International Nonproprietary Names for Pharmaceutical Substances

in accordance with paragraph 7 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,1 notice is hereby given that the following are selected as recommended international nonproprietary names.

The inclusion of a name in the lists of recommended international nonproprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

Recommended International Nonproprietary Names (Rec. INN): List 292

Recommended International Nonproprietary Name (Latin, English) Chemical Name or Description and Molecular Formulae

abecarnilum abecarnil

isopropyl 6-(benzyloxy)-4-(methoxymethyl)-9H-pyrido[3,4-b]indole-3-

carboxylate C₂₄H₂₄N₂O₄

acemannanum acemannan

 $(1\rightarrow 4)$ - β -o-mannurono-2-acetamido-2-deoxy- β -o-gluco- β -o-mannan 3-acetate

acidim butedronicum butedronic acid

(diphosphonomethyl)succinic acid

C.H.,O,,P.

acidum gadotericum

gadoteric acid

hydrogen [1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetato(4-)]-

gadolinate(1-) C1.H25GdN4O.

acidum pamidronicum

pamidronic acid

(3-amino-1-hydroxypropylidene)diphosphonic acid

C.H.,NO,P.

acidum tiludronicum

tiludronic acid

[[(p-chlorophenyl)thio]methylene]diphosphonic acid

C,H,CIO,P,S

actisomidum actisomide

(+)-cis-4-[2-(diisopropylamino)ethyl]-4,4a,5,6,7,8-hexahydro-1-methyl-

4-phenyl-3H-pyrido[1,2-c]pyrimidin-3-one

C23H35N3O

alfadexum alfadex

a-cyclodextrin C₃₆H₆₀O₃₀

¹ Off. Rec. Wid Hith Org., 1955, 60, 3 (Resolution EB15 R7); 1969, 1973, 10 (Resolution EB43.R9).

² Other lists of recommended international nonproprietary names can be found in Cumulative List No. 7, 1988.

alteplasum alteplase	plasminogen activator (human tissue-type 2-chain form protein molety) $C_{2734}H_{4174}N_{914}O_{924}S_{45}$
ambamustinum ambamustine	N-[3-[m-[bis(2-chloroethyl)amino]phenyl]-N-[3-(p-fluorophenyl)-∟alanyl]- ∟-alanyl]-∟-methionine, ethyl ester C₂-H₃-Cl₂FN₄O₄S
ambasilidum ambasilide	$3-(p-aminobenzoyl)-7-benzyl-3,7-diazabicyclo[3.3.1]nonane C_{21}H_{23}N_3O$
amilomerum amilomer	microspheres produced by reaction of partially hydrolysed starch with epichlorhydrin, quickly degradable by amylase (with a half-life of less than 120 minutes). The name is followed by a hyphenated numerical code in which the nur. preceding the hyphen indicates the half-life in minutes and that following the hyphen indicates the mean diameter of the microspheres in μm . e.g. amilomer 25–45 has a half-life of 25 minutes and a mean diameter of 45 μ . The methods of determining these parameters are approved by the competent national authority.
anistreplasum anistreplase	anisoylated (human) lys-plasminogen streptokinase activator complex (1 ·
antithrombinum ItI antithrombin III	antithrombin III. The source of the product should be indicated.
apafantum apafant	4-[3-[4-(o -chlorophenyl)-9-methyl-6 H -thieno[3,2- t]-s-triazolo[4,3- a]-[1,4]diazepin-2-yl]propionyl]morpholine $C_{zz}H_{zz}CIN_zO_zS$
apracionidinum apracionidine	2-[(4-amino-2,6-dichlorophenyl)imino]imidazolidine $C_{\bullet}H_{10}Cl_{2}N_{\bullet}$
argimesnum argimesna	L-arginine mono(2-mercaptoethanesulfonate) $C_{\bullet}H_{20}N_4O_{\theta}S_2$
arpromidinum arpromidine	(\pm) -1-[3-(p-fluoropheny!)-3-(2-pyridyl)propy!]-3-(3-imidazol-4-ylpropyl)-guanidine $C_{21}H_{25}FN_6$
atosibanum atosiban	1-(3-mercaptopropionic acid)-2-[3-(ρ -ethoxyphenyi)-p-alanine]-4-L-threonine 8-L-ornithineoxytocin $C_{43}H_{67}N_{11}O_{12}S_2$
azetirelinum azetirelin	(—)-N-[[$\{2S\}$ -4-oxo-2-azetidinyl]carbonyl]-t-histidyl-t-prolinamide $C_{1s}H_{zo}N_{c}O_{c}$
barmastinum barmastine	3-[2-[4-[(3-furfuryl-3 H -imidazo[4,5- b]pyridin-2-yl)amino]piperidino]ethyl]-2-methyl-4 H -pyrido[1,2- a]pyrimidin-4-one $C_{a7}H_{a9}N_7O_3$
baxitozinum baxitozine	(E)-3-(3,4,5-trimethoxybenzoyl)acrylic acid $C_{13}H_{14}O_{6}$
bepafantum bepafant	4-[[6-(o-chlorophenyl)-8,9-dihydro-1-methyl-4H,7H-cyclopenta[4,5]thieno- [3,2-f]-s-triazolo[4,3-a][1,4]diazepin-8-yl]carbonyl]morpholine C ₂₃ H ₂₂ ClN ₂ O ₂ S

