocarbon group including 16-alkylidene substitutes}
C07J 5/0038	....	{by an alkyl group}
C07J 5/0046	.	{substituted in position 17 alfa}
C07J 5/0053	..	{not substituted in position 16}
C07J 5/0061	..	{substituted in position 16}
C07J 5/0069	...	{by a saturated or unsaturated hydrocarbon group}
C07J 5/0076	....	{by an alkyl group}
C07J 5/0084	....	{by an alkylene group}
C07J 5/0092	...	{by an OH group free esterified or etherified}
<b>C07J 7/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen substituted in position 17 beta by a chain of two carbon atoms( <a href="#">C07J 5/00</a> takes precedence )</b>	
C07J 7/0005	.	{not substituted in position 21}
C07J 7/001	..	{substituted in position 20 by a keto group}
C07J 7/0015	...	{not substituted in position 17 alfa}
C07J 7/002	....	{not substituted in position 16}
C07J 7/0025	....	{substituted in position 16}
C07J 7/003	.....	{by a saturated or unsaturated hydrocarbon group}
C07J 7/0035	.....	{by a hydroxy group free esterified or etherified}
C07J 7/004	...	{substituted in position 17 alfa}
C07J 7/0045	....	{not substituted in position 16}

C07J 7/005	.... {substituted in position 16}
C07J 7/0055	..... {by a saturated or unsaturated hydrocarbon group}
C07J 7/006	..... {by a hydroxy group free esterified or etherified}
C07J 7/0065	.. {substituted in position 20 by an OH group free esterified or etherified}
C07J 7/007	... {not substituted in position 17 alfa}
C07J 7/0075	... {substituted in position 17 alfa}
C07J 7/008	. {substituted in position 21}
C07J 7/0085	.. {by an halogen atom}
C07J 7/009	.. {by only one oxygen atom doubly bound}
C07J 7/0095	.. {carbon in position 21 is part of carboxylic group}
<b>C07J 9/00</b>	<b>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</b>
C07J 9/005	. {containing a carboxylic function directly attached or attached by a chain containing only carbon atoms to the cyclopenta[a]hydrophenanthrene skeleton}
<b>C07J 11/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 3</b>
<b>C07J 13/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen having a carbon-to-carbon double bond from or to position 17{( for carbonyl groups <a href="#">C07J 1/00</a> )}</b>
C07J 13/002	. {with double bond in position 13 (17)}
C07J 13/005	. {with double bond in position 16 (17)}
C07J 13/007	. {with double bond in position 17 (20)}
<b>C07J 15/00</b>	<b>Stereochemically pure steroids containing carbon, hydrogen, halogen or oxygen having a partially or totally inverted skeleton, e.g. retrosteroids, L-isomers</b>
C07J 15/005	. {Retrosteroids (9 beta 10 alfa)}
<b>C07J 17/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen, having an oxygen-containing hetero ring not condensed with the cyclopenta(a)hydrophenanthrene skeleton( <a href="#">cardanolide</a>, <a href="#">bufanolide</a> <a href="#">C07J 19/00</a> )</b>
C07J 17/005	. {Glycosides}
<b>C07J 19/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 by a lactone ring</b>
C07J 19/005	. {Glycosides}
<b>C07J 21/00</b>	<b>Normal steroids containing carbon, hydrogen, halogen or oxygen having an oxygen-containing hetero ring spiro-condensed with the cyclopenta(a)hydrophenanthrene skeleton</b>
C07J 21/001	. {Lactones}
C07J 21/003	.. {at position 17}
C07J 21/005	. {Ketals}
C07J 21/006	.. {at position 3}

C07J 21/008 . . {at position 17}

**Guidance heading:** Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing sulfur

**C07J 31/00** Normal steroids containing one or more sulfur atoms not belonging to a hetero ring

C07J 31/003 . {the S atom directly linked to a ring carbon atom of the cyclopenta(a)hydrophenanthrene skeleton}

C07J 31/006 . { not covered by [C07J 31/003](#) }

**C07J 33/00** Normal steroids having a sulfur-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton

C07J 33/002 . {not condensed}

C07J 33/005 . {spiro-condensed}

C07J 33/007 . . {Cyclic thioketals}

**Guidance heading:** Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing nitrogen

**C07J 41/00** Normal steroids containing one or more nitrogen atoms not belonging to a hetero ring

C07J 41/0005 . {the nitrogen atom being directly linked to the cyclopenta(a)hydro phenanthrene skeleton}

