

International Nonproprietary Names (INN) for pharmaceutical substances

Names for radicals, groups & others
Comprehensive list

2012



International Nonproprietary Names (INN) Programme
Quality and Safety: Medicines
Essential Medicines and Health Products

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International Nonproprietary Names (INN) for pharmaceutical substances. Names for radicals, groups & others: comprehensive list

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Printed by the WHO Document Production Services, Geneva, Switzerland

WHO'S INN PROGRAMME

GENERAL INFORMATION

The World Health Organization (WHO) has a constitutional responsibility to "develop, establish and promote international standards with respect to biological, pharmaceutical and similar products". The International Nonproprietary Names (INN) Programme is a core activity embedded in the normative functions of WHO and has served the global public health and medicines community for over sixty years. The Programme was established to assign nonproprietary names to pharmaceutical substances so that each substance would be recognized by a unique name. Such names are needed for the clear identification, safe prescription and dispensing of medicines, and for communication and exchange of information among health professionals. INNs can be used freely because they are in the public domain. In addition to being a basic component of many WHO medicines activities and programmes, INNs are used in regulatory and administrative processes in many countries. They are also intended for use in pharmacopoeias, labelling, and product information and to provide standardized terminology for the international exchange of scientific information.

INN SELECTION PROCEDURE

Each name proposed for designation as an INN is examined and selected in accordance with a formal procedure. Requests for INNs can be submitted directly to WHO (application forms online at <http://www.who.int/medicines/services/inn/en/>). In some countries where national nomenclature commissions exist, applications may also be made through the national nomenclature authority.

The INN Expert Group, consisting of selected members of the WHO Expert Panel on the International Pharmacopoeia and Pharmaceutical Preparations is officially designated to select nonproprietary names. Based on the information provided, an agreed name is selected and published as a **proposed** INN. During a four month period, any person can make comments or lodge a formal objection to the proposed name. If no objection is raised, this agreed name is published as the **recommended** INN.

In 1993, the World Health Assembly endorsed resolution WHA46.19 which states that trade marks should not be derived from INNs and INN stems should not be used in trade marks. The Assembly reasoned that such practice could frustrate the rational selection of INNs and ultimately compromise the safety of patients by promoting confusion in drug nomenclature. Above all, INNs are protected for use in the public domain.

CRITERIA FOR SELECTION OF INN

International Nonproprietary Names (INN) should be distinctive in sound and spelling. They should not be inconveniently long and not be liable to confusion with names in common use.

In addition, certain rules have been established in devising INNs to facilitate their use internationally. For example, to make pronunciation possible in various languages, the letters "h" and "k" should be avoided; "e" should be used instead of "ae" and "oe", "i" instead of "y", "t" instead of "th" and "f" instead of "ph".

Information on transliteration of Greek letters in English, French and Spanish is given in Annex 2 and on standardization of the Spanish version of INN in Annex 3.

Further information on the selection procedure and general principles in devising INNs may be found in the “Guidelines on the Use of International Nonproprietary Names (INNs) for Pharmaceutical Substances” (WHO/PHARM S/NOM 1570) available on the INN Programme website at: <http://www.who.int/medicines/services/inn/publication/en/index.html>.

INN STEMS

Stems define the pharmacologically related group to which the INN belongs. Whenever possible, an INN includes the "common stem" expressing the pharmacologically-related group. Names that are likely to convey an anatomical, physiological, pathological or therapeutic suggestion are avoided.

For further details on stems, please refer to "*The use of stems in the selection of International Nonproprietary Names (INN) for pharmaceutical substances*" (WHO/EMP/QSM/2011.3), which can be downloaded from the INN Programme website:

<http://www.who.int/medicines/services/inn/en/>

NAMES FOR RADICALS AND GROUPS

As a general rule, since 1975 INNs are selected for the active moiety of pharmaceutical substances. In the case of INNs of salts and esters it is left to the user to devise their names from the INN in conformity with normal chemical practice. Separate names for salts and esters derived from this procedure are not published. The same approach should be followed in the case of combination products. In all those situations, names are referred to as International Nonproprietary Name Modified INN.

Some of the radicals and groups involved are, however, of such complexity that, shorter nonproprietary names are selected for these inactive moieties, and published in proposed lists under the title "names for radicals and groups". If a "radical and group name" is used in conjunction with an INN, it is also referred to as an INN.

In some cases, a name of an INN Radical describes more than one substituent, e.g. (names in Latin) *acefuras*, *aceponas*, *enbutas*, *stinopras*,... Alphabetical list of currently used names for radicals and groups is given in the main part of the document, while the names of elements and chemical groups that were published together with INNs are given in Annex 1.

For further details on the INN, please refer to the INN Working Document 05.167/3 "*International Nonproprietary Names Modified*" which can be downloaded from the INN Programme website.

INFORMATION ON NAMES USED FOR SPECIFIC GROUPS OF SUBSTANCES

For a few groups of substances containing certain structural features, INNs are selected using particular approaches. Designations used in such INNs are listed in Annex 4. INNs for substances that include a carrier moiety are usually given a two-word name, describing separately the active element and the carrier part. Designations used for toxins (either active or inactivated proteins) are listed in Annex 4.1. Particular designations selected for other types of active moieties and relevant INNs are listed in Annex 4.2. It should be noted that these lists are not comprehensive. INNs for modified insulins include, as a second word, a qualifier indicating to modifications introduced into the amino acid chain. These insulin qualifiers are listed in Annex 4.3. INNs for substances that contain as the carrier a polyoxyethylene polymeric chain are given either a prefix *peg-* or a two-word INN, using "*pegol*" as the second word. The list of INNs containing such structures and an explanatory note is given in Annex 5.

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Acknowledgements

The INN Secretariat wishes to express its gratitude to Dr R. Boudet-Dalbin, France, to Dr G. Moss, United Kingdom, and to Professor H. Favre, Canada, for their assistance in the preparation of this document. A special thank goes to Mrs E. Cortés, Spain, for review and correction of the Spanish chemical definitions.

Reference to publications containing proposed Lists of INN:**List no. and reference**

1 *Chron. Wld Hlth Org.* 7: 299 (1953)
2 *Chron. Wld Hlth Org.* 8: 216 (1954)
3 *Chron. Wld Hlth Org.* 8: 313 (1954)
4 *Chron. Wld Hlth Org.* 10: 28 (1956)
5 *Chron. Wld Hlth Org.* 11: 231 (1957)
6 *Chron. Wld Hlth Org.* 12: 102 (1958)
7 *WHO chronicle* 13: 105 (1959)
8 *WHO chronicle* 13: 152 (1959)
9 *WHO chronicle* 14: 168 (1960)
10 *WHO chronicle* 14: 244 (1960)
11 *WHO chronicle* 15: 314 (1961)
12 *WHO chronicle* 16: 385 (1962)
13 *WHO chronicle* 17: 389 (1963)
14 *WHO chronicle* 18: 433 (1964)
15 *WHO chronicle* 19: 446 (1965)
16 *WHO chronicle* 20: 216 (1966)
17 *WHO chronicle* 21: 70 (1967)
18 *WHO chronicle* 21: 478 (1967)
19 *WHO chronicle* 22: 112 (1968)
20 *WHO chronicle* 22: 407 (1968)
21 *WHO chronicle* 23: 183 (1969)
22 *WHO chronicle* 23: 418 (1969)
23 *WHO chronicle* 24: 119 (1970)
24 *WHO chronicle* 24: 413 (1970)
25 *WHO chronicle* 25: 123 (1971)
26 *WHO chronicle* 25: 415 (1971)
27 *WHO chronicle* 26: 121 (1972)
28 *WHO chronicle* 26: 414 (1972)
29 *WHO chronicle* 27: 120 (1973)
30 *WHO chronicle* 27: 380 (1973)
31 *WHO chronicle* 28: 133 (1974)
32 *WHO chronicle* 28: No. 9, suppl. (1974)
33 *WHO chronicle* 29: No. 3, suppl. (1975)
34 *WHO chronicle* 29: No. 9, suppl. (1975)
35 *WHO chronicle* 30: No. 3, suppl. (1976)
36 *WHO chronicle* 30: No. 9, suppl. (1976)
37 *WHO chronicle* 31: No. 3, suppl. (1977)
38 *WHO chronicle* 31: No. 9, suppl. (1977)
39 *WHO chronicle* 32: No. 3, suppl. (1978)
40 *WHO chronicle* 32: No. 9, suppl. (1978)
41 *WHO chronicle* 33: No. 3, suppl. (1979)
42 *WHO chronicle* 33: No. 9, suppl. (1979)
43 *WHO chronicle* 34: No. 3, suppl. (1980)
44 *WHO chronicle* 34: No. 9, suppl. (1980)
45 *WHO chronicle* 35: No. 3, suppl. (1981)

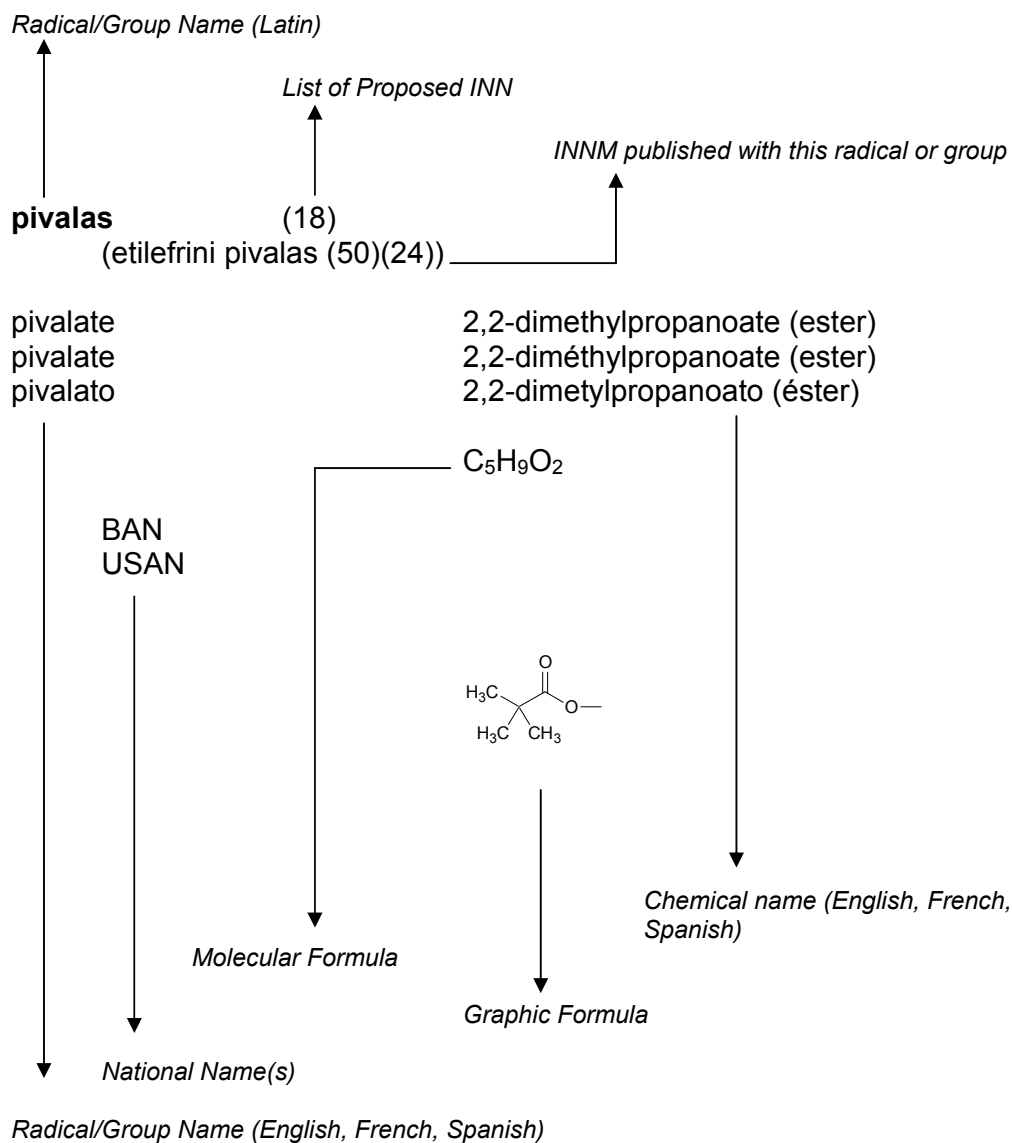
List no. and reference

46 *WHO chronicle* 35: No. 5, suppl. (1981)
47 *WHO chronicle* 36: No. 2, suppl. (1982)
48 *WHO chronicle* 36: No. 5, suppl. (1982)
49 *WHO chronicle* 37: No. 2, suppl. (1983)
50 *WHO chronicle* 37: No. 5, suppl. (1983)
51 *WHO chronicle* 38: No. 2 suppl. (1984)
52 *WHO chronicle* 38: No. 4, suppl. (1984)
53 *WHO chronicle* 39: No. 1, suppl. (1985)
54 *WHO chronicle* 39: No. 4, suppl. (1985)
55 *WHO chronicle* 40: No. 1, suppl. (1986)
56 *WHO chronicle* 40: No. 5, suppl. (1986)
57 *WHO drug information* 1: No. 2 (1987)
58 *WHO drug information* 1: No. 3 (1987)
59 *WHO drug information* 2: No. 2 (1988)
60 *WHO drug information* 2: No. 4 (1988)
61 *WHO drug information* 3: No. 2 (1989)
62 *WHO drug information* 3: No. 4 (1989)
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68 *WHO drug information* 6: No. 4 (1992)
69 *WHO drug information* 7: No. 2 (1993)
70 *WHO drug information* 7: No. 4 (1993)
71 *WHO drug information* 8: No. 2 (1994)
72 *WHO drug information* 8: No. 4 (1994)
73 *WHO drug information* 9: No. 2 (1995)
74 *WHO drug information* 9: No. 4 (1995)
75 *WHO drug information* 10: No. 2 (1996)
76 *WHO drug information* 10: No. 4 (1996)
77 *WHO drug information* 11: No. 2 (1997)
78 *WHO drug information* 11: No. 4 (1997)
79 *WHO drug information* 12: No. 2 (1998)
80 *WHO drug information* 12: No. 4 (1998)
81 *WHO drug information* 13: No. 2 (1999)
82 *WHO drug information* 13: No. 4 (1999)
83 *WHO drug information* 14: No. 2 (2000)
84 *WHO drug information* 14: No. 4 (2000)
85 *WHO drug information* 15: No. 2 (2001)
86 *WHO drug information* 16: No. 1 (2002)
87 *WHO drug information* 16: No. 2 (2002)
88 *WHO drug information* 17: No. 1 (2003)
89 *WHO drug information* 17: No. 3 (2003)
90 *WHO drug information* 18: No. 1 (2004)

List no. and reference

- 91 *WHO drug information* 18: No. 2 (2004)
- 92 *WHO drug information* 18: No. 4 (2004)
- 93 *WHO drug information* 19: No. 2 (2005)
- 94 *WHO drug information* 19: No. 4 (2005)
- 95 *WHO drug information* 20: No. 2 (2006)
- 96 *WHO drug information* 20: No. 4 (2006)
- 97 *WHO drug information* 21: No. 2 (2007)
- 98 *WHO drug information* 21: No. 4 (2007)
- 99 *WHO drug information* 22: No. 2 (2008)
- 100 *WHO drug information* 22: No. 4 (2008)
- 101 *WHO drug information* 23: No. 2 (2009)
- 102 *WHO drug information* 23: No. 4 (2009)
- 103 *WHO drug information* 24: No. 2 (2010)
- 104 *WHO drug information* 24: No. 4 (2010)
- 105 *WHO drug information* 25: No. 2 (2011)
- 106 *WHO drug information* 25: No. 4 (2011)
- 107 *WHO drug information* 26: No. 2 (2012)

Layout of information



INNs: Names for radicals and groups

Comprehensive list

Explanatory Note

Some substances for which a proposed International Nonproprietary Name has been established for the active moiety may be used in the form of salts or esters and their names are devised from the INN in conformity with normal chemical practice. However, in some cases, the radicals or groups involved may be of complex composition and it is then inconvenient to refer to them in systematic chemical nomenclature. Consequently, shorter nonproprietary names for some radicals and groups have been devised or selected, and they are suggested for use with the proposed nonproprietary names.