(\pm)-(1 R^* ,2 R^* ,3a S^* ,8b S^*)-2,3,3a.8b-tetrahydro-2-hydroxy-1-[(E)-(3 S^*)-3-hydroxy-4-methyl-1-octen-6-ynyl]-1H-cyclopenta[b]benzofuran-5-butyric acid $C_{24}H_{36}O_5$

beraprostum beraprost betiatidum betiatide N-[N-[N-(mercaptoacetyl)glycyl]glycyl]glycine benzoate (ester)

C, H, N, O.S

binfloxacinum binfloxacin 7-(1,4-diazabicyclo[3.2.2]non-4-yl)-1-ethyl-6-fluoro-1,4-dihydro-4-oxo-

3-quinolinecarboxylic acid

C1,H2,FN,O,

binizolastum binizolast 1-(piperidinomethyl)-4-propyl-s-triazolo[4,3-a]quinazolin-5(4H)-one

C, H23N5O

bisaramilum bisaramil syn-3-ethyl-7-methyl-3,7-diazabicyclo[3.3.1]non-9-yl p-chlorobenzoate

C17H22CIN2O2

bretazenilum bretazenil tert-butyl (S)-8-bromo-11,12,13,13a-tetrahydro-9-oxo-9H-imidazo-

[1,5-a]pyrrolo[2,1-c][1,4]benzodiazepine-1-carboxylate

C, H20BrN,O,

brivudinum brivudine (E)-5-(2-bromovinyl)-2'-deoxyuridine

C,,H,,BrN,O,

bunaprolastum bunaprolast 2-butyl-4-methoxy-1-naphthol acetate

C1,H20O,

cefcanelum cefcanei (6R,7R)-7-[(R)-mandelamido]-3-[[(5-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-3-[(S-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-1-(R)-mandelamido]-1-(R)-mandelami

8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid

C,H,N,O,S,

cefcanelum daloxatum cefcanel daloxate

2,3-dihydroxy-2-butenyl (6R,7R)-7-[(R)-mandelamido}-3-[(5-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-

carboxylate, cyclic 2,3-carbonate, ester with L-alanine

C27H27N,O.S.

cefprozilum cefprozil (6R,7R)-7-[(R)-2-amino-2-(p-hydroxyphenyl)acetamido]-8-oxo-3-(1-propenyl)-

5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid

C1.H.N.O.S

celquinomum celquinome 1-[[(6R,7R)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-5,6,7,8-tetrahydroquinolinium

hydroxide, inner salt, 7^2 -(Z)-(Q-methyloxime)

C23H24N6O5S2

ceftibutenum ceftibuten (+)-(6R,7R)-7-[(Z)-2-(2-amino-4-thiazolyl)-4-carboxycrotonamido]-8-oxo-

5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid

C16H14N4O6S2

cilofunginum cilofungin 1-[(4R,5R)-4,5-dihydroxy- N^2 -[p-(octyloxy)benzoyl]-L-ornithine]echinocandin B or (4R,5R)-4,5-dihydroxy- N^2 -[p-(octyloxy)benzoyl]-L-ornithyl-L-threonyl-trans-4-hydroxy-L-prolyi-(S)-4-hydroxy-4-(p-hydroxyphenyl)-L-threonyl-L-threonyl-

(3S,4S)-3-hydroxy-4-methyl-L-proline cyclic $(6 \rightarrow 1)$ -peptide

C48H71N7O17

cisconazolum cisconazole (\pm) -cis-1-[[3-[(2,6-difluorobenzyl)oxy]-5-fluoro-2,3-dihydrobenzo[b]thien-

2-yl]methyl]imidazole

C1.H1.F,N2OS

ciarithromycinum clarithromycin

6-O-methylerythromycin

C,4H4,NO13

colestolonum colestolone	3β -hydroxy-5 α -cholest-8(14)-en-15-one $C_{27}H_{4a}O_2$
colextranum colextran	dextran 2-(diethylamino)ethyl ether
cyromazinum cyromazine	cyclopropylmelamine C _s H ₁₀ N _s
daptomycinum daptomycin	N-decanoyl-L-tryptophyl-L-asparaginyl-L-aspartyl-L-threonylglycyl-L-ornithy L-aspartyl-b-alanyl-L-aspartylglycyl-b-seryl-threo-3-methyl-L-glutamyl-3-anthranitoyl-L-alanine, ε_1 -lactone $C_{12}H_{101}N_{17}O_{26}$
delfaprazinum delfaprazine	1- $(a^2$ -phenyl-2,5-xylyl)piperazine C ₁₈ H ₂₂ N ₂
delmopinolum delmopinol	(\pm) -3-(4-propylheptyl)-4-morpholineethanol $C_{18}H_{33}NO_2$
dexmedetomidinum dexmedetomidine	(+)-4-[(\emph{H})- α ,2,3-trimethylbenzyl]:midazole C ₁₂ H, $_{6}$ N $_{2}$
diprafenonum diprafenone	(\pm)-2'-[2-hydroxy-3-($tert$ -pentylamino)propoxy}-3-phenylpropiophenone $C_{23}H_{31}NO_3$
dizocilpinum dizocilpine	(+)-10,11-dihydro-5-methyl-5 H -dibenzo[a , d]cyclohepten-5,10-imine $C_{16}H_{18}N$
docarpaminum docarpamine	$(-)$ - (S) -2-acetamido- N - $(3,4$ -dihydroxyphenethyl)-4- $($ methylthio $)$ butyramid bis $($ ethyl carbonate $)$ $($ ester $)$ $C_{21}H_{30}N_2O_{4}S$
dopropidilum dopropidil	1-[1-(isobutoxymethyl)-2-[[1-(1-propynyl)cyclohexyl]oxy]ethyl]pyrrolidine C ₂₀ H ₃₅ NO ₂
doretinelum doretinel	(\pm) -p-[(E)-2-(5,6,7,8-tetrahydro-7-hydroxy-5,5,8,8-tetramethyl-2-naphthylpropenyl]benzyl alcohol $C_{24}H_{30}O_2$
dumorelinum dumorelin	27-L-leucine-44a-glycinegrowth hormone-releasing factor (human) $C_{216}H_{362}N_{72}O_{68}$
edelfosinum edelfosine	choline hydroxide, (\pm)-2-methoxy-3-(octadecyloxy)propy! hydrogen phosphate, inner sait or 2-O-methyl-1-O-octadecyl-rac-glycero-3-phosphocholine $C_{27}H_{56}NO_6P$
efaroxanum efaroxan	(\pm)-2-(2-ethyl-2.3-dihydro-2-benzofuranyl)-2-imidazoline $C_{13}H_{16}N_2O$
elbanizinum elbanizine	1-[2-[(2,6-dimethyl-3-n:tro-4-pyridyl)amıno}ethyl]-4-(diphenylmethyl)-piperazine $C_{2e}H_{31}N_{5}O_{2}$
elnadipinum elnadipine	isopropyl (-)-(S)-4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-5-(1,3,4-oxadiazol-2-yl)nicotinate $C_{19}H_{19}Cl_2N_3O_3$