C07J 41/0011 . . {Unsubstituted amino radicals}

C07J 41/0016 . . {Oximes}

C07J 41/0022 . . {Isocyanates; Isothiocyanates}

C07J 41/0027 . . {Azides}

C07J 41/0033 . { not covered by [C07J 41/0005](#) }

**NOTE**

In groups [C07J 41/0038](#) to [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

C07J 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}

C07J 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}

C07J 41/005 . . {the 17-beta position being substituted by an uninterrupted chain of only two carbon atoms, e.g. pregnane derivatives}

C07J 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}

C07J 41/0061	...	{one of the carbon atoms being part of an amide group}
C07J 41/0066	..	{the 17-beta position being substituted by a carbon atom forming part of an amide group}
C07J 41/0072	..	{the A ring of the steroid being aromatic}
C07J 41/0077	..	{substituted in position 11-beta by a carbon atom, further substituted by a group comprising at least one further carbon atom}
C07J 41/0083	...	{substituted in position 11-beta by an optionally substituted phenyl group not further condensed with other rings}
C07J 41/0088	..	{containing unsubstituted amino radicals}
C07J 41/0094	..	{containing nitrile radicals, including thiocyanide radicals}
<b>C07J 43/00</b>	<b>Normal steroids having a nitrogen-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton</b>	
C07J 43/003	.	{not condensed}
C07J 43/006	.	{spiro-condensed}
<b>C07J 51/00</b>	<b>Normal steroids with unmodified cyclopenta(a)hydrophenanthrene skeleton not provided for in groups <a href="#">C07J 1/00</a> to <a href="#">C07J 43/00</a></b>	
<b>C07J 53/00</b>	<b>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}</b>	
C07J 53/001	.	{spiro-linked}
C07J 53/002	.	{Carbocyclic rings fused}
C07J 53/004	..	{3 membered carbocyclic rings}
C07J 53/005	...	{in position 12}
C07J 53/007	...	{in position 6-7}
C07J 53/008	...	{in position 15/16}
<b>Guidance heading:</b>	<b><u>Nor- or homo steroids</u></b>	
<b>C07J 61/00</b>	<b>Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of only one ring by one or two atoms</b>	
<b>C07J 63/00</b>	<b>Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of only one ring by one or two atoms</b>	
C07J 63/002	.	{Expansion of ring A by one atom, e.g. A homo steroids}
C07J 63/004	.	{Expansion of ring B by one atom, e.g. B homo steroids}
C07J 63/006	.	{Expansion of ring C by one atom, e.g. C homo steroids}
C07J 63/008	.	{Expansion of ring D by one atom, e.g. D homo steroids}
<b>C07J 65/00</b>	<b>Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of two rings, each by one atom</b>	

<b>C07J 67/00</b>	<b>Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of two rings, each by one atom</b>
<b>C07J 69/00</b>	<b>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</b>
<b>C07J 71/00</b>	<b>Steroids in which the cyclopenta(a)hydrophenanthrene skeleton is condensed with a heterocyclic ring( <a href="#">spiro-condensed heterocyclic rings C07J 21/00</a> , <a href="#">C07J 33/00</a> , <a href="#">C07J 43/00</a> )</b>
C07J 71/0005	. {Oxygen-containing hetero ring}
C07J 71/001	.. {Oxiranes}
C07J 71/0015	... {at position 9(11)}
C07J 71/0021	... {at position 14(15)}
C07J 71/0026	.. {cyclic ketals}
C07J 71/0031	... {at positions 16, 17}
C07J 71/0036	. {Nitrogen-containing hetero ring}
C07J 71/0042	.. {Nitrogen only}
C07J 71/0047	... {at position 2(3)}
C07J 71/0052	... {at position 16(17)}
C07J 71/0057	.. {Nitrogen and oxygen}
C07J 71/0063	... {at position 2(3)}
C07J 71/0068	... {at position 16(17)}
C07J 71/0073	. {Sulfur-containing hetero ring}
C07J 71/0078	.. {containing only sulfur}
C07J 71/0084	... {Episulfides}
C07J 71/0089	.. {containing sulfur and oxygen}
C07J 71/0094	.. {containing sulfur and nitrogen}
<b>C07J 73/00</b>	<b>Steroids in which the cyclopenta[a]hydrophenanthrene skeleton has been modified by substitution of one or two carbon atoms by hetero atoms</b>
C07J 73/001	. {by one hetero atom}
C07J 73/003	.. {by oxygen as hetero atom}
C07J 73/005	.. {by nitrogen as hetero atom}
C07J 73/006	.. {by sulfur as hetero atom}
C07J 73/008	. {by two hetero atoms}
<b>C07J 75/00</b>	<b>Processes for the preparation of steroids in general</b>
C07J 75/005	. {Preparation of steroids by cyclization of non-steroid compounds}