The following list contains radicals and groups which have been published either in the section "Names for radicals and groups" in lists 1-107 of proposed INN or as part of a two-word INN in lists 1-107 of proposed and 1-68 of recommended INN, respectively. Whenever a name appeared in both lists, reference is made to its publication only in the category "radicals and groups".

Other groups and elements which have been published in two-word INN and which may now be considered as being part of the INN (modified INN) approach are listed in ANNEX 1 of this document.

In addition, references to British Approved Name (BAN)¹, Japanese Accepted Name (JAN)² and United States Adopted Name (USAN)³ have been included for the radicals, groups and adducts published or accepted for use by these national nomenclature committees.

¹ British Approved Names 2012, Names for ions and Groups, effective date: 1 January 2012

² Japanese Accepted Names for Pharmaceuticals (JAN), last update: 18 June 2012 at :

<http://moldb.nihs.go.jp/jan/index.aspx>

³ "USP Dictionary of USAN and International Drug names", 2012 "Organic moieties, Counterions and Solvent Molecules Used in Coining Two-Word Names", , USAN Program, <http://www.ama-assn.org/resources/doc/usan/radicals-and-anions-list.pdf> consulted July 2012

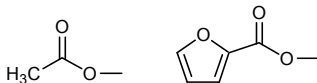
<i>Latin name</i>	
<i>English name</i>	<i>chemical name</i>
<i>Dénomination en français</i>	<i>molecular formula</i>
<i>Denominación en español</i>	<i>graphic formula</i>
	<i>(published as INN (Proposed list number)(Recommended list number))</i>

acefuras

(dexamethasoni acefuras (57)(27))

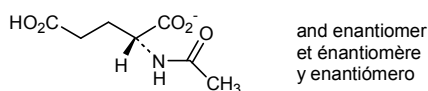
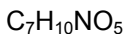
acefurate	acetate (ester), furan-2-carboxylate (ester)
acéfurate	acétate (ester), furane-2-carboxylate (ester)
acefurato	acetato (éster), furano-2-carboxilato (éster)

USAN

**aceglumas**

(deanoli aceglumas (15)(!))

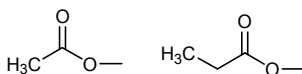
aceglumate	hydrogen <i>rac</i> - <i>N</i> -acetylglutamate
acéglumate	hydrogène <i>rac</i> - <i>N</i> -acétylglutamate
aceglumato	hidrógeno <i>rac</i> - <i>N</i> -acetilglutamato

**aceponas**

(methylprednisoloni aceponas (52)(25))

(hydrocortisoni aceponas (54)(26))

aceponate	acetate (ester), propanoate (ester)
acéponate	acétate (ester), propanoate (ester)
aceponato	acetato (éster), propanoato (éster)



acetonidum

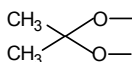
(fluocinoloni acetonidum (11)(05))

(flucloroloni acetonidum (22)(10))

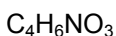
acetonide propane-2,2-diylbis(oxy)
 acétonide propane-2,2-diylbis(oxy)
 acetónido propano-2,2-diilbis(oxi)



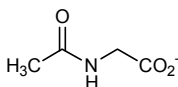
BAN
 JAN
 USAN

**aceturas** (22)

aceturate *N*-acetylglycinate
 acétureate *N*-acétylglycinate
 aceturato *N*-acetilglicinato

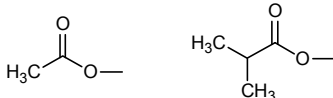
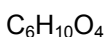


BAN
 USAN

**acibutas**

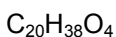
(betamethasoni acibutas (26)(12))

acibutate acetate (ester), 2-methylpropanoate (ester)
 acibutate acétate (ester), 2-méthylpropanoate (ester)
 acibutato acetato (éster), 2-metilpropanoato (éster)

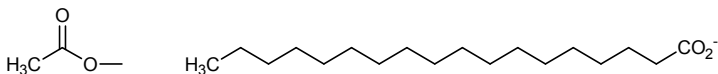
**acistras** (64)

(erythromycini acistras (53)(25))

acistrate acetate (ester), octadecanoate (salt)
 acistrate acétate (ester), octadécanoate (sel)
 acistrato acetato (éster), octadecanoato (sal)



USAN

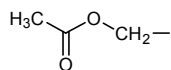


acoxilum (67)

acoxil (acetyloxy)methyl
 acoxil (acétyloxy)méthyle
 acoxilo (acetiloxi)metilo

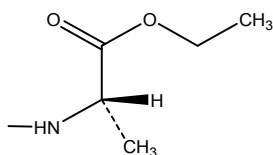
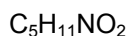


JAN
 USAN

**alanetilum**

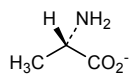
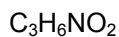
(managlinatum dialanetilum (97)(58))

alanetil [(S)-1-ethoxy-1-oxo-propan-2-yl]amino
 alanétil [(S)-1-éthoxy-1-oxo-propan-2-yl]amino
 alanetilo [(S)-1-etoxi-1-oxo-propan-2-il]amino

**alaninas**

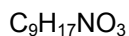
(alaninati brivanibum (97)(59))

alaninate L-alaninate
 alaninate L-alaninate
 alaninato L-alaninato

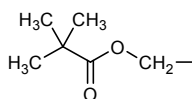
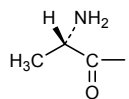
**alapivoxilum**

(ceftizoximum alapivoxilum (77)(39))

alapivoxil L-alanyl, [(2,2-dimethylpropanoyl)oxy]methyl
 alapivoxil L-alanyle, [(2,2-diméthylpropanoyl)oxy]méthyle
 alapivoxilo L-alanilo, [(2,2-dimetilpropano)oxi]metilo



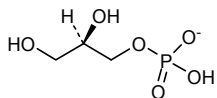
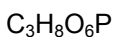
JAN



alfosceras

(cholini alfosceras (60)(29))

alfoscerate (2*R*)-2,3-dihydroxypropyl hydrogen phosphate
 alfoscérate hydrogénophosphate de (2*R*)-2,3-dihydroxypropyle
 alfoscerato hidrógenofosfato de (2*R*)-2,3-dihidroxiopropilo

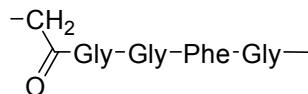
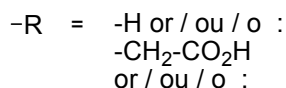
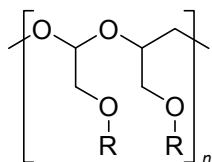
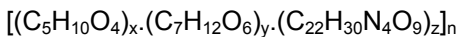
**alideximerum**

(exatecanum alideximerum (89)(51))

alideximer poly([oxy(2-hydroxyethane-1,1-diyl)]{oxy[1-(hydroxymethyl)ethane-1,2-diyl]}) partly O-etherified with carboxymethyl groups with some carboxy groups amide linked to the tetrapeptide residue (glyglyglycyl-L-phenylalanylglycyl)

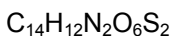
alideximer poly([oxy(2-hydroxyéthane-1,1-diyl)]{oxy[1-(hydroxyméthyl)éthane-1,2-diyl]}) partiellement O-éthérifié avec le groupe carboxyméthyle avec quelques groupes carboxamides liés au tétrapeptide (glyglyglycyl-L-phénylalanylglycyl)

alidexímero poli([oxi(2-hidroxietano-1,1-diil)]{oxi[1-(hidroximetil)etano-1,2-diil]}) parcialmente O-eterificado con grupos carboximetilo con algunos grupos carboxamida unidos al tetrapéptido (glicilglicil-L-fenilalanilglicilglicil)

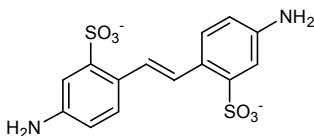
**amsonas** (18)

(chlorphenoctii amsonas (08)(04))

amsonate 2,2'-ethene-1,2-diylbis(5-aminobenzene-1-sulfonate)
 amsonate 2,2'-éthène-1,2-diylbis(5-aminobenzène-1-sulfonate)
 amsonato 2,2'-eteno-1,2-diilbis(5-aminobenceno-1-sulfonato)



BAN

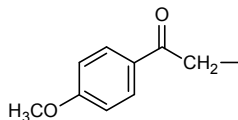


anisatylum (76)

anisatil 2-(4-methoxyphenyl)-2-oxoethyl
 anisatil 2-(4-méthoxyphényl)-2-oxoéthyle
 anisatilo 2-(4-metoxifenil)-2-oxoetilo

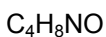
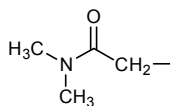


USAN

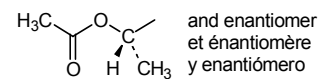
**arbamelum**

(tilnoprofenum arbamelum (74)(36))

arbamel 2-(dimethylamino)-2-oxoethyl
 arbamel 2-(diméthylamino)-2-oxoéthyle
 arbamel 2-(dimetilamino)-2-oxoetilo

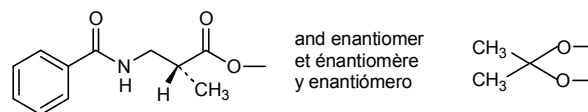
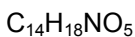
JAN
USAN**axetilum** (48)

axetil *rac*-1-(acetyloxy)ethyl
 axétíl *rac*-1-(acétyloxy)éthyle
 axetilo *rac*-1-(acetiloxi)etilo

BAN
JAN
USAN**benetonidum**

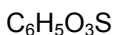
(triamcinoloni benetonidum (36)(17))

benetonide *rac*-*N*-benzoyl-2-methyl-β-alanine (ester), propane-
2,2-diylbis(oxy)
 bénétonide *rac*-3-(benzoylamino)-2-méthylpropanoate (ester), propane-
2,2-diylbis(oxy)
 benetónido *rac*-3-(benzoilamino)-2-metilpropanoato (éster), propano-
2,2-diilbis(oxi)

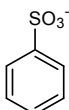


besilas (22)
 (atracurii besilas (42)(20))
 (cisatracurii besilas (73)(36))
 (nolpitantii besilas (75)(37))

besilate benzenesulfonate
 bésilate benzènesulfonate
 besilato bencenosulfonato

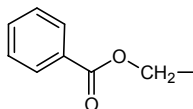


BAN
 JAN
 USAN: besylate



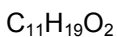
bezomilum (62)

bezomil (benzoyloxy)methyl
 bézomil (benzoyloxy)méthyle
 bezomilo (benzoiloxi)metilo

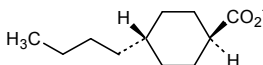


buciclas (66)

bucilate *trans*-4-butylcyclohexanecarboxylate
 buciate *trans*-4-butylcyclohexanecarboxylate
 buciato *trans*-4-butilciclohexanocarboxilato

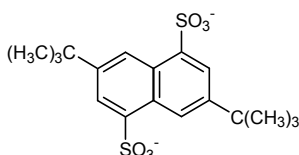
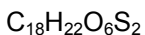


USAN



bunapsilas (24)

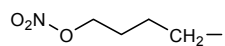
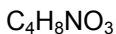
bunapsilate 3,7-di-*tert*-butyl-naphthalene-1,5-disulfonate
 bunapsilate 3,7-di-*tert*-butyl-naphtalène-1,5-disulfonate
 bunapsilato 3,7-di-*terc*-butilnaftaleno-1,5-disulfonato



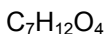
bunodum

(latanoprostenum bunodum (107))

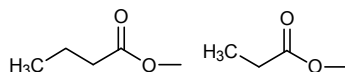
bunod 4-(nitrooxy)butyl
 bunod 4-(nitrooxy)butyl
 bunod 4-(nitrooxi)butil

**butepras** (61)

buteprate butanoate (ester), propanoate (ester)
 butéprate butanoate (ester), propanoate (ester)
 buteprato butanoato (éster), propanoato (éster)



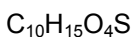
USAN: probutate

**camsilas** (18)

(trimetaphani camsilas (06)(03))

(amoxydrimini camsilas (15)(06))

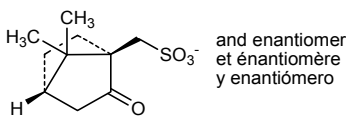
camsilate *rac*-(7,7-dimethyl-2-oxobicyclo[2.2.1]heptan-1-yl)methanesulfonate
 camsilate *rac*-(7,7-diméthyl-2-oxobicyclo[2.2.1]heptan-1-yl)méthanesulfonate
 camsilato *rac*-(7,7-dimetil-2-oxobiciclo[2.2.1]heptan-1-il)metanosulfonato



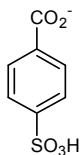
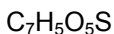
BAN

JAN

USAN: camsylate

**carbesilas** (35)

carbesilate 4-sulfobenzoate
 carbésilate 4-sulfobenzoate
 carbesilato 4-sulfobenzoato

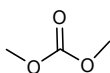


carbonas

(Iodenafili carbonas (94)(56))

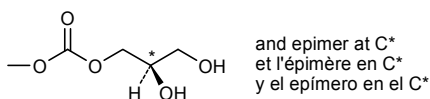
carbonate carbonate (ester)
 carbonate carbonate (ester)
 carbonato carbonato (éster)

JAN

CO₃**ceribas**

(paclitaxelum ceribas (92)(53))

ceribate *rac*-2,3-dihydroxypropyl carbonate (ester)
 céribate carbonate de *rac*-2,3-dihydroxypropyle (ester)
 ceribato carbonato de *rac*-2,3-dihidroxi-propilo (éster)

C₄H₇O₅**ciclotas** (28)

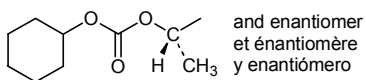
ciclotate 4-methylbicyclo[2.2.2]oct-2-ene-1-carboxylate
 ciclotate 4-méthylbicyclo[2.2.2]oct-2-ène-1-carboxylate
 ciclotato 4-metilbicyclo[2.2.2]oct-2-eno-1-carboxilato

USAN: cyclotate

C₁₀H₁₃O₂**cilexetilum** (73)

cilexetil *rac*-1-[(cyclohexyloxy)carbonyl]oxyethyl
 cilexétíl *rac*-1-[(cyclohexyloxy)carbonyl]oxy]éthyle
 cilexetilo *rac*-1-[(ciclohexiloxi)carbonil]oxi]etilo

BAN
 JAN
 USAN

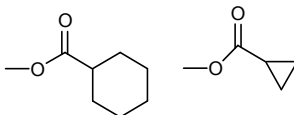
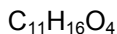
C₉H₁₅O₃

cipecilatium

(dexamethasoni cipecilas (94)(56))

cipecilate cyclohexanecarboxylate (ester), cyclopropanecarboxylate (ester)
 cipéçilate cyclohexanecarboxylate (ester), cyclopropanecarboxylate (ester)
 cipecilato ciclohexanocarboxilato (éster), ciclopropanocarboxilato (éster)

JAN

**cipionas** (18)

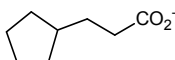
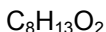
(oxaboloni cipionas (14)(06))

cipionate 3-cyclopentylpropanoate
 cipionate 3-cyclopentylpropanoate
 cipionato 3-ciclopentilpropanoato

BAN

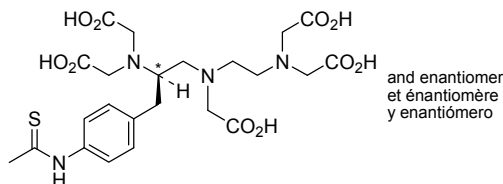
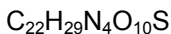
JAN

USAN: cypionate

**cituxetanum**

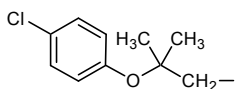
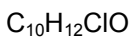
(epitumomabum cituxetanum (89)(51))

cituxetan *rac-N*-(4-{2-[bis(carboxymethyl)amino]-3-({2-[bis(carboxymethyl)amino]ethyl}(carboxymethyl)=aminopropyl}phenyl)thiocarbamoyl
 cituxétan *rac-N*-(4-{2-[bis(carboxyméthyl)amino]-3-({2-[bis(carboxyméthyl)amino]éthyl}(carboxyméthyl)=aminopropyl}phényl)thiocarbamoyle
 cituxetán *rac-N*-(4-{2-[bis(carboximetil)amino]-3-({2-[bis(carboximetil)=amino]etil}(carboximetil)aminopropil}fenil)tiocarbamoilo