emedastinum emedastine	1-(2-ethoxyethyl)-2-(hexahydro-4-methyl-1 H -1,4-diazepin-1-yl)benzimidazoie $C_{17}H_{26}N_4O$
endixaprinum endixaprine	1-[6-(2,4-dichlorophenyl)-3-pyridazinyl]-4-pıperidinol $C_{15}H_{15}Cl_2N_3O$
epicriptinum epicriptine	9,10a-dihydro-13'-epi- eta -ergocryptine or (13' R)-9,10a-dihydro- eta -ergocryptine $C_{32}H_{43}N_{6}O_{5}$
erbulozolum erbulozole	ethyl (\pm)-cis-p-[[[2-(imidazol-1-ylmethyl)-2-(p-methoxyphenyl)-1,3-dioxolan-4-yl]methyl]thio]carbanilate $C_{24}H_{27}N_3O_8S$
esafloxacinum esafloxacin	(\pm)-7-(3-amino-1-pyrrolidinyl)-1-ethyl-6-fluoro-1,4-dihydro-4-oxo-1,8-naphthyridine-3-carboxylic acid $C_{15}H_{17}FN_4O_3$
etrabaminum etrabamine	4,5,6,7-tetrahydro-6-(methylamino)benzothiazole C _e H ₁₂ N₂S
famiraprinii chloridum famiraprinium chloride	6-amino-1-(3-carboxypropyl)-5-methyl-3-phenylpyridazinium chloride C _{1s} H _{1s} ClN ₃ O ₂
fiacitabinum fiacitabine	1-(2-deoxy-2-fluoro- β -o-arabinofuranosyl)-5-iodocytosine $C_9H_{11}FIN_3O_4$
flerobuterolum flerobuterol	a -[($tert$ -butylamino)methyl]- o -fluorobenzyl alcohol $C_{1z}H_{1a}FNO$
fluparoxanum fluparoxan	$(3aS,9aS)$ -5-fluoro-2,3,3a,9a-tetrahydro-1 <i>H</i> -[1,4]benzodioxino[2,3- c]pyrrole $C_{10}H_{10}FNO_2$
fronepidilum fronepidil	1-[1-(isobutoxymethyl)-2-[(1-methyl-1-phenyl-2-propynyl)oxy)ethyl]pyrrolidine $C_{21}H_{31}NO_2$
gadopenamidum gadopenamide	$ [N,N-bis[2-[(carboxymethyl)[(morpholinocarbony])methyl]amino]ethyl]-glycinato(3-)]gadolinium \\ C_{22}H_{34}GdN_3O_{10} $
galtifeninum galtifenin	[[[(2,6-diethyl-3-iodophenyl)carbamoyl]methyl]imino]diacetic, acid $C_{18}H_{23}IN_2O_8$
gapromidinum gapromidine	1-(3-imidazol-4-ylpropyl)-3-[2-(2-pyridylamino)ethyl]guanidine $C_{14}H_{21}N_7$
glisentidum glisentide	1-cyclopentyl-3-[[<i>p-</i> [2-(<i>o-</i> anisamido)ethyl]phenyl]sulfonyl]urea C ₂₂ H ₂₇ N ₃ O ₅ S
granisetronum granisetron	1-methyl-N-(endo-9-methyl-9-azabicyclo[3.3.1]non-3-yl)-1 H -indazole-3-carboxamide C ₁₈ $H_{24}N_4O$
ibafloxacinum ibafloxacin	9-fluoro-6,7-dihydro-5,8-dimethyl-1-oxo-1 <i>H</i> ,5 <i>H</i> -benzo[<i>ij</i>]quinolizine- 2-carboxylic acid C _{1s} H ₁₄ FNO ₃

imidaprilum imidapril	(4S)-3-[(2S)-N-[(1S)-1-carboxy-3-phenylpropyl]alanyl]-1-methyl-2-oxo-4-imidazolidinecarboxylic acid, 3-ethyl ester C ₂₀ H ₂₇ N ₃ O ₆
imirestatum ımırestat	$2,7\text{-difluorospiro}[fluorene-9,4'-imidazolidine]-2',5'-dione C_{15}H_{\bullet}F_2N_2O_2$
inaperisonum inaperisone	(\pm)-4'-ethyl-2-methyl-3-(1-pyrrolidinyl)propiophenone $C_{16}H_{23}NO$
notrisidum iotriside	(\pm) -N,N'-bis(2,3-dihydroxypropyl)-2,4,6-trilodo-N-methyl-1,3,5-benzenetricarboxamide $C_{16}H_{20}l_3N_3O_7$
ioxilanum ioxilan	N -(2,3-dihydroxypropyl)-5-[N -(2,3-dihydroxypropyl)acetamido]- N '-(2-hydroxyethyl)-2,4,6-triidoisophthalamide $C_{1B}H_{2*}I_2N_3O_B$
irtemazolum irtemazole	(\pm) -5-(a-imidazoi-1-ylbenzyl)-2-methylbenzimidazole $C_{1a}H_{1e}N_a$
isbogrelum isbogrel	(E)-7-phenyl-7-(3-pyridyl)-6-heptenoic acid C_{14} H_{14} NO ₂
ivarimodum ivarimod	4-[[$\{3aR,3bS,5aR,6R,9aR,9bR,11R,11aR\}$ -1,2,3,3a,4,5,5a,6,7,8,9,9a,9b,10,11,11aR}-1,2,3,3a,4,5,5a,6,7,8,9,9a,9b,10,11,11aR}-1,2-isopropyl-6,9a-dimethyl-1,3-dioxo-3b,11-etheno-3bH-naphth[2,1-e]isoindol-6-yl]carbonyl]morpholine $C_{3o}H_{44}N_2O_4$
lansoprazolum lansoprazole	2-[[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl]sulfinyl]benzimidazole $C_{16}H_{14}F_3N_3O_2S$
laprafyllinum laprafylline	8-[2-[4-(diphenylmethyl)-1-piperazinyl]ethyl]-3-isobutyl-1-methylxanthine $C_{2a}H_{3a}N_aO_2$
locicortoloni dicibas locicortolone dicibate	9,11β-dichloro-21-hydroxy-16a-methylpregna-1,4-diene-3,20-dione dicyclohexylmethyl carbonate C _{3ε} H ₃₀ Cl ₂ O ₃
lodeiabenum Iodelaben	(\pm) -2-chloro-4-(1-hydroxyoctadecyl)benzoic acid $C_{25}H_{41}ClO_3$
loracarbefum loracarbef	$(6R,7S)$ -7-[(R)-2-amino-2-phenylacetamido]-3-chloro-8-oxo-1-azabi-cyclo[4.2.0]oct-2-ene-2-carboxylic acid $C_{16}H_{16}CIN_3O_4$
loreclezolum toreclezole	(Z) -1- $(\beta,2,4$ -trichlorostyryl)-1 H -1,2,4-triazole $C_{10}H_6Cl_3N_3$
lornoxicamum lornoxicam	6-chloro-4-hydroxy-2-methyl- N -2-pyridyl-2 H -thieno[2,3- e]-1,2-thiazine-3-carboxamide 1,1-dioxide $C_{13}H_{10}CtN_3O_4S_3$
lorpiprazolum lorpiprazole	(\pm) -cis-5,5a,6.7.8.8a-hexahydro-3-[2-[4-($a.a.a$ -trifluoro- m -tolyl)-1-piperazinyl]ethyl]cyclopenta[3.4]pyrrolo[2,1- c]-s-triazole $C_{z^4}H_{z^6}F_3N_s$
manidipinum manidipine	2-[4-(diphenylmethyl)-1-piperazinyl]ethyl methyl (\pm)-1,4-dihydro-2,6-dimethyl-4-(m -nitrophenyl)-3,5-pyridinedicarboxylate $C_{35}H_{36}N_4O_5$

Recommended International Nonproprietary Name (Latin, English)

meropenemum meropenem (4R,5S,6S)-3-[{(3S,5S)-5-(dimethylcarbamoyl)-3-pyrrolidinyl]thio]-6-{(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic

acid C₁₇H₂₅N₃O₅S

mertiatidum mertiatide N-[N-[N-(mercaptoacetyl)glycyl]glycyl]glycine

C4H13N3O5S

metalkonii chloridum metalkonium chloride benzyl[(dodecyicarbamoyl)methyl]dimethylammonium chloride

C23H41CIN2O

methoprenum methoprene isopropyl (2E,4E)-(7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate

C,,H,,O,

milnacipranum milnacipran (\pm) -cis-2-(aminomethy!)-N,N-diethyl-1-phenylcyclopropanecarboxamide $C_{11}H_{21}N_2O$

mirosamicinum

14-hydroxymycinamicin I or (\sim)-(1R,2S,3R,6E,8S,9S,10S,12R,14E,16S)-2- [[(6-deoxy-2,3-di-O-methyl- β -p-allopyranosyl)oxy]methyl]-3-ethyl-2- hydroxy-8,10,12-trimethyl-9-[[3,4,6-trideoxy-3-(dimethylamino)- β -p-xylo-hexopyranosyl]oxy]-4,17-dioxabicyclo[14.1.0]heptadeca-6,14-diene-5,13-dione