**clofibrolum**

(acefyllinum clofibrolum (44)(22))

clofibrol 2-(4-chlorophenoxy)-2-methylpropyl
 clofibrol 2-(4-chlorophénoxy)-2-méthylpropyle
 clofibrol 2-(4-clorofenoxi)-2-metilpropilo

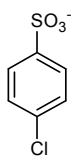


closilas (18)
(thenii closilas (12)(05))

closilate 4-chlorobenzene-1-sulfonate
 closilate 4-chlorobenzène-1-sulfonate
 closilato 4-clorobenceno-1-sulfonato

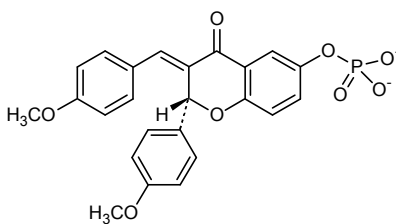
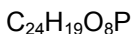


BAN
USAN: closylate



crobefas (61)

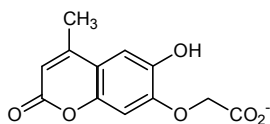
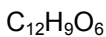
crobefate *rac*-(3*E*)-3-[(4-methoxyphenyl)methylidene]-
 2-(4-methoxyphenyl)-4-oxochroman-6-yl phosphate(2-)
 crobéfate phosphate(2-) de *rac*-(3*E*)-3-[(4-méthoxyphényl)méthylidène]-
 2-(4-méthoxyphényl)-4-oxochroman-6-yle
 crobefato fosfato(2-) de *rac*-(3*E*)-3-[(4-metoxifenil)metilideno]-
 2-(4-metoxifenil)-4-oxocroman-6-ilo



and enantiomer
et énantiomère
y enantiómero

cromacas (22)

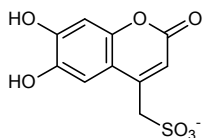
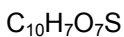
cromacate 2-[(6-hydroxy-4-methyl-2-oxo-2*H*-chromen-7-yl)oxy]acetate
 cromacate 2-[(6-hydroxy-4-méthyl-2-oxo-2*H*-chromén-7-yl)oxy]acétate
 cromacato 2-[(6-hidroxi-4-metil-2-oxo-2*H*-cromen-7-il)oxi]acetato



chromesilas (22)

chromesilate (6,7-dihydroxy-2-oxo-2*H*-chromen-4-yl)methanesulfonate
 cromésilate (6,7-dihydroxy-2-oxo-2*H*-chromén-4-yl)méthanesulfonate
 cromesilato (6,7-dihidroxi-2-oxo-2*H*-cromen-4-il)metanosulfonato

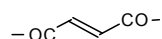
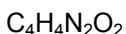
BAN

**crosumarilum**

(hemoglobinum crosumarilum (76)(38))

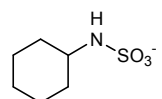
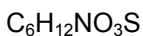
crosumaril (2*E*)-but-2-enedioyl
 crosumaril (2*E*)-but-2-ènedioyle
 crosumarilo (2*E*)-but-2-enodioilo

USAN

**cyclamas**

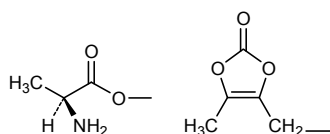
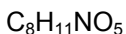
(aminophenazoni cyclamas (16)(!))
 (natrii cyclamas (01)(01))

cyclamate cyclohexylsulfamate
 cyclamate cyclohexylsulfamate
 ciclamato ciclohexilsulfamato

**daloxatum**

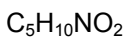
(cefcanelum daloxatum (59)(29))

daloxate L-alaninate (ester), (5-methyl-2-oxo-1,3-dioxol-4-yl)methyl
 daloxate L-alaninate (ester), (5-méthyl-2-oxo-1,3-dioxol-4-yl)méthyle
 daloxato L-alaninato (éster), (5-metil-2-oxo-1,3-dioxol-4-il)metilo

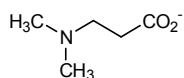


daropas (74)

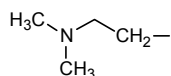
daropate 3-(dimethylamino)propanoate
 daropate 3-(diméthylamino)propanoate
 daropato 3-(dimetilamino)propanoato



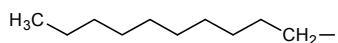
JAN
 USAN: dapropate

**deanil** (40)

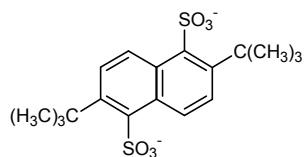
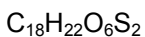
deanil 2-(dimethylamino)ethyl
 déanil 2-(diméthylamino)éthyle
 déanilo 2-(dimetilamino)etilo

**decil** (40)

decil decyl
 décil décyle
 decilo decilo

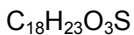
**dibudinas** (25)

dibudinate 2,6-di-*tert*-butylnaphthalene-1,5-disulfonate
 dibudinate 2,6-bis(1,1-diméthyléthyl)naphtalène-1,5-disulfonate
 dibudinato 2,6-di-*terc*-butilnaftaleno-1,5-disulfonato

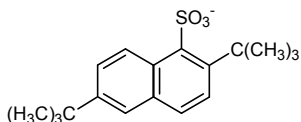


dibunas (48)
 (ethylis dibunas (12)(05))
 (natrii dibunas (12)(05))

dibunate 2,6-di-*tert*-butylnaphthalene-1-sulfonate
 dibunate 2,6-di-*tert*-butylnaphtalène-1-sulfonate
 dibunato 2,6-di-*terc*-butilnaftaleno-1-sulfonato

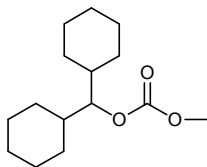
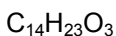


JAN



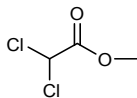
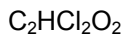
dicibas
 (locicortoloni dicibas (60)(29))

dicibate dicyclohexylmethyl carbonate (ester)
 dicibate carbonate de dicyclohexylméthyle (ester)
 dicibato carbonato de dicitlohexilmetilo (éster)



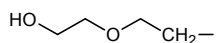
dicloacetat
 (etiprednoli dicloacetat (88)(50))

dicloacetate 2,2-dichloroacetate (ester)
 dicloacétate 2,2-dichloroacétate (ester)
 dicloacetato 2,2-dicloroacetato (éster)



digolilum (59)

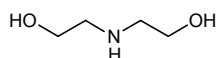
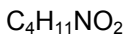
digolil 2-(2-hydroxyethoxy)ethyl
 digolil 2-(2-hydroxyéthoxy)éthyle
 digolilo 2-(2-hidroxietoxi)etilo



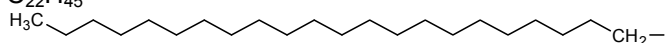
diolaminum (22)

diolamine 2,2'-azanediyl-diethanol
 diolamine 2,2'-azanediyl-diéthanol
 diolamina 2,2'-azanodiildietanol

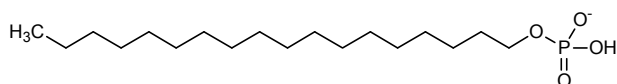
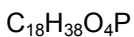
USAN

**docosilum** (63)

docosil docosyl
 docosil docosyle
 docosilo docosilo

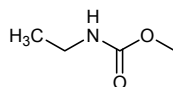
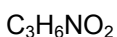
**dofosfatum** (65)

dofosfate octadecyl hydrogen phosphate
 dofosfate hydrogénophosphate d'octadécyle
 dofostato hidrógenofosfato de octadecilo

**ecamas**

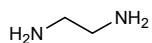
(asoprisnili ecamas (89)(50))

ecamate *N*-ethylcarbamate (ester)
 écamate *N*-éthylcarbamate (ester)
 ecamato *N*-etilcarbamato (éster)

**edaminum** (70)

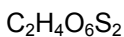
edamine ethane-1,2-diamine
 édamine éthane-1,2-diamine
 edamina etano-1,2-diamina

USAN

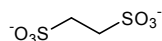


edisilas (18)

edisilate ethane-1,2-disulfonate
 édisilate éthane-1,2-disulfonate
 edisilato etano-1,2-disulfonato



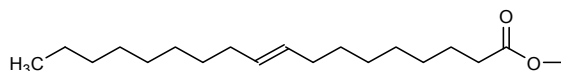
BAN
 USAN: edisylate

**elaidas**

(gemcitabini elaidas (106)(68))

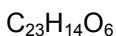
elaidate (9*E*)-octadec-9-enoate (ester)
 elaidate (9*E*)-octadéc-9-énoate (ester)
 elaidato (9*E*)-octadec-9-enoato (éster)

USAN $\text{C}_{18}\text{H}_{33}\text{O}_2$

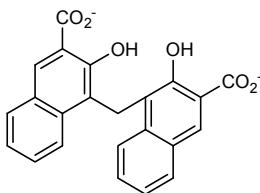
**embonas** (18)

(cycloguanili embonas (13)(05))
 (pararosaniilini embonas (15)(06))

embonate 4,4'-methylenebis(3-hydroxynaphthalene-2-carboxylate)
 embonate 4,4'-méthylènebis(3-hydroxynaphtalène-2-carboxylate)
 embonato 4,4'-metilenbis(3-hidroxi-naftaleno-2-carboxilato)

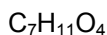


BAN
 USAN: pamoate

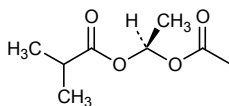
**enacarbilum**

(gabapentinum enacarbilum (94)(56))

enacarbil {*rac*-1-[(2-methylpropanoyl)oxy]ethoxy}carbonyl
 énacarbil {*rac*-1-[(2-méthylpropanoyl)oxy]éthoxy}carbonyle
 enacarbilo {*rac*-1-[(2-metilpropanoil)oxy]etoxi}carbonilo



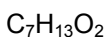
JAN



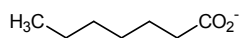
and enantiomer
 et énantiomère
 y enantiómero

enantas (18)

enantate heptanoate
 énantate heptanoate
 enantato heptanoato

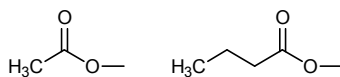
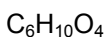


BAN
 JAN: enanthate
 USAN: enanthate

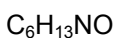
**enbutas**

(icometasoni enbutas (70)(34))

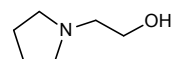
enbutate acetate (ester), butanoate (ester)
 enbutate acétate (ester), butanoate (ester)
 enbutato acetato (éster), butanoato (éster)

**epolaminum** (69)

epolamine 2-(pyrrolidin-1-yl)ethanol
 épolamine 2-(pyrrolidin-1-yl)éthanol
 epolamina 2-(pirrolidin-1-il)etanol



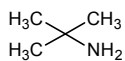
USAN

**erbuminum** (62)

erbumine 2-methylpropan-2-amine
 erbumine 2-méthylpropan-2-amine
 erbumina 2-metilpropan-2-amina

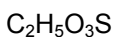


BAN
 JAN
 USAN

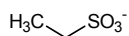


esilas (18)
(trazii esilas (54)(26))

esilate ethanesulfonate
ésilate éthanesulfonate
esilato etanosulfonato

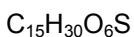


BAN
USAN: esylate

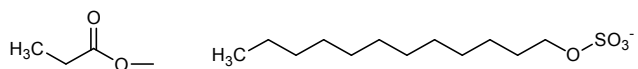


estolas (28)

estolate propanoate (ester), dodecyl sulfate (salt)
estolate propanoate (ester), sulfate de dodécyle (sel)
estolato propanoate (éster), sulfato de dodecilo (sal)



USAN

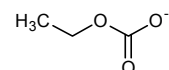


etabonas (64)
(remogliflozini etabonas (98)(60))
(sergliflozini etabonas (98)(59))

etabonate ethyl carbonate
étabonate carbonate d'éthyle
etabonato carbonato de etilo

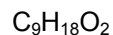


BAN
JAN
USAN

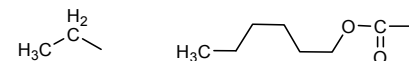


etexilatium
(dabigatranum etexilatium (87)(49))

etexilate ethyl, (hexyloxy)carbonyl
étexilate éthyle, (hexyloxy)carbonyle
etexilato etilo, (hexiloxi)carbonilo



JAN
USAN

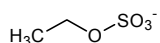
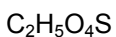


etilsulfas

(mecetronii etilsulfas (51)(24))

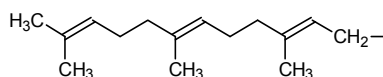
etilsulfate ethyl sulfate
 étilsulfate sulfate d'éthyle
 etilsulfato sulfato de etilo

USAN: ethylsulfate

**farnesilum** (61)

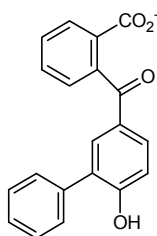
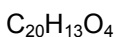
farnesil (2E,6E)-3,7,11-trimethyldodeca-2,6,10-trien-1-yl
 farnésil (2E,6E)-3,7,11-triméthyldodéca-2,6,10-trién-1-yle
 farnesilo (2E,6E)-3,7,11-trimetildodeca-2,6,10-trien-1-ilo

JAN

**fendizoas** (64)

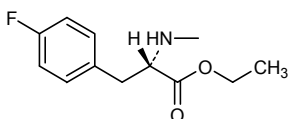
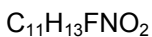
fendizoate 2-(6-hydroxybiphenyl-3-carbonyl)benzoate
 fendizoate 2-(6-hydroxybiphényl-3-carbonyl)benzoate
 fendizoato 2-(6-hidroxibifenil-3-carbonil)benzoato

JAN

**flufenamidum**

(melphalanum flufenamidum (105)(67))

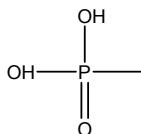
flufenamide [(2S)-1-ethoxy-3-(4-fluorophenyl)-1-oxopropan-2-yl]amino
 flufénamide [(2S)-1-éthoxy-3-(4-fluorophényl)-1-oxopropan-2-yl]amino
 flufenamida [(2S)-1-etoxi-3-(4-fluorofenil)-1-oxopropan-2-il]amino



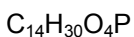
fosamilum

(ceftarolinum fosamilum (99)(60))

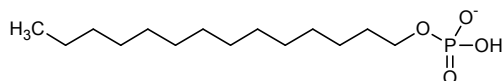
fosamil	phosphono
fosamil	phosphono
fosamilo	fosfono

**fostedatum** (70)

fostedate	tetradecyl hydrogen phosphate
fostédáte	hydrogénophosphate de tétradécyle
fostedato	hidrógenofosfato de tetradecilo

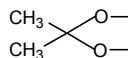
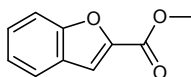
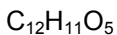


USAN

**furetonidum**

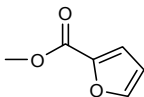
(triamcinoloni furetonidum (36)(17))

furetonide	1-benzofurane-2-carboxylate (ester), propane-2,2-diylbis(oxy)
furétonide	1-benzofurane-2-carboxylate (ester), propane-2,2-diylbis(oxy)
furetónido	1-benzofurano-2-carboxilato (éster), propano-2,2-diilbis(oxi)

**furoas**

(fluticasoni furoas (96)(57))

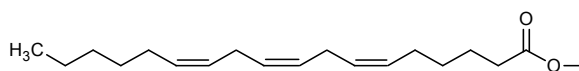
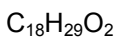
furoate	furan-2-carboxylate (ester)
furoate	furane-2-carboxylate (ester)
furoato	furano-2-carboxilato (éster)

JAN
USAN

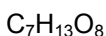
gamolenas

(ascorbyli gamolenas (79)(41))