C,,H,,NO,,

mitoflaxonum mitoflaxone 4-oxo-2-phenyl-4*H*-1-benzopyran-8-acetic acid C₁₇H₁₂O₄

moexiprilum moexipril (3S)-2-[(2S)-N-[(1S)-1-carboxy-3-phenylpropyl]alanyl]-1,2,3,4-tetrahydro-6,7-dimethoxy-3-isoquinolinecarboxylic acid, 2-ethyl ester

 $C_{27}H_{24}N_2O_7$

moxiraprinum moxirapine p-[5-methyl-6-[(2-morpholinoethyl)amino]-3-pyridazinyl]phenol $C_{17}H_{22}N_2O_2$

muroderminum murodermin urogastrone (mouse salivary gland) or epidermal growth factor (mouse salivary gland)

muromonabum-CD3 muromonab-CD3 a biochemically purified $\lg G_{2\Omega}$ immunoglobulin consisting of a heavy chain of approx. 50,000 daltons and a light chain of approx. 25,000 daltons it is manufactured by a process involving the fusion of mouse myeloma cells to lymphocytes from immunized animals to produce a hybridoma which secretes antigen-specific antibodies to the T3 antigen of human T-lymphocytes.

nanterinonum nanterinone

6-(2,4-dimethylimidazol-1-yl)-8-methylcarbostyril $C_{15}H_{15}N_3O$

napirimusum napirimus 1-methyl-4-(1-naphtholyl)pyrrole-2-carboxylic acid $C_{17}H_{13}NO_3$

natrii pentosani polysulfas pentosan polysulfate sodium $(1\rightarrow 4)$ - β -o-xylan 2,3-bis(hydrogen sulfate), sodium salt $(C_8H_8Na_2O_{10}S_2)_n$

naxagolidum naxagolide (+)-(4aR,10bR)-3,4,4a.5,6,10b-hexahydro-4-propyl-2H-naphth[1,2-b]-1,4-oxazin-9-ol $C_{13}H_{21}NO_2$

nebracetamum nebracetam	(\pm) -4-(aminomethyl)-1-benzyl-2-pyrrolidinone $C_{12}H_{16}N_2O$
neldazosinum neldazosin	(\pm)-1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(3-hydroxybutyryl)piperazine $C_{14}H_{26}N_5O_4$
nelezaprinum nelezaprine	(E)-9-chloro-11-[3-(dimethylamino)propylidene]-6,11-dihydro- $5H$ -pyrrolo[2,1- b][3]benzazepine $C_{14}H_2$, CIN_2
nemadectinum nemadectin	(6 R ,23 S ,25 S)-5- O -demethyl-28-deoxy-25-[(E)-1,3-dimethyl-1-butenyl]-6,28-epoxy-23-hydroxymilbemycin B $C_{34}H_{52}O_{6}$
nicaravenum nicaraven	(\pm) - N , N' -propylenebis[nicotinamide] $C_{13}H_{14}N_4O_2$
noberastinum noberastine	3 -(5-methyllurluryl)-2-(4-piperidylamıno)-3 H -ımidazo[4,5- b]pyrıdıne $C_{17}H_{21}N_{3}O$
nuvenzepinum nuvenzepine	6.11rdihydro-11-(1-methylison)pecotoyl)-5 <i>H</i> -pyrido[2,3- <i>b</i>][1,5]benzodiazepin-5-one $C_{19}H_{20}N_aO_2$
ondansetronum ondansetron	(\pm)-2,3-dihydro-9-methyl-3-[(2-methylimidazol-1-yl)methyl]carbazol-4(1 H)-one $\rm C_{10}H_{10}N_3O$
oxamisolum oxamisole	(\pm) -2,3,6,7-tetrahydro-2-phenylimidazo[1,2-a]pyridin-8(5H)-one, dimethyl acetal $C_{1s}H_{2o}N_2O_2$
pelretinum pelretin	(E,E,E) - p -[4-methyl-6-(2,6,6-trimethyl-1-cyclohexen-1-yl)-1,3,5-hexatrienyl]-benzoic acid $C_{23}H_{26}O_2$
pentamorphonum pentamorphone	7,8-didehydro-4,5 α -epoxy-3-hydroxy-17-methyl-14-(pentylamino)morphinan-6-one $C_{22}H_{28}N_2O_3$
pentigetidum pentigetide	N^2 -[1-[N -(N -L- α -aspartyl-L-seryi)-L- α -aspartyl-L-prolyl]-L-arginine $C_{zz}H_{xx}N_{z}O_{11}$
pentisomidum pentisomide	(\pm)-a-[2-(diisopropylamino)ethyl]-a-isobutyl-2-pyridineacetamide $C_{19}H_{33}N_3O$
perfomedilum perfomedil	(\pm) -2',4',6'-trimethoxy-4-(3-methylpiperidino)butyrophenone $C_{19}H_{29}NO_4$
phenylpropanolaminum phenylpropanolamine	(±)-norephedrine C₀H₁₃NO
pioglitazonum pioglitazone	(\pm)-5-[p-[2-(5-ethyl-2-pyridyl)ethoxy]benzyl]-2,4-thiazolidinedione C $_{14}\rm{H}_{20}\rm{N}_2\rm{O}_3\rm{S}$