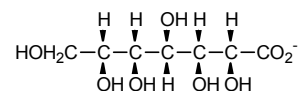
gamolenate (6Z,9Z,12Z)-octadeca-6,9,12-trienoate (ester)
 gamolénate (6Z,9Z,12Z)-octadéca-6,9,12-triénoate (ester)
 gamolenato (6Z,9Z,12Z)- octadeca-6,9,12-trienoato (éster)

**gluceptas** (18)

gluceptate D-glycero- D-gulo-heptonate
 gluceptate D-glycéro- D-gulo-heptonate
 gluceptato D-glicero-D-gulo-heptonato

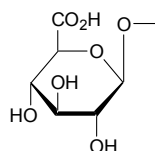
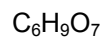


BAN
 USAN

**glucuronidum**

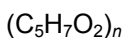
(morphini glucuronidum (92)(54))

glucuronide β-D-glucopyranosiduronic acid [oside]
 glucuronide acide β-D-glucopyranosiduronique [oside]
 glucurónido ácido β-D-glucopiranosidurónico [ósido]

**glutamerum**

(hemoglobinum glutamerum (80)(42))

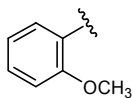
glutamer glutaraldehyde polymer
 glutamère polymère de glutaraldéhyde
 glutámero polímero de glutaraldehido



guacilum

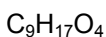
(amtolmetinum guacilum (65)(32))

guacil 2-methoxyphenyl
 guacil 2-méthoxyphényle
 guacilo 2-metoxifenilo

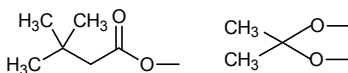
**hexacetonidum**

(triamcinoloni hexacetonidum (15)(06))

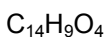
hexacetonide 3,3-dimethylbutanoate (ester), propan-2,2-diylbis(oxy)
 hexacétonide 3,3-diméthylbutanoate (ester), propan-2,2-diylbis(oxy)
 hexacetónido 3,3-dimetilbutanoato (éster), propan-2,2-diilbis(oxi)



USAN

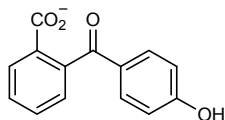
**hibenzas** (18)

hibenzate 2-(4-hydroxybenzoyl)benzoate
 hibenzate 2-(4-hydroxybenzoyl)benzoate
 hibenzato 2-(4-hidroxibenzoil)benzoato

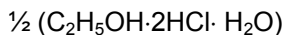


JAN

USAN: hybenzate

**hyclas** (62)

hyclate ethanol – hydrogen chloride - water (1/2 / 1 / 1/2)
 hyclate éthanol – chlorure d'hydrogène – eau (1/2 / 1 / 1/2)
 hiclato etanol – cloruro de hidrógeno – agua (1/2 / 1 / 1/2)



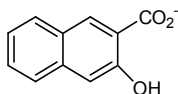
USAN

hydroxynaphthoas

(bepinii hydroxynaphthoas (11)(05))

hydroxynaphthoate	3-hydroxynaphthalene-2-carboxylate
hydroxynaphthoate	3-hydroxynaphtalène-2-carboxylate
hidroxinaftoato	3-hidroxinaftaleno-2-carboxilato

BAN

C₁₁H₇O₃**isetionas** (18)

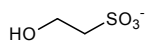
(stilbamidini isetionas (04)(03))

isetionate	2-hydroxyethane-1-sulfonate
isétionate	2-hydroxyéthane-1-sulfonate
isetionato	2-hidroxietano-1-sulfonato

BAN

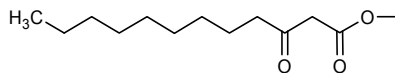
JAN

USAN: isethionate

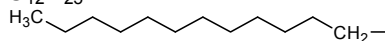
C₂H₅O₄S**ketolauras**

(testosteroni ketolauras (16)(07))

ketolaurate	3-oxododecanoate (ester)
kétolaurate	3-oxododécanoate (ester)
cetolaurato	3-oxododecanoato (éster)

C₁₂H₂₁O₃**lauril** (41)

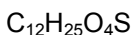
lauril	dodecyl
lauril	dodécyle
laurilo	dodecilo

C₁₂H₂₅

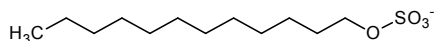
laurilsulfas (24)

laurilsulfate
laurilsulfate
laurilsulfato

dodecyl sulfate
sulfate de dodécyle
sulfato de dodecilo



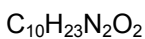
JAN: laurylsulfate
USAN: lauryl sulfate

**lisetilum**

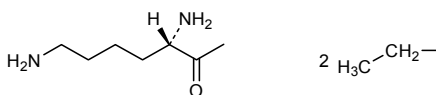
(cromoglicas lisetilum (72)(35))

lisetil
lisétíl
lisetilo

L-lysinyl (ester), diethyl (ester)
L-lysinyl (ester), diéthyl (ester)
L-lisinilo (éster), dietílico (éster)



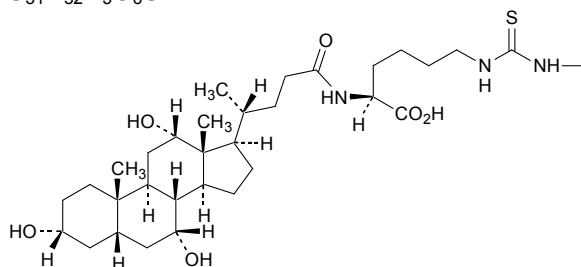
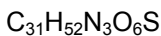
JAN

**lisicolum**

(fluoresceinum lisicolum (89)(51))

lisicol
lisicol
lisicol

{N-[(5S)-5-carboxy-5-(3α,7α,12α-trihydroxy-5β-cholan-24-amido)pentyl]carbamoithiyl}amino
{N-[(5S)-5-carboxy-5-(3α,7α,12α-trihydroxy-5β-cholan-24-amido)pentyl]carbamoithiyl}amino
{N-[(5S)-5-carboxi-5-(3α,7α,12α-trihidroxi-5β-colan-24-amido)pentil]carbamoitioil}amino

**mebutas**

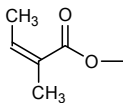
(ingenoli mebutas (106)(67))

mebutate
mébutate
mebutato

(2Z)-2-methylbut-2-enoate (ester)
(2Z)-2-méthylbut-2-énoate (ester)
(2Z)-2-metilbut-2-enoato (éster)

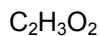


USAN

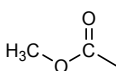
**mecarbilum**

(omecamtivum mecarbilum (102)(64))

mecarbil	methoxycarbonyl
mécarbil	méthoxycarbonyle
mecarbilo	metoxicarbonilo

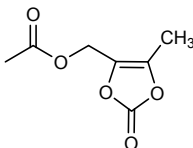
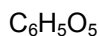


USAN

**medocarilum**

(ceftobiprolum medocarilum (92)(54))

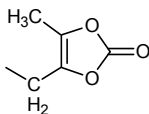
medocaril	[(5-methyl-2-oxo-1,3-dioxol-4-yl)methoxy]carbonyl
médocaril	[(5-méthyl-2-oxo-1,3-dioxol-4-yl)méthoxy]carbonyl
medocarilo	[(5-metil-2-oxo-1,3-dioxol-4-il)metoxi]carbonilo

**medoxomilum**

(olmesartanum medoxomilum (86)(48))

(azilsartanum medoxomilum (98)(59))

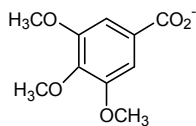
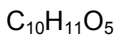
medoxomil	(5-methyl-2-oxo-1,3-dioxol-4-yl)methyl
médoxomil	(5-méthyl-2-oxo-1,3-dioxol-4-yl)méthyle
medoxomilo	(5-metil-2-oxo-1,3-dioxol-4-il)metilo

JAN
USAN

megallas (33)

megallate 3,4,5-trimethoxybenzoate
 mégallate 3,4,5-triméthoxybenzoate
 megallato 3,4,5-trimetoxibenzoato

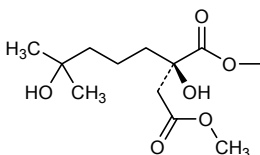
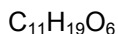
BAN

**mepesuccinas**

(omacetaxini mepesuccinas (98)(60))

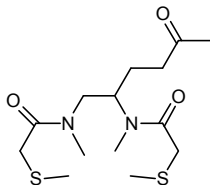
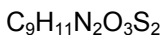
mepesuccinate (2*R*)-2,6-dihydroxy-2-(2-methoxy-2-oxoethyl)-6-methylheptanoate (ester)
 mégésuccinate (2*R*)-2,6-dihydroxy-2-(2-méthoxy-2-oxoéthyl)-6-méthylheptanoate (ester)
 mepesuccinato (2*R*)-2,6-dihidroxi-6-metil-2-(2-metoxi-2-oxoetil)heptanoato (éster)

USAN

**merpentanum**(technetium (^{99m}Tc) nofetumomabum merpentanum (81)(42))

merpentan [N,N'-(5-oxopentane-1,2-diyl)bis(2-sulfanylacetamidato)](4-)
 merpentan [N,N'-(5-oxopentane-1,2-diyl)bis(2-sulfanylacétamidato)](4-)
 merpentán [N,N'-(5-oxopentano-1,2-diyl)bis(2-sulfanilacetamidato)](4-)

USAN

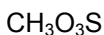
**mesilas** (18)

(amidefrini mesilas (15)(06))

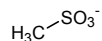
(sevitropii mesilas (56)(27))

mesilate methanesulfonate
 mésilate méthanesulfonate
 mesilato metanosulfonato

BAN



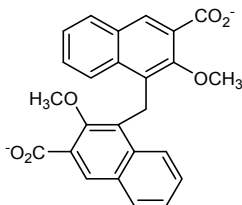
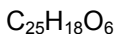
JAN
USAN: mesylate



metembonas (27)

metembonate
métembonate
metembonato

4,4'-methylenebis(3-methoxynaphthalene-2-carboxylate)
4,4'-méthylènebis(3-méthoxynaphtalène-2-carboxylate)
4,4'-metilenobis(3-metoxinaftaleno-2-carboxilato)

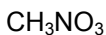


methonitras

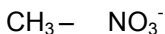
(atropini methonitras (04)(03))

methonitrate
méthonitrate
metonitrato

N-methyl, nitrate (salt)
N-méthyl, nitrate (sel)
N-metil, nitrato (sal)



JAN



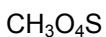
metilsulfas (18)

(laudexii metilsulfas (04)(03))
(diphemanili metilsulfas (04)(03))
(hexocyclii metilsulfas (06)(03))
(poldini metilsulfas (13)(!))
(toloconii metilsulfas (17)(07))
(bevonii metilsulfas (19)(10))
(fenclexonii metilsulfas (20)(08))

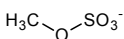
(pentapiperii metilsulfas (26)(12))
(rimazolii metilsulfas (26)(12))
(roxolonii metilsulfas (33)(15))
(amezinii metilsulfas (36)(17))
(thiazinamii metilsulfas (36)(17))
(mefenidramii metilsulfas (52)(25))
(tematropii metilsulfas (64)(31))

metilsulfate
métilsulfate
metilsulfato

methyl sulfate
sulfate de méthyle
sulfato de metilo



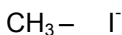
BAN
JAN



metiodidum

(buzepidi metiodidum (14)(06))

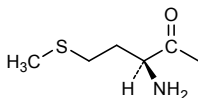
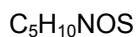
metiodide *N*-methyl, iodide (salt)
 métiodure *N*-méthyl, iodure (sel)
 metioduro *N*-metilo, ioduro (sal)

**methionilum**

(pomaglumetadum methionilum (104)(66))

methionil (2*S*)-2-amino-4-(methylsulfanyl)butanoyl (L-methionyl)
 méthionil (2*S*)-2-amino-4-(méthylsulfanyl)butanoyl (L-méthionyl)
 metionilo (2*S*)-2-amino-4-(metilsulfanil)butanoil (L-metionil)

USAN

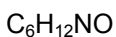
**metoxilum**

(atecegatranum metoxilum (105)(67))

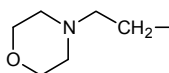
metoxil methoxy
 métoxil méthoxy
 metoxilo metoxi

**mofetilum** (65)

mofetil 2-(morpholin-4-yl)ethyl
 mofétíl 2-(morpholin-4-yl)éthyle
 mofetilo 2-(morfolin-4-il)etilo

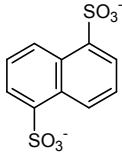
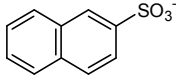
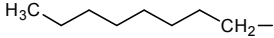
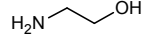
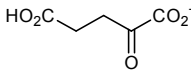


BAN
 JAN
 USAN

**napadisilas** (18)

(aclatonii napadisilas (44)(20))

napadisilate naphthalene-1,5-disulfonate
 napadisilate naphtalène-1,5-disulfonate
 napadisilato naftaleno-1,5-disulfonato

		$C_{10}H_6O_6S_2$
BAN		
JAN		
USAN: napadisylate		
napsilas	(18)	
napsilate		naphthalene-2-sulfonate
napsilate		naphtalène-2-sulfonate
napsilato		naftaleno-2-sulfonato
		$C_{10}H_7O_3S^-$
BAN		
USAN: napsylate		
octilum	(65)	
octil		octyl
octil		octyle
octilo		octilo
		C_8H_{17}
		
olaminum	(22)	
olamine		2-aminoethanol
olamine		2-aminoéthanol
olamina		2-aminoetanol
		C_2H_7NO
JAN		
USAN		
oxogluras	(22)	
oxoglurate		hydrogen 2-oxopentanedioate
oxoglurate		2-oxohydrogénopentanedioate
oxoglurato		2-oxohidrógenopentanoedioato
		$C_5H_5O_5$
		

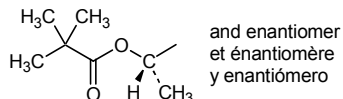
pamoate -> see embonate

pentexilum (65)

pentexil
pentexil
pentexilo

rac-1-[(2,2-dimethylpropanoyl)oxy]ethyl
rac-1-[(2,2-diméthylpropanoyl)oxy]éthyle
rac-1-[(2,2-dimetilpropanoil)oxi]etilo

$C_7H_{13}O_2$



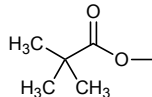
pivalas (18)
(etilefrini pivalas (50)(24))

pivalate
pivalate
pivalato

2,2-dimethylpropanoate (ester)
2,2-diméthylpropanoate (ester)
2,2-dimetilpropanoato (éster)

$C_5H_9O_2$

BAN
JAN
USAN



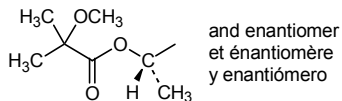
pivoxetilum (54)

pivoxetil
pivoxétíl
pivoxetilo

rac-1-[(2-methoxy-2-methylpropanoyl)oxy]ethyl
rac-1-[(2-méthoxy-2-méthylpropanoyl)oxy]éthyle
rac-1-[(2-metoxi-2-metilpropanoil)oxi]etilo

$C_7H_{13}O_3$

BAN
USAN

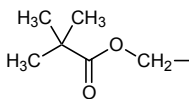
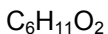


pivoxil (44)
(tebipenemum pivoxilum (87)(46))
(valproatum pivoxilum (51)(24))

pivoxil
pivoxil
pivoxilo

[(2,2-dimethylpropanoyl)oxy]methyl
[(2,2-diméthylpropanoyl)oxy]méthyle
[(2,2-dimetilpropanoil)oxi]metilo

BAN
JAN

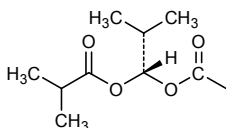
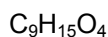


placarbilum

(arbaclofenum placarbilum (97)(59))

placarbil
placarbil
placarbilo

{(1*R*)-2-methyl-1-[(2-methylpropanoyl)oxy]propoxy}carbonyl
{(1*R*)-2-méthyl-1-[(2-méthylpropanoyl)oxy]propoxy}carbonyl
{(1*R*)-2-metil-1-[(2-metilpropanoil)oxi]propoxi}carbonil



poliglumexum

(paclitaxelum poliglumexum (90)(52))

poliglumex

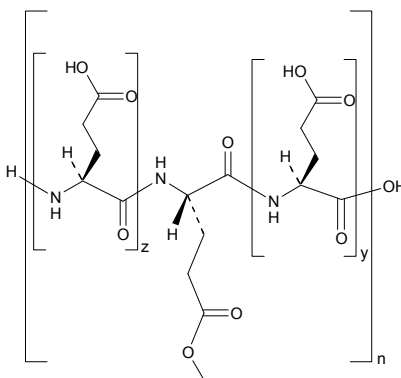
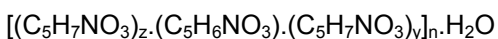
poly[poly(L-glutamic acid)_z—(L-glutamate-γ-ester)—poly(L-glutamic acid)_y]_n

poliglumex

poly[poly[(acide L-glutamique)_z—(L-glutamate-γ-ester)—poly(acide L-glutamique)_y]_n

poliglumex

poli[poli[(ácido L-glutámico)_z—(L-glutamato-γ-éster)—poli(ácido L-glutámico)_y]_n

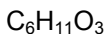


probutate -> see buteprate

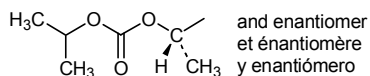
proxetilum (58)

proxetil
proxétíl
proxetilo

rac-1-[[[(propan-2-yloxy)carbonyl]oxy]ethyl
rac-1-[[[(propan-2-yloxy)carbonyl]oxy]éthyle
rac-1-[[[(propan-2-iloxi)carbonil]oxi]etilo



BAN
JAN
USAN

**raffimerum**

(hemoglobinum raffimerum (89)(51))

raffimer

(2*S*,4*R*,6*R*,8*S*,11*S*,13*S*)-2,4,8,13-tetrakis(hydroxymethyl)-

4,6,11-tris(ylomethyl)-3,5,7,10,12-pentaoxatetradecane-1,14-diyl

raffimer

(2*S*,4*R*,6*R*,8*S*,11*S*,13*S*)-2,4,8,13-tétrakis(hydroxyméthyl)-

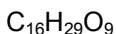
4,6,11-tris(ylométhyl)-3,5,7,10,12-pentaoxatétradécane-

1,14-diyle

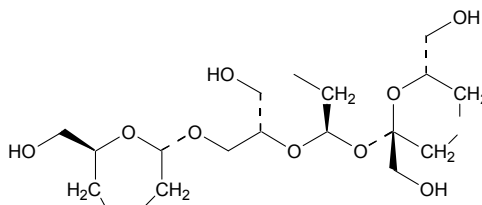
rafímero

(2*S*,4*R*,6*R*,8*S*,11*S*,13*S*)-2,4,8,13-tetrakis(hidroximetil)-

4,6,11-tris(ilometil)-3,5,7,10,12-pentaoxatetradecano-1,14-diilo



USAN

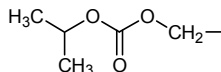
**soproxilum** (82)

soproxil
soproxil
soproxilo

[[[(propan-2-yloxy)carbonyl]oxy]methyl
[[[(propan-2-yloxy)carbonyl]oxy]méthyle
[[[(propan-2-iloxi)carbonil]oxi]metilo

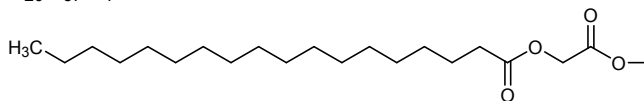
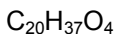


BAN
JAN



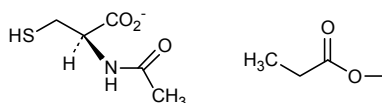
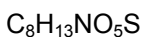
steaglas (18)
(prednisoloni steaglas (16)(07))

steaglate 2-(octadecanoyloxy)acetate (ester)
stéaglate 2-(octadécanoyloxy)acétate (ester)
esteaglató 2-(octadecanoiloxi)acetato (éster)



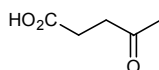
stinopras
(erythromycini stinopras (58)(27))

stinoprate *N*-acetyl-L-cysteinate (salt), propanoate (ester)
stinoprate *N*-acétyl-L-cystéinate (sel), propanoate (ester)
estinoprato *N*-acetil-L-cisteinato (sal), propanoato (éster)



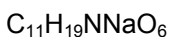
succinilum
(norfloxacinum succinilum (58)(28))

succinil 3-carboxypropanoyl
succinil 3-carboxypropanoyle
succinilo 3-carboxipropanoilo

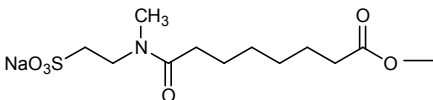


suleptanas
(methylprednisoloni suleptanas (56)(27))

suleptanate 8-[methyl(2-sulfoethyl)amino]-8-oxooctanoate (ester),
monosodium salt
suleptanate 8-[méthyl(2-sulfoéthyl)amino]-8-oxooctanoate (ester), sel
monosodique
suleptanato 8-[metil(2-sulfoetil)amino]-8-oxooctanoato (éster), sal
monosódica

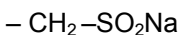
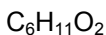
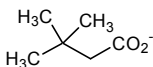
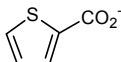
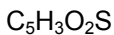


BAN
USAN

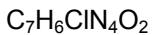
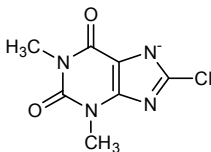


sulfoxylas

(phenarsoni sulfoxylas (01)(!))

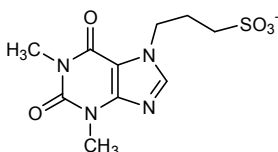
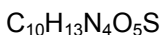
sulfoxylate
sulfoxylate
sulfoxilatosulfinomethyl, monosodium salt
sulfinométhyle, sel monosodique
sulfinometilo, sal monosódica**tebutas** (22)tebutate
tébutate
tebutato3,3-dimethylbutanoate
3,3-diméthylbutanoate
3,3-dimetilbutanoatoJAN
USAN**tenoas** (52)tenoate
ténoate
tenoatothiophene-2-carboxylate
thiophène-2-carboxylate
tiofeno-2-carboxilato**teoclas** (18)

(promethazini teoclas (10)(04))

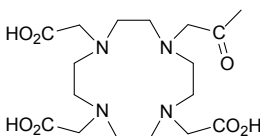
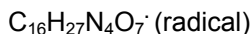
teoclata
téoclata
teoclato8-chloro-1,3-dimethyl-2,6-dioxo-3,6-dihydro-1*H*-purin-7(2*H*)-ide
8-chloro-1,3-diméthyl-2,6-dioxo-3,6-dihydro-1*H*-purin-7(2*H*)-ure
8-cloro-1,3-dimetil-2,6-dioxo-3,6-dihidro-1*H*-purin-7(2*H*)-uroBAN
JAN

teprosilas (29)

teprosilate	3-(1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-7 <i>H</i> -purin-7-yl)propane-1-sulfonate
téprosilate	3-(1,3-diméthyl-2,6-dioxo-1,2,3,6-tétrahydro-7 <i>H</i> -purin-7-yl)propane-1-sulfonate
teprosilato	3-(1,3-dimetil-2,6-dioxo-1,2,3,6-tetrahydro-7 <i>H</i> -purin-7-il)propano-1-sulfonato

**tetraxetanium** (92)(yttrium (^{90}Y) tacatuzumabum tetraxetanium (93)(55))(yttrium (^{90}Y) clivatuzumabum tetraxetanium (102)(64))

tetraxetan	2-[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclodecan-1-yl]acetyl
tétraxétan	2-[4,7,10-tris(carboxyméthyl)-1,4,7,10-tétrazacyclodécane-1-yl]acétyle
tetraxetán	2-[4,7,10-tris(carboximetil)-1,4,7,10-tetraazaciclodecane-1-il]acetilo

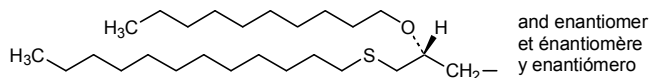
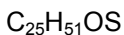
**tidoxilum**

(fozivudinum tidoxilum (73)(36))

(fosfluridinum tidoxilum (93)(55))

(fosalvudinum tidoxilum (95)(57))

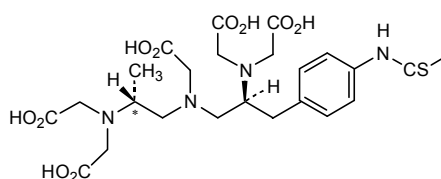
tidoxil	<i>rac</i> -2-(decyloxy)-3-(dodecylsulfanyl)propyl
tidoxil	<i>rac</i> -2-(décyloxy)-3-(dodécylsulfanyl)propyle
tidoxilo	<i>rac</i> -2-(deciloxi)-3-(dodecilsulfanil)propilo



tiuxetanum

(ibritumomabum tiuxetanum (86)(48))

tiuxetan	<i>N</i> -(4-[(2 <i>S</i>)-2-[bis(carboxymethyl)amino]-3-[(2 <i>RS</i>)-{2-[bis(carboxymethyl)amino]propyl}(carboxymethyl)amino]propyl]=phenyl) thiocarbamoyl
tiuxétan	<i>N</i> -(4-[(2 <i>S</i>)-2-[bis(carboxyméthyl)amino]-3-[(2 <i>RS</i>)-{2-[bis(carboxyméthyl)amino]propyl}(carboxyméthyl)amino]propyl]=phényl]thiocarbamoyle
tiuxetán	<i>N</i> -(4-[(2 <i>S</i>)-2-[bis(carboximetil)amino]-3-[(2 <i>RS</i>)-{2-[bis(carboximetil)amino]propil}(carboximetil)amino]propil}fenil]tio carbamoilo

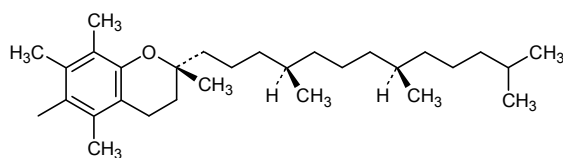
C₂₃H₃₁N₄O₁₀SBAN
JAN
USANand epimer at C*
et l'épimère en C*
y el epímero en C***tocoferilum**

(tretinoinum tocoferilum (66)(32))

tocoferil	<i>rac</i> -(2 <i>R</i>)-2,5,7,8-tetramethyl-2-[(4 <i>R</i> ,8 <i>R</i>)-4,8,12-trimethyltridecyl]=chroman-6-yl
tocoféril	<i>rac</i> -(2 <i>R</i>)-2,5,7,8-tétraméthyl-2-[(4 <i>R</i> ,8 <i>R</i>)-4,8,12-triméthyltridécyl]=chroman-6-yl
tocoferilo	<i>rac</i> -(2 <i>R</i>)-2,5,7,8-tetrametil-2-[(4 <i>R</i> ,8 <i>R</i>)-4,8,12-trimetiltridecil]=croman-6-ilo

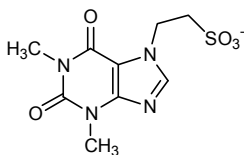
C₂₉H₄₉O

JAN

and enantiomer
et énantiomère
y enantiómero**tofesilas** (27)

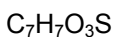
tofesilate	2-(1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-7 <i>H</i> -purin-7-yl)ethane-1-sulfonate
tofésilate	2-(1,3-diméthyl-2,6-dioxo-1,2,3,6-tétrahydro-7 <i>H</i> -purin-7-yl)éthane-1-sulfonate
tofesilato	2-(1,3-dimetil-2,6-dioxo-1,2,3,6-tetrahidro-7 <i>H</i> -purin-7-il)etano-1-sulfonato

C₉H₁₁N₄O₅S

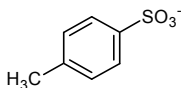


tosilas (18)
 (bretylilii tosilas (10)(04)) (trethinii tosilas (14)(06))
 (itramini tosilas (13)(05)) (xylamidini tosilas (17)(!))
 (troxonii tosilas (13)(05)) (emilii tosilas (37)(17))
 (troxypyrrolii tosilas (13)(05)) (suplatasti tosilas (104)(65))

tosilate 4-methylbenzene-1-sulfonate
 tosilate 4-méthylbenzène-1-sulfonate
 tosilato 4-metilbenceno-1-sulfonato

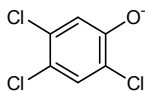
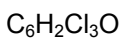


BAN
 JAN
 USAN: tosylate



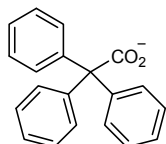
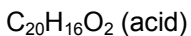
triclofenas (18)
 (alazanini triclofenas (13)(05))

triclofenate 2,4,5-trichlorophenolate
 triclofénate 2,4,5-trichlorophénolate
 triclofenato 2,4,5-triclorofenolato



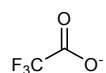
trifenatatas (104)

trifenatate triphenylacetate
 trifénatate triphénylacétate
 trifenatato trifenilacetato

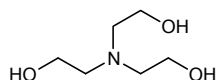
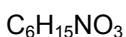


triflutas (64)triflutate
triflutate
triflutatotrifluoroacetate
trifluoroacétate
trifluoroacetato

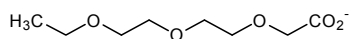
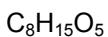
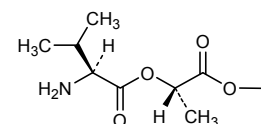
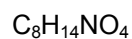
USAN

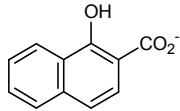
**trolaminum** (25)trolamine
trolamine
trolamina2,2',2''-nitrilotriethanol
2,2',2''-nitrilotriéthanol
2,2',2''-nitrilotrietanol

USAN

**troxundas** (46)troxundate
troxundate
troxundato[2-(2-ethoxyethoxy)ethoxy]acetate
[2-(2-éthoxyéthoxy)éthoxy]acétate
[2-(2-etoxietoxi)etoxi]acetato

BAN

**valactas** (101)valactate
valactate
valactato(2S)-2-[(2S)-2-amino-3-methylbutanoyloxy]propanoate
(2S)-2-[(2S)-2-amino-3-méthylbutanoyloxy]propanoate
(2S)-2-[(2S)-2-amino-3-metilbutanoiloxi]propanoato

xinafoas (63)xinafoate
xinafoate
xinafoato1-hydroxynaphthalene-2-carboxylate
1-hydroxynaphtalène-2-carboxylate
1-hidroxinaftaleno-2-carboxilato $C_{11}H_7O_3$ BAN
JAN
USAN

* * * * *

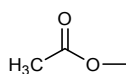
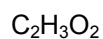
ANNEX 1

The following groups and elements have also been published together with INNs:

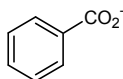
acetas

acetate
acétate
acetato

ethanoate (ester)
éthanoate (ester)
etanoato (éster)

**benzoas**

benzoate
benzoate
benzoato

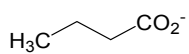
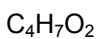
**bromidum**

bromide
bromure
bromuro

**butyras**

butyrate
butyrate
butirato

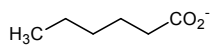
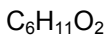
butanoate
butanoate
butanoato



caproas

caproate
caproate
caproato

hexanoate
hexanoate
hexanoato

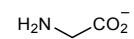
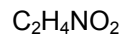
**chloridum**

chloride
chlorure
cloruro

**glycinas**

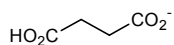
glycinate
glycinate
glicinato

2-aminoacetate
2-aminoacétate
2-aminoacetato

**hemissuccinas**

hemisuccinate
hémisuccinate
hemisuccinato

hydrogen butanedioate
hydrogénobutanedioate
hidrógenobutanodioato

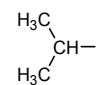
**iodidum**

iodide
iodure
ioduro

**isopropylis**

isopropyl
isopropyle
isopropilo

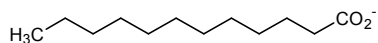
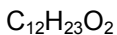
propan-2-yl
propan-2-ylo
propan-2-ilo



lauras

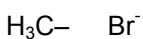
laurate
laurate
laurato

dodecanoate
dodécanoate
dodecanoato

**methylbromidum**

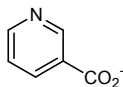
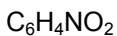
methylbromide
méthylbromure
metilbromuro

N-methyl, bromide (salt)
N-méthyl, bromure (sel)
N-metil, bromuro (sal)