piroxantronum piroxantrone	5-[(3-aminopropyl)amino]-7,10-dihydroxy-2-[2-[(2-hydroxyethyl)amino]-ethyl]anthra[1,9- cd]pyrazol-6(2 H)-one $C_{2\tau}H_{25}N_{6}O_{4}$
posatirelinum posatirelin	(2S)-N-[(1S)-1-[[(2S)-2-carbamoyl-1-pyrrolidinyl]carbonyl]-3-methylbutyl]-6-oxopipecolamide $C_{17}H_{28}N_4O_4$
pravadolinum pravadoline	p -methoxyphenyl 2-methyl-1-(2-morpholinoethyl)indol-3-yl ketone $C_{23}H_{26}N_2O_3$
prifelonum prifelone	3,5-d)- $tert$ -butyl-4-hydroxyphenyl 2-thienyl ketone $C_{18}H_{24}O_2S$
quinaprilatum quinaprilat	(3S)-2-[(S)-N-[(S)-1-carboxy-3-phenylpropyl]alanyl]-1,2,3,4-tetrahydro-3-isoquinolinecarboxylic acid $C_{23}H_{26}N_2O_8$
quineloranum quinelorane	(+-)-(5aR,9aR)-2-amino-5,5a,6,7,8,9,9a,10-octahydro-6-propylpyrido[2,3-g]quinazoline $C_{14}H_{22}N_4$
renzapridum renzapride	(±)-endo-4-amino-N-1-azabicyclo[3.3.1]non-4-yl-5-chloro-o-anisamide C ₁₈ H ₂₂ ClN ₃ O ₂
ridogrelum ridogrel	(E)-5-[[[α -3-pyridyl- m -(trifluoromethyl)benzylidene]amıno]oxy]valeric acid $C_{18}H_{17}F_3N_2O_3$
riluzolum riluzole	2-amino-6-(trifluoromethoxy)benzothiazole C _a H _s F ₃ N ₂ OS
romazaritum romazarit	$ 2\hbox{-}[[2\hbox{-}(\emph{p}\hbox{-}chlorophenyl})\hbox{-}4\hbox{-}methyl\hbox{-}5\hbox{-}oxazolyl]] methoxy]\hbox{-}2\hbox{-}methylpropionic acid } C_{15}H_{16}CINO_4 $
rosterolonum rosterolone	17β -hydroxy- $1a$ -methyi- 17 -propyi- $5a$ -androstan- 3 -one $C_{23}H_{38}O_2$
rotraxatum . rotraxate	p-[[trans-4-(aminomethyl)cyclohexyl]carbonyl]hydrocinnamic acid C ₁₇ H ₂₃ NO ₃
roxindolum roxindole	3-[4-(3.6-dihydro-4-phenyl-1(2 H)-pyridyl)butyl]indol-5-ol $C_{23}H_{24}N_2O$
saperconazolum saperconazole	(\pm)-1-sec-butyl-4-[p-[4-[p-[](2R*,4S*)-2-(2.4-difluorophenyl)-2-(1 <i>H</i> -1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy]phenyl]-1-piperazinyl]phenyl]- \varDelta^2 -1,2,4-triazolin-5-one $C_{35}H_{36}F_2N_6O_4$
sarmazenilum sarmazenil	ethyl 7-chloro-5,6-dihydro-5-methyl-6-oxo-4 H -ımıdazo-[1,5- a][1,4]benzodiazepine-3-carboxylate $C_{15}H_{14}CIN_3O_3$

semduramicinum
semduramicin

(3R,4S,5S,6R,7S,22S)-23,27-didemethoxy-2,6,22-tridemethyl-5,11-di-O-demethyl-6-methoxy-22-[[(2S,5S,6R)-tetrahydro-5-methoxy-6-methyl-2H-pyran-2-yl]oxy]lonomycin A or <math display="block">(2R,3S,4S,5R,6S)-tetrahydro-2,4-dihydroxy-6-[(1R)-1-[(2S,5R,7S,8R,9S)-9-hydroxy-2,8-dimethyl-2-[(2R,5S)-tetrahydro-5-methyl-5-[(2R,3S,5R)-tetrahydro-5-hydroxy-3,5,6-trimethyl-2H-pyran-2-yl]-3-[[(2S,5S,6R)-tetrahydro-5-methoxy-6-methyl-2H-pyran-2-yl]-2-furyl]-1,6-dioxaspiro[4.5]dec-7-yi]ethyl]-5-methoxy-3-methyl-2H-pyran-2-acetic acid

sergolexolum sergolexole trans-4-methoxycyclohexyl 1-isopropyl-6-methylergoline-8 β -carboxylate $C_{2\epsilon}H_{3\epsilon}N_2O_3$

siguazodanum siguazodan 2-cyano-1-methyl-3-[p-{1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl)phenyl]guanidine $C_{14}H_{16}N_6O$

sitalidonum sitalidone (\pm) -2-chloro-4'-hydroxy-5-(2-hydroxy-1-methyl-5-oxo-2-pyrrolidinyl)-3',5'-diisopropylbenzenesulfonanilide $C_{23}H_{26}CIN_2O_3S$

spiraprilatum spiraprilat (8S)-7-[(S)-N-[(S)-1-carboxy-3-phenylpropyl]alanyl]-1,4-dithia-7-azaspiro[4,4]nonane-8-carboxylic acid