**nicotinas**

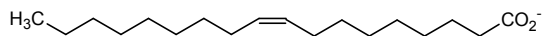
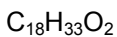
nicotinate
nicotinate
nicotinato

pyridine-3-carboxylate
pyridine-3-carboxylate
piridina-3-carboxilato

**oleas**

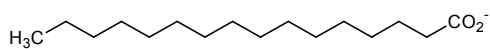
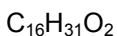
oleate
oléate
oleato

(9*Z*)-octadec-9-enoate
(9*Z*)-octadéc-9-énoate
(9*Z*)-octadec-9-enoato

**palmitas**

palmitate
palmitate
palmitato

hexadecanoate
hexadécanoate
hexadecanoato



perchloras

perchlorate
perchlorate
perclorato

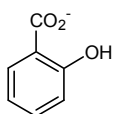
**potassio (kalii)**

potassium
potassium
(de) potasio

**salicylas**

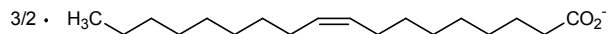
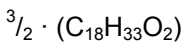
salicylate
salicylate
salicilato

2-hydroxybenzoate
2-hydroxybenzoate
2-hidroxibenzoato

**sesquioleas**

sesquioleate
sesquioléate
sesquioleato

(9Z)-octadec-9-enoate(1.5)
(9Z)-octadéc-9-énoate(1,5)
(9Z)-octadec-9-enoato(1.5)

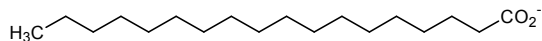
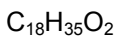
**sodio (natrii)**

sodium
sodium
(de) sodio

**stearas**

stearate
stéarate
estearato

octadecanoate
octadécanoate
octadecanoato



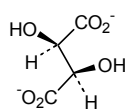
sulfas

sulfate
sulfate
sulfato

**tartras**

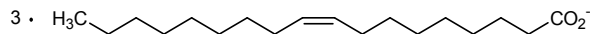
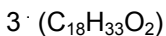
tartrate
tartrate
tartrato

(2*R*,3*R*)-2,3-dihydroxybutanedioate
(2*R*,3*R*)-2,3-dihydroxybutanedioate
(2*R*,3*R*)-2,3-dihidroxibutanodioato

**trioleas**

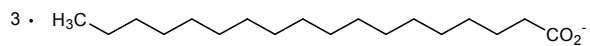
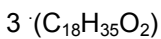
trioleate
trioleate
trioleato

tris[(9*Z*)-octadec-9-enoate]
tris[(9*Z*)-octadéc-9-énoate]
tris[(9*Z*)-octadec-9-enoato]

**tristearas**

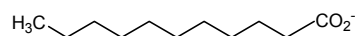
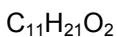
tristearate
tristéarate
triéstearato

tris(octadecanoate)
tris(octadécanoate)
tris(octadecanoato)

**undecylas**

undecylate
undécylate
undecilato

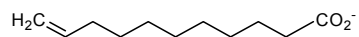
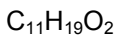
undecanoate
undécanoate
undecanoato



undecylenas

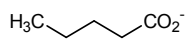
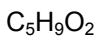
undecylenate
undécylénate
undecilenato

undec-10-enoate
undéc-10-énoate
undec-10-enoato

**valeras**

valerate
valérate
valerato

pentanoate
pentanoate
pentanoato



* * * * *

ANNEX 2

Transliteration of Greek letters in English, French and Spanish

Upper case	Lower case	English	French	Spanish
A	α	alfa (and not alpha)	alfa (and not alpha)	alfa
B	β	beta	bêta	beta
Γ	γ	gamma	gamma	gamma
Δ	δ	delta	delta	delta
E	ε	epsilon	epsilon	épsilon
Z*	ζ*	zeta	zêta	<u>d</u>seta
H	η	eta	êta	eta
Θ*	θ*	theta	thêta	<u>z</u>eta
I	ι	iota	iota	iota
K	κ	kappa	kappa	kappa
Λ	λ	lambda	lambda	lambda
M	μ	mu	mu	mi
N	ν	nu	nu	ni
Ξ	ξ	xi	xi	xi
O	ο	omicron	omicron	ómicron
Π	π	pi	pi	pi
P	ρ	rho	rhô	ro
Σ	σ	sigma	sigma	sigma
T	τ	tau	tau	tau
Υ	υ	upsilon	upsilon	ípsilon
Φ	φ	phi	phi	fi
X	χ	chi	khi	ji
Ψ	ψ	psi	psi	psi
Ω	ω	omega	oméga	omega

* Due to possible confusion of the transliteration of these two Greek letters, the future use of the Greek letters ζ and θ is discouraged.

ANNEX 3

Standardization of the Spanish version of INN

The spelling of the Spanish version of the INN has been standardized in collaboration with a Spanish nomenclature group and the WHO Secretariat (1, 2).

The criteria for standardization may be summarized as follows:

1. keep as close as possible to the present INN (minimum changes)
2. keep "stems" uniform
3. avoid lengthening of words
4. base changes on a combination of:
 - 4.1 acceptance wherever possible of the English and/or French (original) name
 - 4.2 acceptance wherever possible of the existing Spanish name
 - 4.3 consideration of the Spanish phonetics and spelling in special cases.

To be more concise, the Spanish endings similar to the English endings are not shown in this list, even for unusual cases in Spanish (i.e. –cept).

Rules for the Spanish version of the INN**English Spanish**

-ac	-aco	
-ame	-amo	
-an	-án	except: -orfano, -sulfano, -oxano
-ane	-ano	except: insulina defalana/insulina isofana
-ase	-asa	
-ate	-ato	
-barb	-barbo	
benze	bence	
benzi	benci	
chlo	clo	
-el	-el	
-en(e)	-eno	except: -bén, -bufén, -gén (for –gene in English), -rsén (for –rsen in English)
-er	-ero	
-fos or		
-phos	-fos	
-ic	-ico	
-ide	-ida	except: -óxido, -ósido, -glusido, iodide (ioduro), chloride (cloruro), etc.
-il (e) and		
-yl	-ilo	except: -dil, -pril, -guanil, -azenil
-ime	-ima	
-imus	-imús	
-in (e)	-ina	except: -dipino, -nixino, -oxacino, -platino
-it(e)	-ita	except: -arit
-ium	-io	
k-	k-	
-ka-	-ca-	except: -kacina, -kalim, -lukast
-ke-	-que-	except: -kefamide
khe	ke	
-ki-	-qui-	except: leukina, rokitamicina
-kin-	-kin-	in monoclonal antibodies, no change to –k(i)(in)-
-ko-	-co-	

-ku-	-cu-	
-ky-	-qui-	
-ll-	-l-	
-mf-	-mf ¹	except: anfetaminas (derivatives), alcanfor (derivatives), cloranfenicol (derivatives and analogues)
-nb-	-nb ¹	
-np-	-np ¹	
-ol(e)	-ol	
-ome	-omo	except: cef..oma
-on	-on	
-one	-ona	
-ou-	-u-	
-pafant	-pafant	
ph	f	
-prim	-prima	
qua-	qua-	
-qua-	-cua-	
quo-	quo-	
-quo-	-cuo-	
sf-	esf-	
sp-	esp-	
st-	est-	
th	t	
y	i	

¹While *st-* and *sp-* are changed into *est-* and *esp-* respectively, the letter sequences *-mf-*, *-nb-*, and *-np-*, although unusual in Spanish have been retained for the following reasons:

- international linguistic requirements; the established philosophy takes precedence over spelling
- correspondence with the English and French versions; fewer changes to the first Spanish versions (previous cumulative lists).

Last update: August 2012

References

1. Dal Re Saavedra, M.A. et al. Propuesta de unificación de las denominaciones comunes internacionales de las sustancias farmacéuticas en lengua española. [Proposal for unification of the international nonproprietary names for pharmaceutical substances in the Spanish language.] *Anales de la Real Academia de Farmacia*, 1985, **51**:289-300:
2. Comments on Appendix to: article on "Unificación de las denominaciones comunes internacionales de las sustancias farmacéuticas" and on listing received in Madrid in September 1985 (Pharm S/Nom 1105 and 1105 Add: 1).

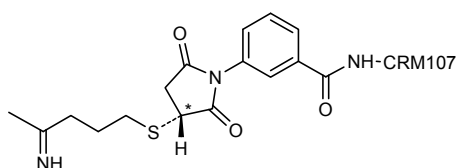
ANNEX 4

4-1- Names for toxins (active or inactivated proteins)

aldifitoxum

(transferrinum aldifitoxum (95)(56))

- aldifitox 3-{*rac*-3-[(4-imino-4-ylbutyl)sulfanyl]-2,5-dioxopyrrolidin-1-yl}phenylcarbonyl and forming an *N*-benzoyl derivative of a primary amine group of diphtheria [550-L-phenylalanine]toxin from *Corynebacterium diphtheriae*-(26-560)-peptide
- aldifitox 3-{*rac*-3-[(4-imino-4-ylbutyl)sulfanyl]-2,5-dioxopyrrolidin-1-yl}phénylcarbonyle lié par une fonction benzamide à une amine primaire du [550-L-phénylalanine]toxine diphtérique de *Corynebacterium diphtheriae*-(26-560)-peptide
- aldifitox 3-{*rac*-3-[(4-imino-4-ilobutil)sulfanil]-2,5-dioxopirrolidin-1-il}fenilcarbonilo ligado por una función benzamida a una amina primaria de la [550-L-fenilalanina]toxina diftérica del *Corynebacterium diphtheriae*-(26-560)-péptido



and epimer at C*
et l'épimère en C*
y el epímero al C*

H ₂ N-CRM107=	GADDVVDSK	SFVMENFSSY	HGTKPGYVDS	IQKGIQKPKS
	GTQGNVDDW	KGFYSTDNKY	DAAGYSVDNE	NPLSGKAGGV
	VKVYTPGLTK	VLALKVDNAE	TIKKELGLSL	TEPLMEQVGT
	EEFIKRFGDG	ASRVVLSLPF	AEGSSSVEYI	NNWEQAKALS
	VELEINFETR	GKRGQDAMYE	YMAQACAGNR	VRRSVGSSLS
	CINLDWDVIR	DKTKTKIESL	KEHGPIKNKM	SESPNKTVSE
	EKAKQYLEEF	HQTALEHPEL	SELKTVTGTN	PVFAGANYAA
	WAVNVAQVID	SETADNLEKT	TAALSILPGI	GSVMGIADGA
	VHHNTEEIVA	QSIALSSLMV	AQAIPLVGEL	VDIGFAAYNF
	VESIINLFQV	VHNSYNRPAY	SPGHKTQPFL	HDGYAVSWNT
	VEDSIIRTGF	QGESGHDIKI	TAENTPLPIA	GVLLPTIPGK
	LDVNKSKTHI	SVNGRKIRMR	CRAIDGDVTF	CRPKSPVYVG
	NGVHANLHVA	FHRSSSEKIH	SNEISSDSIG	VLGYQKTVDH
	TKVNFKLSLF	FEIKS		

aritoxum

(dorlimomabum aritoxum (66)(32))

(telimomabum aritoxum (66)(32))

(zolimomabum aritoxum (80)(41))

- aritox ricin A chain
- aritox chaîne A de la ricine
- aritox cadena A de la ricina

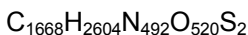
besudotoxum

(cintredekinum besudotoxum (92)(54))

besudotox L-lysyl-L-alanyl-L-serylglycylglycine (linker) fusion protein with des-(365-380)-[Asn³⁶⁴,Val⁴⁰⁷,Ser⁵¹⁵,Gln⁵⁹⁰,Gln⁶⁰⁶,Arg⁶¹³]exotoxin A (*Pseudomonas aeruginosa*)-(251-613)-peptide (toxin with region IA and first 16 residues of region IB deleted)

bésudotox L-lysyl-L-alanyl-L-sérylglycylglycine (peptide de liaison) protéine de fusion avec le dès-(365-380)-[Asn³⁶⁴,Val⁴⁰⁷,Ser⁵¹⁵,Gln⁵⁹⁰,Gln⁶⁰⁶,Arg⁶¹³]exotoxine A (*Pseudomonas aeruginosa*)-(251-613)-peptide (toxine dont la région IA et les 16 premiers résidus de la région IB ont été supprimés)

besudotox L-lisil-L-alanil-L-serilglicilglicina (péptido de enlace) proteína de fusión con el des-(365-380)-[Asn³⁶⁴,Val⁴⁰⁷,Ser⁵¹⁵,Gln⁵⁹⁰,Gln⁶⁰⁶,Arg⁶¹³]exotoxina A (*Pseudomonas aeruginosa*)-(251-613)- péptido (toxina de la que se han suprimido la región IA y les 16 primeros restos de la región IB)



KASGGPEGGS	LAALTAHQAC	HLPLETFTRH	RQPRGWQLE	QCGYPVQRLV	50
ALYLAARLSW	NQVDQVIRNA	LASPGSGGDL	GEAIREQPEQ	ARLALTLAAA	100
ESERFVRQGT	GNDDEAGAANG	PADSGDALLE	RNYPTGAEFL	GDGGDVSFST	150
RGTQNWTVR	LLQAHRQLEE	RGYVFGYHG	TFLEAAQSIV	FGGVRARSQD	200
LDAIWRGFYI	AGDPALAYGY	AQDQEPDARG	RIRNGALLRV	YVPRSSLPGF	250
YRTSLTLAAP	EAAGEVERLI	GHPLPLRLDA	ITGPEEEGGR	LETILGWPLA	300
ERTVVIPSAI	PTDPRNVGGD	LDPSSIPDQE	QAISALPDYA	SQPGQFPRED	350
LR					352

Disulfide bridge location / Position du pont disulfure / Posición del puente disulfuro

20-42

bogatoxum

(citatumabum bogatoxum (99)(61))

bogatox 12-mer linker [furin proteolytic cleavage site from *Pseudomonas* exotoxin A (298-309 precursor fragment)] (1-12) -*Bougainvillea spectabilis* Willd bouganin [rRNA N-glycosidase, type I ribosome inactivating protein (RIP)] fragment (27-276 from precursor, V149>A, D153>A, Y159>N, I78>A) (13-262)

bogatox 12-mer linker [site de clivage protéolytique par la furine, de *Pseudomonas* exotoxine A (fragment 298-309 du précurseur)] (1-12) -fragment de la bouganine [N-glycosidase de l'ARNr, protéine de type I inactivant le ribosome (RIP)] de *Bougainvillea spectabilis* Willd (27-276 du précurseur, V149>A, D153>A, Y159>N, I178>A) (13-262)

bogatox 12-mero de enlace [secuencia de ruptura proteolítica por furina, de la exotoxina A de *Pseudomonas* (fragmento 298-309 del precursor)] (1-12) -fragmento de la buganina [N-glicosidasa de ARNr, proteína de tipo I inactivadora de ribosomas (RIP)] de *Bougainvillea spectabilis* Willd (27-276 del precursor, V149>A, D153>A, Y159>N, I178>A) (13-262)

TRHRQPRGWE	QLYNTVSFNL	GEAYEYPTFI	QDLRNELAKG	TPVCQLPVTL	50
QTIADDKREV	LVDITTTSKK	TVKVAIDVTD	VYVVGQDKW	DGKDRAVFLD	100
KVPTVATSKL	FPGVTNRVTL	TFDGSYQKLV	NAAKADRKAL	ELGVNKLFEFS	150
IEAIHGKTIN	GQEAAKFFLI	VIQMVSEEAR	FKYIETEVDV	RGLYGSFKPN	200
FKVLNLENNW	GDISDAIHKS	SPQCTTINPA	LQLISPSNDP	WVVKVQSQIS	250
PDMGILKFKS	SK				262

cridificarum

(vanutidum cridificarum (100)(62))

- cridificar [N⁶-Lys-(sulfanylacetyl)]-[52-glutamic acid(G>E)]diphtheria toxin *Corynebacterium diphtheriae*
- cridificar [N⁶-Lys-(sulfanylacétyle)]-[52-acide glutamique(G>E)]toxine diphtérique *Corynebacterium diphtheriae*
- cridificar [N⁶-Lys-(sulfanilacetil)]-[52-ácido glutámico G>E]toxina diftérica *Corynebacterium diphtheriae*

GADDVVDSSK	SFVMENFSSY	HGTKPGYVDS	IQKGIQKPKS	GTQGNVDDDW	50
KEFYSTDNKY	DAAGYSVDNE	NPLSGKAGGV	VKVITYPGLTK	VLALKVDNAE	100
TIKKELGLSL	TEPLMEQVGT	EEFIKRFGDG	ASRVVLSLFP	AEGSSSVEYI	150
NNWEQAKALS	VELEINFETR	GKRGQDAMYE	YMAQACAGNR	VRRSVGSSLS	200
CINLDWDVIR	DKTKTKIESL	KEHGPIK N KM	SESPNKTVSE	EKAKQYLEEF	250
HQTALEHPEL	SELKTVTGTN	PVFAGANYAA	WAVNVAQVID	SETADNLEKT	300
TAALSILPGI	GSMGIADGA	VHHNTEEIVA	QSIALSSLMV	AQAIPLVGEL	350
VDIGFAAYNF	VESIINLFQV	VHNSYNRPAY	SPGHKTQPFL	HDGYAVSWNT	400
VEDSIIRTFG	QGESHDIKI	TAENTPLPIA	GVLLPTIPGK	LDVNKSKTHI	450
SVNGRKIRMR	CRAIDGDVTF	CRPKSPVYVG	NGVHANLHVA	FHRSSSEKIH	500
SNEISSDSIG	VLGYQKTVDH	TKVNSKLSLF	FEIKS		535

diftitoxum

(denileukinum diftitoxum (78)(40))

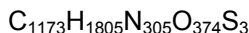
- diftitox N-L-methionyl[387-L-histidine-388-L-alanine]-(1-388)-toxin (*Corynebacterium diphtheriae* strain C7) (388→2')-protein
- diftitox N-L-méthionyl[387-L-histidine-388-L-alanine]-(1-388)-toxine (souche C7 de *Corynebacterium diphtheriae*)-(388→2')
- diftitox N-L-metionil[387-L-histidina-388-L-alanina]-(1-388)-toxina (cepa C7 de *Corynebacterium diphtheriae*) (388→2')
- USAN

estafenatoxum

(naptumomabum estafenatoxum (96)(58))

- estafenatox glycyglycyl-L-proline (linker) fusion protein with enterotoxin type A (*Staphylococcus aureus*)-(1-33)-peptidyl-L-seryl[Ser³⁶,Ser³⁷,Glu³⁸,Lys³⁹,Ala⁴¹,Thr⁴⁶,Thr⁷¹,Ala⁷²,Ser⁷⁵,Glu⁷⁶,Glu⁷⁸,Ser⁸⁰,Ser⁸¹,Thr²¹⁴,Ser²¹⁷,Thr²¹⁹,Ser²²⁰,Ser²²²,Ser²²⁴]enterotoxin type E (*Staphylococcus aureus*)-(32-230)-peptide (synthetic superantigen SEA/E-120)
- estafénatox glycyglycyl-L-proline (peptide de liaison) protéine de fusion avec l'entérotoxine type A (*Staphylococcus aureus*)-(1-33)-peptidyl-L-séryl[Ser³⁶,Ser³⁷,Glu³⁸,Lys³⁹,Ala⁴¹,Thr⁴⁶,Thr⁷¹,Ala⁷²,Ser⁷⁵,Glu⁷⁶,Glu⁷⁸,Ser⁸⁰,Ser⁸¹,Thr²¹⁴,Ser²¹⁷,Thr²¹⁹,Ser²²⁰,Ser²²²,Ser²²⁴]entérotoxine type E (*Staphylococcus aureus*)-(32-230)-peptide (superantigène SEA/E-120 synthétique)

estafenatox glicilglicil-L-prolina (péptido de enlace) proteína de fusión con la enterotoxina tipo A (*Staphylococcus aureus*)-(1-33)-peptidil-L-seril[Ser³⁶,Ser³⁷,Glu³⁸,Lys³⁹,Ala⁴¹,Thr⁴⁶,Thr⁷¹,Ala⁷²,Ser⁷⁵,Glu⁷⁶,Glu⁷⁸,Ser⁸⁰,Ser⁸¹,Thr²¹⁴,Ser²¹⁷,Thr²¹⁹,Ser²²⁰,Ser²²²,Ser²²⁴]enterotoxina tipo E (*Staphylococcus aureus*)-(32-230)-péptido (superantígeno SEA/E-120 sintético)



GGPSEKSEEI	NEKDLRKKSE	LQGTALGNLK	QIYYNSKAI	TSSEKSADQF	50
LTNTLLFKGF	FTGHPWYNDL	LVDLGSTAAT	SEYEGSSVDL	YGAYYGQCA	100
GGTPNKTACM	YGGVTLHDNN	RLTEEKVPPI	NLWIDGKQTT	VPIDKVKTSK	150
KEVTVQELDL	QARHYLHGKF	GLYNSDSFGG	KVQRGLIVFH	SSEGSTVSYD	200
LFDAQGQYPD	TLLRIYRDNT	TISSTLSLIS	LYLYTT		236

Disulfide bridge location / Position du pont disulfure / Posición del puente disulfuro
99-109

mafenatoxum

(anatumomabum mafenatoxum (86)(48))

mafenatox [227-L-alanine]enterotoxin A (*Staphylococcus aureus*)
 mafénatox [227-L-alanine]entérottoxine A (*Staphylococcus aureus*)
 mafenatox [227-L-alanina]enterotoxina A de *Staphylococcus aureus*

monatoxum

(oportuzumabum monatoxum (100)(62))

monatox 20-mer linker (1-20) -*Pseudomonas aeruginosa* exotoxin A (ETA) fragment [277-633 precursor fragment, containing domain II (281-393) with furin proteolytic cleavage site (298-309), domain Ib I432>V (394-433), domain III (434-633)] (21-377) -hexahistidyl-lysyl-aspartyl-glutamyl-leucyl (378-387)

monatox 20-mer linker (1-20) -fragment de l'exotoxine A de *Pseudomonas aeruginosa* (ETA) [fragment 277-633 du précurseur, comprenant le domaine II (281-393) dont le site de clivage protéolytique par la furine (298-309), le domaine Ib I432>V (394-433), le domaine III (434-633)] (21-377) -hexahistidyl-lysyl-aspartyl-glutamyl-leucyl (378-387)

monatox 20-mero de enlace (1-20) -fragmento de la exotoxina A de *Pseudomonas aeruginosa* (ETA) [fragmento 277-633 del precursor, que comprende el dominio II (281-393), que incluye la secuencia de ruptura proteolítica por furina (298-309), el dominio Ib I432>V (394-433), el dominio III (434-633)] (21-377) -hexahistidil-lisil-aspartil-glutamil-leucil (378-387)

EFGGAPEFPK	PSTPPGSSGL	EGGSLAALTA	HQACHLPLET	FTRHRQPRGW	50
EQLEQCGYPV	QRLVALYLAA	RLSWNQVDQV	IRNALASPGS	GGDLGEAIRE	100
QPEQARLALT	LAAAESERFV	RQGTGNDEAG	AASADVSLT	CPVAAGECAG	150
PADSGDALLE	RNYPTGAEFL	GDGGDVSFST	RGTQNWTVR	LLQAHRQLEE	200
RGYVFVGYHG	TFLEAAQSIV	FGGVRARSQD	LDAIWRGFYI	AGDPALAYGY	250
AQDQEPDARG	RIRNGALLRV	YVPRSSLPGF	YRTGLTLAAP	EAAGEVERLI	300
GHPFLPLRLDA	ITGPEEEGGR	LETILGWPLA	ERTVVIPSAI	PTDPRNVGGD	350
LDPSSIPDKE	QAISALPDYA	SQPGKPPHHH	HHKDEL		387

paptoxum

(taplitumomabum paptoxum (84)(46))

paptox protein PAP (*Phytolacca americana* antiviral)
 paptox protéine antivirale extraite du *Phytolacca americana* (PAP)
 paptox proteína PAP (proteína antiviral de *Phytolacca americana*)

pasudotoxum

(moxetumomabum pasudotoxum (102)(64))

- pasudotox 6-mer linker (1-6) -*Pseudomonas aeruginosa* exotoxin A (ETA) PE38 fragment [276-638 precursor fragment with del 390-405, containing domain II S389>N (281-389) with furin proteolytic cleavage site (298-309), domain Ib I432>V (406-433), domain III (434-638)] (7-353)
- pasudotox 6-mer linker (1-6) -fragment PE38 de l'exotoxine A de *Pseudomonas aeruginosa* (ETA) [fragment 276-638 du précurseur avec del 390-405, comprenant le domaine II S389>N (281-389) dont le site de clivage protéolytique par la furine (298-309), le domaine Ib I432>V (406-433), le domaine III (434-638)] (7-353)
- pasudotox 6-mero de enlace (1-6)-fragmento PE38 de la exotoxina A de *Pseudomonas aeruginosa* (ETA) [fragmento 276-638 del precursor con del 390-405, que comprende el dominio II S389>N (281-389), que incluye la secuencia de ruptura proteolítica por furina (298-309), el dominio Ib I432>V (406-433), el dominio III (434-638)] (7-353)

AKASGGPEGG	SLAALTAHQ	CHLPLETFTR	HRQPRGWEQL	EQCGYPVQRL	50
VALYLAARLS	WNQVDQVIRN	ALASPGSGGD	LGEAIREQPE	QARLALTLAA	100
AESERFVRQG	TGNDEAGAA	GPADSGDALL	ERNYPTGAEF	LGDDGVDVSFS	150
TRGTQNWTV	RLLQAHRL	ERGVFVGYH	GTFLEAAQSI	VFGGVRARSQ	200
DLDAIWRGFY	IAGDPALAYG	YAQDQEPDAR	GRIRNGALLR	VYVPRSSLPG	250
FYRTSLTLAA	PEAAGEVERL	IGHPLPLRLD	AITGPEEEGG	RLETILGWPL	300
AERTVVIPSA	IPTDPRNVGG	DLDPSSIPDK	EQAISALPDY	ASQPGKPPRE	350
DLK					

sudotoxum

(alvirceptum sudotoxum (69)(34))

- sudotox [248-L-histidine-249-L-methionine-250-L-alanine-251-L-glutamic acid]-(248-613)-exotoxin A (*Pseudomonas aeruginosa* reduced)
- sudotox [248-L-histidine-249-L-méthionine-250-L-alanine-251-acide L-glutamique]-(248-613)-exotoxine A (*Pseudomonas aeruginosa* réduite)
- sudotox [248-L-histidina-249-L-metionina-250-L-alanina-251-ácidoL-glutámico]-(248-613)-exotoxina A (*Pseudomonas aeruginosa* reducida)

tafenatoxum

(nacolomabum tafenatoxum (80)(41))

- tafenatox enterotoxin A (*Staphylococcus aureus*)
- tafénoatox entérotoxine A (*Staphylococcus aureus*)
- tafenatox enterotoxina A (*Staphylococcus aureus*)

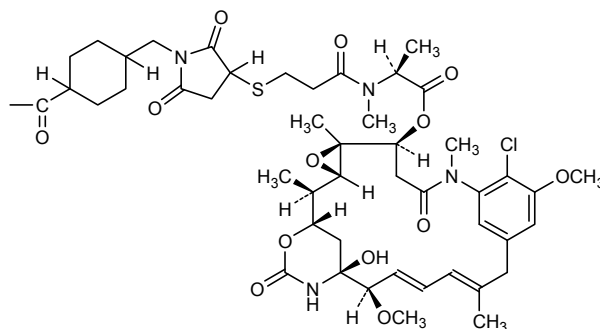
4-2- Designations for selected active moieties*

emtansinum

(trastuzumabum emtansinum (103)(65))

- emtansine 4-({3-[3-[(1*S*)-2-[(1*S*,2*R*,3*S*,5*S*,6*S*,16*E*,18*E*,20*R*,21*S*)-11-chloro-21-hydroxy-12,20-dimethoxy-2,5,9,16-tetramethyl-8,23-dioxo-4,24-dioxa-9,22-diazatetracyclo[19.3.1.1^{10,14}.0^{3,5}]]hexacosa-10,12,14(26),16,18-pentaen-6-yl]oxy}-1-methyl-2-oxoethyl]methylamino)-3-oxopropyl)sulfanyl]-2,5-dioxopyrrolidin-1-yl)methyl)cyclohexylcarbonyle
- emtansine 4-({3-[3-[(1*S*)-2-[(1*S*,2*R*,3*S*,5*S*,6*S*,16*E*,18*E*,20*R*,21*S*)-11-chloro-21-hydroxy-12,20-diméthoxy-2,5,9,16-tétraméthyl-8,23-dioxo-4,24-dioxa-9,22-diazatétracyclo[19.3.1.1^{10,14}.0^{3,5}]]hexacosa-10,12,14(26),16,18-pentaén-6-yl]oxy}-1-méthyl-2-oxoéthyl]méthylamino)-3-oxopropyl)sulfanyl]-2,5-dioxopyrrolidin-1-yl)méthyl)cyclohexylcarbonyle
- emtansina 4-({3-[3-[(1*S*)-2-[(1*S*,2*R*,3*S*,5*S*,6*S*,16*E*,18*E*,20*R*,21*S*)-11-cloro-21-hidroxi-12,20-dimetoxi-2,5,9,16-tetrametil-8,23-dioxo-4,24-dioxa-9,22-diazatetraciclo[19.3.1.1^{10,14}.0^{3,5}]]hexacosa-10,12,14(26),16,18-pentaen-6-il]oxi)-1-metil-2-oxoetil]metilamino)-3-oxopropil)sulfanil]-2,5-dioxopirrolidin-1-il}metil)ciclohexilcarbonilo

C₄₇H₆₂ClN₄O₃S

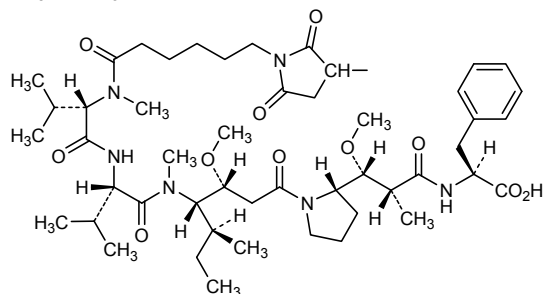
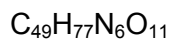


mafodotinum

(vorsetuzumabum mafodotinum (107))

- mafodotin 1-(6-[(1*S*)-1-[(1*S*)-1-[(1*S*,2*R*)-4-(2-[(1*R*,2*R*)-3-[(1-carboxy-2-phenylethyl)amino]-1-methoxy-2-methyl-3-oxopropyl]pyrrolidin-1-yl)-2-methoxy-1-[(1*S*)-1-methylpropyl]-4-oxobutyl]methylcarbamoyl)-2-methylpropyl]carbamoyl]-2-methylpropyl]methylamino)-6-oxohexyl)-2,5-dioxopyrrolidin-3-yl

mafodotine	1-(6-[[[(1S)-1-[[[(1S)-1-[(1S,2R)-4-(2-[(1R,2R)-3-[(1-carboxy-2-phényléthyl)amino]-1-méthoxy-2-méthyl-3-oxopropyl]pyrrolidin-1-yl)-2-méthoxy-1-[(1S)-1-méthylpropyl]-4-oxobutyl]méthylcarbamoyl]-2-méthylpropyl]carbamoyl]-2-méthylpropyl]méthylamino]-6-oxohexyl)-2,5-dioxopyrrolidin-3-yle
mafodotina	1-(6-[[[(1S)-1-[[[(1S)-1-[(1S,2R)-4-(2-[(1R,2R)-3-[(1-carboxi-2-feniletil)amino]-1-metoxi-2-metil-3-oxopropil]pirrolidin-1-il)-2-metoxi-1-[(1S)-1-metilpropil]-4-oxobutil]metilcarbamoil]-2-metilpropil]carbamoil]-2-metilpropil]metilamino]-6-oxohexil)-2,5-dioxopirrolidin-3-ilo