C20H26N2O5S2

CasHtsOts

spirolyllinum spirolylline 8-phenethyl-3-[(1,2,3,6-tetrahydro-1,3-dimethyl-2,6-dioxopurin-7-yl)acetyl]-1-oxa-3,8-diazaspiro[4.5]decan-2-one $C_{2a}H_{2a}N_aO_5$

sumatriptanum sumatriptan 3-[2-(dimethylamino)ethyl]-N-methylindole-5-methanesulfonamide $C_{1a}H_{21}N_3O_3S$

tabilautidum tabilautide three-6-carbamoyl- N^2 -[N-(N-lauroyl-L-alanyl)-e-;-glutamyl]-L-lysine C_2 , $H_{aa}N_aO_a$

tandospironum tandospirone

 $(1R^*,2S^*,3R^*,4S^*)-N-[4-[4-(2-pyrimidiny])-1-piperazinyl]butyl]-2,3-norbornanedicarboximide <math>C_{z_1}H_{z_2}N_zO_z$

tazanolastum tazanolast butyl 3'-(1*H*-tetrazol-5-yl)oxanilate $C_{13}H_{14}N_3O_3$

tazobactamum tazobactam (2S,3S,5R)-3-methyl-7-oxo-3-(1H-1,2,3-triazol-1-ylmethyl)-4-thia-1-azabicyclo[3,2 0]heptane-2-carboxylic acid, 4,4-dioxide $C_{10}H_{12}N_{1}O_{2}S$

technetium (****Tc) sestamibi technetium (****Tc) sestamibi

hexakis(2-methoxy-2-methylpropyl isocyanide)[99m Tc]technetium(1+) $C_{36}H_{66}N_6O_6^{99m}$ Tc

tedisamilum tedisamil 3',7'-bis(cyclopropylmethyl)spiro[cyclopentane-1.9'-[3,7]diaza-bicyclo[3,3 1]nonane] $C_{18}H_{32}N_2$

temafloxacinum temafloxacin $\{\pm\}$ -1-(2,4-difluorophenyl)-6-fluoro-1,4-dihydro-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid $C_2,H_{10}F_3N_3O_3$

zilpaterolum zilpaterol

temurtidum temurtide	2-acetamido-3- O -[[(1 R)-1-[(1 S ,2 R)-1-[[(1 R)-1-carbamoyl-3-carboxypropyl]-carbamoyl]-2-hydroxypropyl]carbamoyl]ethyl}-2-deoxy-c-glucopyranose $C_{20}H_{24}N_4O_{12}$
thrombinum thrombin	thrombin or E C. 3.4.21.5 The source of the product should be indicated
thymocartinum thymocartin	N -[N -(N^2 -L-arginyl-L-lysyl)-L- a -aspartyl]-L-value $C_{a_1}H_{a_0}N_{a_0}O_7$
tomelukastum tomelukast	2'-hydroxy-3'-propyl-4'-[4-(1 H -tetrazol-5-yl)butoxy]acetophenone $C_{16}H_{22}N_4O_3$
tosufloxacinum tosufloxacin	(\pm) -7-(3-amino-1-pyrrolidinyl)-1-(2,4-difluorophenyl)-6-fluoro-1,4-dihydro-4-0xo-1,8-naphthyridine-3-carboxylic acid $C_{10}H_{10}F_3N_4O_3$
trandolaprilatum trandolaprilat	$(2S,3aR,7aS)-1-[(S)-N-[(S)-1-carboxy-3-phenylpropyl]alanyl]hexahydro-2-indolinecarboxylic acid C_{22}H_{30}N_2O_5$
troxolamidum troxolamide	3-[[2,3-dihydroxy-1-(hydroxymethyl)propyl]carbamoyl]-2,2,5,5-tetramethyl-1-pyrrolidinyloxy C ₁₃ H ₂₅ N ₂ O ₅
umespironum umespirone	N-butyl-N'-[4-[4-(o-methoxyphenyl)-1-piperazinyl]butyl]-2,2-dimethyl-1,1,3,3-propanetetracarboxylic 1,3 : 1,3-diimide $C_{28}H_{40}N_4O_5$
vapiprostum vapiprost	$(+)$ - (Z) -7-[$(1R,2R,3S,5S)$ -3-hydroxy-5-[$(\rho$ -phenylbenzyl)oxy]-2-piperidinocyclopentyl]-4-heptenoic acid $C_{30}H_{38}NO_4$
venlafaxınum venlafaxıne	(\pm) -1-[a -{(dimethylamino)methyl]- p -methoxybenzył]cyclohexanol $C_{17}H_{27}NO_2$
vinmegallatum vinmegallate	17,18-didehydro-3α,16α-eburnamenine-14-methanol 3,4,5-trimethoxybenzoa (ester) C ₃₀ H ₃₂ N₂O₃
zardaverinum zardaverine	6-[4-(difluoromethoxy)-3-methoxyphenyl]-3(2H)-pyridazinone $C_{12}H_{10}F_2N_2O_3$

 (\pm) -trans-4.5,6.7-tetrahydro-7-hydroxy-6-(isopropylamino)imidazo-[4.5,1-jk][1]benzazepin-2(1H)-one $C_{1a}H_{1B}N_3O_2$

AMENDMENTS TO PREVIOUS LISTS

WHO Chronicle Vol. 9, 1955

Recommended International Nonproprietary Names (Rec. INN): List 1

p 185 delete

insert

acidum aminoaceticum aminoacetic acid

glycinum glycine

p. 185 acidum glutamicum

glutamic acid

replace the chemical name by the following:

L-glutamic acid

WHO Chronicle Vol. 13, No. 12, 1959

Recommended International Nonproprietary Names (Rec. INN): List 3

p. 469 methioninum methionine replace the chemical name by the following:

L-methionine

Supplement to WHO Chronicle Vol. 20, No. 11, 1966

Recommended International Nonproprietary Names (Rec. INN): List 6

p. 431 quinbolonum quinbolone replace the chemical name by the following:

17β-(1-cyclopenten-1-yloxy)androsta-1,4-dien-3-one

WHO Chronicle Vol. 26, No. 10, 1972

Recommended International Nonproprietary Names (Rec. INN): List 12

p. 481 polidocanolum polidocanol

delete the whole entry

Supplement to WHO Chronicle Vol. 36, No. 6, 1982

Recommended International Nonproprietary Names (Rec. INN): List 22

p. 2 avilamycinum avilamycin replace the chemical name by the following:

consists mainly of avilamycin A or O-(IR)-4-C-acetyl-6-deoxy-2,3-O-methylene-0-galactopyranosylidene-(1 \rightarrow 3-4)-2-O-(2-methyl-1-oxopropyl)-a-L-lyxopyranosyl O-2,6-dideoxy-4-O-(3,5-dichloro-4-hydroxy-2-methoxy-6-methyl-benzoyl)- β -0-arabino-hexopyranosyl-(1 \rightarrow 4)-O-2,6-dideoxy-0-arabino-hexopyranosylidene-(1 \rightarrow 3-4)-O-2,6-dideoxy-3-O-methyl- β -0-arabino-hexopyranosyl-(1 \rightarrow 3)-O-6-deoxy-4-O-methyl- β -0-galactopyranosyl-(1 \rightarrow 4)-2,6-di-O-methyl- β -0-galactopyranosyl-(1 \rightarrow 4)-2,6-di-O-methyl-

β-p-mannopyranoside

p. 2 delete

cadexomerum iodum cadexomer iodine

product of reaction of dextrin with epichlorohydrin coupled with ion-exchange

groups and lodine

insert

cadexomerum cadexomer carboxymethylated microspheres produced by reaction of partially hydrolysed starch with epichlorhydrin; slowly degradable by amylase (with a half-life of

more than 120 minutes)

Each cadexomer name is followed by a number referring to the mean diameter in µm of the microspheres: e.g. cadexomer 110, 200. The method of determining this parameter is approved by the competent national authority.

Supplement to WHO Chronicle Vol. 37, No. 6, 1983

Recommended International Nonproprietary Names (Rec. INN): List 23

p. 3 delete

insert

cholini glycerophosphas choline glycerophosphate

cholini alfosceras choline alfoscerate

Supplement to WHO Chronicle Vol. 38, No. 6, 1984

Recommended International Nonproprietary Names (Rec. INN): List 24

p. 2 aprotininum

replace the chemical name and the molecular formula by the following:

aprotinin

Arg-Pro-Asp-Phe-HCys-Leu-Glu-Pro-Pro-Tyr-Thr-Gly-Pro-HCys-Lys-Ala-Arg-lle-lle-Arg-Tyr-Phe-Tyr-Asn-Ala-Lys-Ala-Gly-Leu-HCys-Gln-Thr-Phe-Vai-Tyr-Gly-Gly-HCys-Arg-Ala-Lys-Arg-Asn-Asn-Phe-Lys-Ser-Ala-Glu-Asn-HCys-Met-Arg-Thr-HCys-Gly-Gly-Ala cyclic (5→55), (14→38), (30→51)-tris(disulfide)

C234H432N44O79S7

p. 4 eldexomerum

eldexomer

replace the definition by the following:

microspheres produced by reaction of partially hydrolysed starch with epichlorhydrin, slowly degradable by amylase (with a half-life of more than

120 minutes)

Each eldexomer name is followed by a number referring to the mean diameter in µm of the microspheres e.g. eldexomer 60. The method of determining this parameter is approved by the competent national authority.

p. 6 levocabastinum

levocabastine

replace the chemical name by:

(-)-(3S,4R)-1-(cis-4-cyano-4-(p-fluorophenyl)cyclohexyl}-3-methyl-4-

phenylisonipecotic acid

Supplement to WHO Chronicle Vol. 39, No. 5, 1985

Recommended International Nonproprietary Names (Rec. INN): List 25

p. 10 pimelautidum

replace the chemical name by the following.

pimelautide $threo-6-carbamoyl-N^2-[N-(N-lauroyl-L-alanyl)-p-y-glutamyl]-N^4-glycyl-pL-lysine$

Supplement to WHO Chronicle Vol. 40, No. 6, 1986

Recommended International Nonproprietary Names (Rec. INN): List 26

p. 7 pirarubicinum pirarubicin

replace the chemical name by the following:

(8,S,10S)-10-[[3-amino-2,3,6-trideoxy-4-O-(2R-tetrahydro-2H-pyran-2-yl)-a-L-lyxo-hexopyranosyl]oxy]-8-giycoloyl-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-

methoxy-5,12-naphthacenedione

WHO Drug Information Vol. 1, No. 4, 1987

Recommended International Nonproprietary Names (Rec. INN): List 27

niguldipinum p. 7

niguldipine

replace the chemical name by the following:

(+)-(S)-3-(4.4-diphenylpiperidino)propyl methyl 1,4-dihydro-2,6-dimethyl-

4-(m-nitrophenyl)-3,5-pyridinedicarboxylate

WHO Drug Information Vol. 2, No. 3, 1988

Recommended International Nonproprietary Names (Rec. INN): List 28

p 164 delete insert

bendacololum bendacolol

bendacalolum bendacalol

p. 164 delete

clipoxaminum clipoxamine

chropaminum cliropamine

pemedolacum p. 166 pemedolac

replace the chemical name by the following:

 (\pm) -cis-4-benzyl-1-ethyl-1,3,4,9-tetrahydropyrano[3,4-b]indole-1-acetic acid