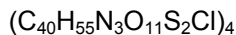


mertansinum

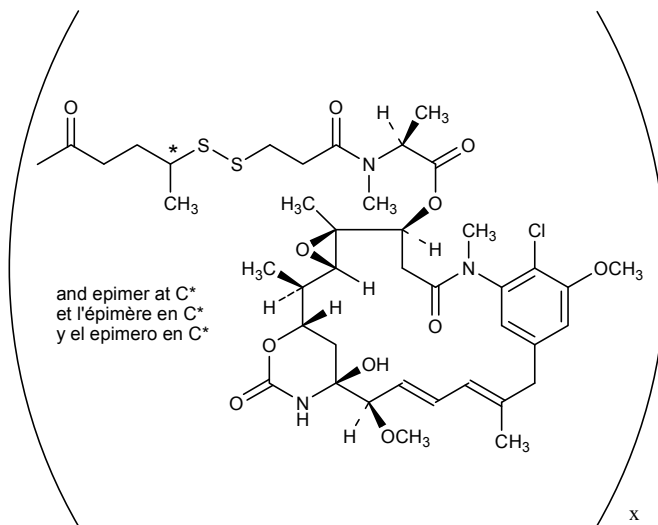
(cantuzumabum mertansinum (105)(66))

(lorvotuzumabum mertansinum (103)(65))

mertansine	x(4RS)-4-[[3-[[[(1S)-2-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-chloro-21-hydroxy-12,20-diméthoxy-2,5,9,16-tétraméthyl-8,23-dioxa-4,24-dioxa-9,22-diazatétracyclo[19.3.1.1 ^{10,14} .0 ^{3,5}]]hexacosa-10,12,14(26),16,18-pentaén-6-yl]oxy]-1-méthyl-2-oxoéthyl]méthylamino]-3-oxopropyl]disulfanyl]pentanoyle}
mertansine	x{(4RS)-4-[[3-[[[(1S)-2-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-chloro-21-hydroxy-12,20-diméthoxy-2,5,9,16-tétraméthyl-8,23-dioxa-4,24-dioxa-9,22-diazatétracyclo[19.3.1.1 ^{10,14} .0 ^{3,5}]]hexacosa-10,12,14(26),16,18-pentaén-6-yl]oxy]-1-méthyl-2-oxoéthyl]méthylamino]-3-oxopropyl]disulfanyl]pentanoyle}
mertansina	x{(4RS)-4-[[3-[[[(1S)-2-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-cloro-21-hidroxi-2,5,9,16-tetrametil -12,20-dimetoxi-4,24-dioxa-8,23-dioxa-9,22-diazatetraciclo[19.3.1.1 ^{10,14} .0 ^{3,5}]]hexacosa-10,12,14(26),16,18-pentaén-6-il]oxi]-1-metil-2-oxoetil]metilamino]-3-oxopropil]disulfanil]pentanoilo}



USAN

**raptansinum**

(cantuzumabum raptansinum (105)(67))

(indatuximabum raptansinum (105)(67))

raptansine

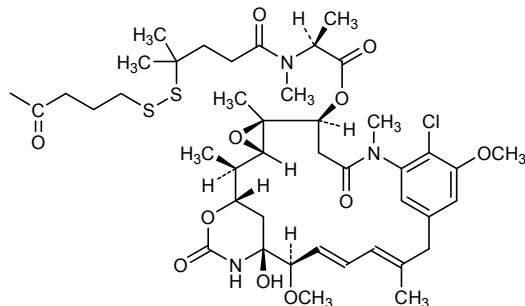
4-[(5-[[[(1S)-1-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-chloro-21-hydroxy-12,20-dimethoxy-2,5,9,16-tetramethyl-8,23-dioxo-4,24-dioxo-9,22-diazatetracyclo[19.3.1.1^{10,14}.0^{3,5}]]hexacos-10,12,14(26),16,18-pentaen-6-yl]oxy]-1-oxopropan-2-yl]](methyl)amino]-2-methyl-5-oxopentan-2-yl]disulfanyl]butanoyl

raptansine

4-[(5-[[[(2S)-1-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-chloro-21-hydroxy-12,20-diméthoxy-2,5,9,16-tétraméthyl-8,23-dioxo-4,24-dioxo-9,22-diazatétracyclo[19.3.1.1^{10,14}.0^{3,5}]]hexacos-10,12,14(26),16,18-pentaèn-6-yl]oxy]-1-oxopropan-2-yl]]méthylamino]-2-méthyl-5-oxopentan-2-yl]disulfanyl]butanoyl

raptansina

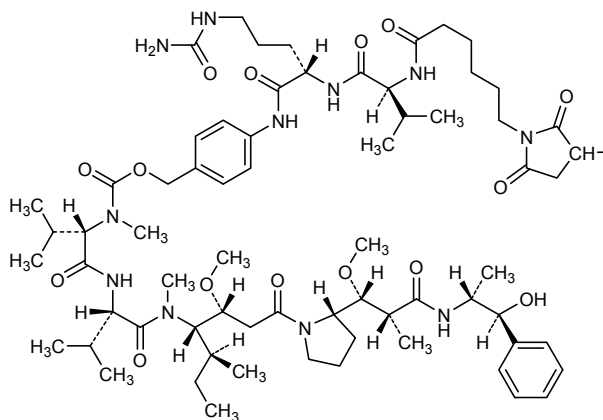
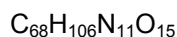
4-[(5-[[[(1S)-1-[[[(1S,2R,3S,5S,6S,16E,18E,20R,21S)-11-cloro-21-hidroxi-12,20-dimetoxi-2,5,9,16-tetrametil-8,23-dioxo-4,24-dioxo-9,22-diazatetraciclo[19.3.1.1^{10,14}.0^{3,5}]]hexacos-10,12,14(26),16,18-pentaen-6-il]oxi]-1-oxopropan-2-il]](metil)amino]-2-metil-5-oxopentan-2-il]disulfanil]butanoil

C₄₂H₅₉ClN₃O₁₁S₂

vedotinum

(brentuximabum vedotinum (103)(65))

- vedotin 1-(6-[[[(2S)-1-[[[(2S)-5-carbamoylamino-1-[[4-[[[(2S)-[[[(2S)-1-[[[(3R,4S,5S)-1-[(2S)-2-[(1R,2R)-3-[[[(1S,2R)-1-hydroxy-1-phenylpropan-2-yl]amino]-1-methoxy-2-methyl-3-oxopropyl]pyrrolidin-1-yl]-3-methoxy-5-methyl-1-oxoheptan-4-yl](methyl)amino]-3-methyl-1-oxobutan-2-yl]amino]-3-methyl-1-oxobutan-2-yl]methylcarbamoyloxy}phenyl]amino]-1-oxopentan-2-yl]amino]-3-methyl-1-oxobutan-2-yl]amino]-6-oxohexyl)-2,5-dioxopyrrolidin-3-yl
- védotine 1-(6-[[[(1S)-1-[[[(1S)-4-(carbamoylamino)-1-({4-[[[(1S)-1-[[[(1S)-1-[[[(1S,2R)-4-[(2S)-2-[(1R,2R)-3-[[[(1R,2S)-2-hydroxy-1-méthyl-2-phényléthyl]amino]-1-méthoxy-2-méthyl-3-oxopropyl]pyrrolidin-1-yl]-2-méthoxy-1-[(1S)-1-méthylpropyl]-4-oxobutyl]méthylcarbamoyl)-2-méthylpropyl]carbamoyl]-2-méthylpropyl]méthylcarbamoyl}oxy)méthyl]phényl]carbamoyl)butyl]carbamoyl]-2-méthylpropyl]amino]-6-oxohexyl)-2,5-dioxopyrrolidin-3-yle
- vedotina 1-(6-[[[(1S)-1-[[[(1S)-4-(carbamoylamino)-1-({4-[[[(1S)-1-[[[(1S)-1-[[[(1S,2R)-4-[(2S)-2-[(1R,2R)-3-[[[(1R,2S)-2-hidroxi-1-metil-2-feniletíl]amino]-2-metil-1-metoxi-3-oxopropyl]pyrrolidin-1-yl]-1-[(1S)-1-metilpropil-2-metoxi]-4-oxobutil]metilcarbamoyl)-2-metilpropil]carbamoyl]-2-metilpropil]metilcarbamoyl}oxi)metil]fenil]carbamoyl)butil]carbamoyl]-2-metilpropil]amino]-6-oxohexil)-2,5-dioxopirrolidin-3-ilo



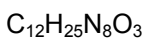
* Kindly note that this list is not exhaustive.

4-3- Insulin qualifiers

arginum

(insulinum arginum (58)(28))

argine	B30-yl-L-arginyl-L-arginine
argine	B30-yl-L-arginyl-L-arginine
argina	B30-il-L-arginil-L-arginina



USAN

aspartum

(insulinum aspartum (76)(38))

aspart	[B28-L-aspartic acid]
asparte	[B28-L-acide aspartique]
asparta	[B28-L-ácido aspártico]

JAN
USAN

dalanatum

(insulinum dalanatum (104)(65))

dalanated	des-B30-alanine
dalanatée	dés-B30-alanine
dalanatada	des-B30-alanina

degludecum

(insulinum degludecum (101)(63))

degludec	$N^{6, B29}$ -[N-(15-carboxypentadecanoyl)-L- γ -glutamyl]-des-30B-L-threonine
dégludec	$N^{6, B29}$ -[N-(15-carboxypentadécanoyl)-L- γ -glutamyl]-dès-30B-L-thréonine
degludec	$N^{6, B29}$ -[N-(15-carboxipentadecanoil)-L- γ -glutamil]-des-30B-L-treonina

JAN

defalanum

(## insulinum defalanum (37)(!))

defalan	des-B1-phenylalanine
défalan	dés-B1-phénylalanine
defalán	des-B1-fenilalanina

detemirum

(insulinum detemirum (80)(42))

detemir	$N^{6,B29}$ -tetradecanoyl-des-B30-L-threonine
détémir	$N^{6,B29}$ -tétradécanoyl-dés-B30-L-thréonine
detemir	$N^{6,B29}$ -tetradecanoil-des-B30-L-treonina

BAN
JAN
USAN

glarginum

(insulinum glarginum (76)(38))

glargine	[A21-glycine], B30-yl-L-arginyl-L-arginine
glargine	[A21-glycine], B30-yl-L-arginyl-L-arginine
glargina	[A21-glicina], B30-il-L-arginil-L-arginina

BAN
JAN
USAN

glulisinum

(insulinum glulisinum (84)(46))

glulisine	[B3-lysine, B29-glutamic acid]
glulisine	[B3-lysine, B29-acide glutamique]
glulisina	[B3-lisina, B29-ácido glutámico]

JAN
USAN

lisprum

(insulinum lisprum (72)(35))

lispro	[B28-L-lysine, B29-L-proline]
lispro	[B28-L-lysine, B29-L-proline]
lispro	[B28-L-lisina, B29-L-prolina]

BAN
JAN
USAN

tregopilum

(insulinum tregopilum (103)(65))

tregopil	$N^{6,B29}$ -(4,7,10,13-tetraoxatetradecanoyl)
tregopil	$N^{6,B29}$ -(4,7,10,13-tétraoxatétradécanoyl)
tregopil	$N^{6,B29}$ -(4,7,10,13-tetraoxatetradecanoil)

ANNEX 5:

Names for substances with polyethylene glycol (PEG) polymeric chains

Names with *peg-* prefix

insulinum peglisprum (107)
insulin peglispro
insuline péglispro
insulina peglispro

peginterferonum alfa-2a (84)(46)
peginterferon alfa-2a
péginterféron alfa-2a
peginterferón alfa-2a

pegacaristimum (80)(42)
pegacaristim
pégacaristim
pegacaristim

peginterferonum alfa-2b (84)(46)
peginterferon alfa-2b
péginterféron alfa-2b
peginterferón alfa-2b

pegademasum (63)(31)
pegademase
pégadémase
pegademasa

peginterferonum lambda-1a (105)(67)
peginterferon lambda-1a
péginterféron lambda-1a
peginterferón lambda-1a

pegadricasum (105)(67)
pegadricase
pégadricase
pegadricasa

pegloticasum (98)(60)
pegloticase
pégloticase
pegloticasa

pegaldesleukinum (74)(36)
pegaldesleukin
pégaldesleukine
pegaldesleukina

pegmusirudinum (77)(39)
pegmusirudin
pegmusirudine
pegmusirudina

pegamotecanum (91)(53)
pegamotecan
pégamotécán
pegamotecán

pegnartograstimum (80)(42)
pegnartograstim
pégnartograstim
pegnartograstim

pegaspargasum (64)(31)
pegaspargase
pégaspargase
pegaspargasa

pegnivacoginum (106)(67)
pegnivacogin
pégnivacogin
pegnivacogina

pegdinatanibum (103)(65)
pegdinatanib
péginétanib
pegdinetanib

pegorgoteinum (72)(35)
pegorgotein
pégorgotéine
pegorgoteína

pegfilgrastimum (86)(47)
pegfilgrastim
péfilgrastim
pegfilgrastim

pegoteratum (31)(14)
pegotate
pégotérate
pegoterato

peginesatidum (103)(65)
peginesatide
péginésatide
peginesatida

pegsunerceptum (95)(49)
pegsunercept
pegsunercept
pegsunercept

pegvisomantum (88)(49)
 pegvisomant
 pegvisomant
 pegvisomant

Names with *pegol* as second word

alacizumabum pegolum (98)(60)
 alacizumab pegol
 alacizumab pégol
 alacizumab pegol

eptacogum alfa pegolum (activatum)
 (101)(63)
 eptacog alfa pegol (activated)
 eptacog alfa pégol (activé)
 eptacog alfa pegol (activado)

calaspargasum pegolum (105)(67)
 calaspargase pegol
 calaspargase pégol
 calaspargasa pegol

etirinotecanum pegolum (107)
 etirinotecan pegol
 étirinotécan pégol
 etirinotecán pegol

certolizumabum pegolum (97)(59)
 certolizumab pegol
 certolizumab pégol
 certolizumab pegol

firtecanum pegolum (107)
 firtecan pegol
 firtécan pégol
 firtecán pégol

egaptivonum pegolum (104)(66)
 egaptivon pegol
 egaptivon pégol
 egaptivón pegol

nonacogum beta pegolum (103)(65)
 nonacog beta pegol
 nonacog bêta pégol
 nonacog beta pegol

enlimomabum pegolum (77)(39)
 enlimomab pegol
 enlimomab pégol
 enlimomab pegol

somatropinum pegolum (103)(65)
 somatropin pegol
 somatropine pégol
 somatropina pegol

Names with *-peg-* as an infix

cepeginterferonum alfa-2b (105)(67)
 cepeginterferon alfa-2b
 cépeginterféron alfa-2b
 cepeginterferón alfa-2b

lipegfilgrastimum (107)(68)
 lipegfilgrastim
 lipegfilgrastim
 lipegfilgrastim

empegfilgrastimum (107)
 empegfilgrastim
 empegfilgrastim
 empegfilgrastim

Explanatory note:

INNs for substances which contain, as part of their structure, polyethylene glycol (PEG) polymeric chains are given either a *-peg* prefix, or, in special cases a *-peg* infix. When a two-word construction is used, INNs include *pegol* as the second word. Both approaches are equivalent, the choice in the selection process depending on linguistic considerations. As there is a considerable variation in ways in which the PEG moiety is linked to the other part of the structure, and as there are considerable differences in the average molecular mass of the PEG moiety,

structures of individual substances have not been reproduced in the document, but can be consulted in relevant INN lists which are accessible on-line at

<http://www.who.int/medicines/publications/druginformation/innlists/en/index.html>

Furthermore, it should be noted that INN *macrogol* has been selected for polyethylene glycol as an individual polymeric substance. Each such macrogol name is followed by a number corresponding approximately to the average molecular mass of the product.

WHY INNs?

Since the number of drug substances being registered during the last decades is constantly increasing, there is a strong need to ensure the identification of each pharmaceutical compound by a unique, universally available and accepted name. The existence of an international nomenclature system for pharmaceutical products is crucial for the clear identification, safe prescription and dispensing of medicines to patients, and for communication and exchange of information among health professionals and scientists worldwide.

An **International Nonproprietary Name (INN)** identifies a pharmaceutical substance by a **unique name that is globally recognized and is public property**. A nonproprietary name is also known as a generic name. Generic names are intended to be used in pharmacopoeias, labeling, advertising, drug regulation and scientific literature.