

International Nonproprietary Names for Pharmaceutical Substances

In accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,¹ notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Nonproprietary Names.

Comments on, or formal objections to, the proposed names may be forwarded by any person to the Pharmaceuticals unit of the World Health Organization within four months of the date of their publication in the *WHO Chronicle*, e.g., for List 53 Prop. INN not later than 30 September 1985.

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

Proposed International Nonproprietary Names (Prop. INN): List 53²

Comprehensive information on the INN programme can be found in: WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances*. Twentieth Report of the WHO Expert Committee). ISBN 92 4 120581 4 (price: Sw. fr. 6.-); an account of this publication will be found on page 25 of this Supplement (Annex 2). All names from Lists 1-47 of Proposed International Nonproprietary Names, together with a molecular formula index, will be found in: *International Nonproprietary Names (INN) for Pharmaceutical Substances Cumulative List No. 6*, 1982, World Health Organization, Geneva (ISBN 92 4 056013 0) (price: Sw. fr. 55.-). This publication consists, in the main, of a computer printout which groups together all the proposed and recommended international nonproprietary names (INN)—in Latin, English, French, Russian, and Spanish—published up to April 1982. The printout also indicates in which of the 47 individual lists of proposed names and 21 lists of recommended names each INN was originally published, and gives references to national nonproprietary names, pharmacopoeia monographs, and other sources. In addition, the list contains molecular formulae and Chemical Abstracts Service registry numbers. For easy reference, national nonproprietary names that differ from INN, molecular formulae, and Chemical Abstracts Service registry numbers are indexed in a series of annexes. A final annex describes the procedure for selecting recommended INN and outlines the general principles to be followed in devising these names. All the textual material published in this volume appears in both English and French.

These publications may be obtained, direct or through booksellers, from the sales agents listed on the back cover of the *WHO Chronicle*. Orders from countries where sales agents have not yet been appointed may be addressed to: World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland.

¹ See Annex 1, p. 23.

² Other lists of proposed and recommended international nonproprietary names can be found in *Cumulative List No. 6*, 1982.

abamectinum
abamectin

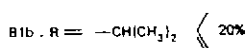
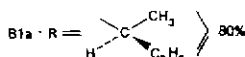
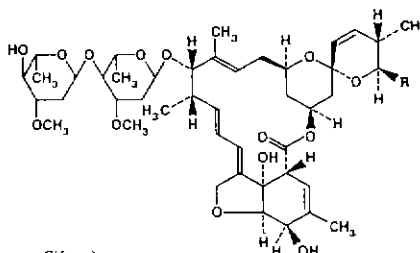
A mixture of components B1a and B1b

Component B1a:

(2a*E*,4*E*,8*E*)-(5'*S*,6*S*,6'*R*,7*S*,11*R*,13*S*,15*S*,17a*R*,20*R*,20a*R*,20b*S*)-6'-[(*S*)-*sec*-butyl]-5',6,6',7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-5',6,8,19-tetramethyl-17-oxospiro[11,15-methano-2*H*,13*H*,17*H*-furo[4,3,2-*pq*][2,6]benzodioxacyclooctadecin-13,2'-[2*H*]pyran]-7-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl- α -*L*-arabino-hexopyranosyl)-3-*O*-methyl- α -*L*-arabino-hexopyranoside
C₄₈H₇₂O₁₄ 65195-55-3

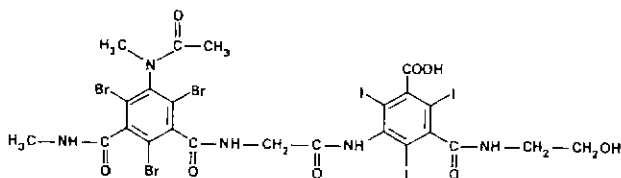
Component B1b:

(2a*E*,4*E*,8*E*)-(5'*S*,6*S*,6'*R*,7*S*,11*R*,13*S*,15*S*,17a*R*,20*R*,20a*R*,20b*S*)-5',6,6',7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-6'-isopropyl-5',6,8,19-tetramethyl-17-oxospiro[11,15-methano-2*H*,13*H*,17*H*-furo[4,3,2-*pq*][2,6]benzodioxacyclooctadecin-13,2'-[2*H*]pyran]-7-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl- α -*L*-arabino-hexopyranosyl)-3-*O*-methyl- α -*L*-arabino-hexopyranoside
C₄₇H₇₀O₁₄ 65195-56-4



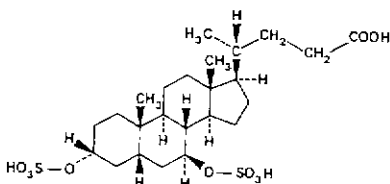
acidum ioxabrolicum
ioxabrolic acid

N-(2-hydroxyethyl)-2,4,6-triiodo-5-[2-[2,4,6-tribromo-3-(*N*-methylacetamido)-5-(methylcarbamoyl)benzamido]acetamido]isophthalamic acid
C₂₄H₂₁Br₃I₃N₅O₈ 96191-65-0



acidum ursulcholicum
ursulcholic acid

3 α ,7 β -dihydroxy-5 β -cholan-24-oic acid bis(hydrogen sulfate)
C₂₄H₄₀O₁₀S₂ 88426-32-8

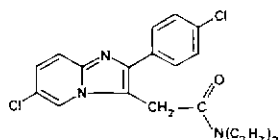


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

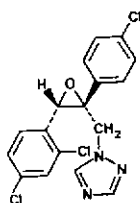
alpidemum
alpidem

6-chloro-2-(*p*-chlorophenyl)-*N,N*-dipropylimidazo[1,2-*a*]pyridine-3-acetamide
 $C_{21}H_{23}Cl_2N_3O$ 82626-01-5



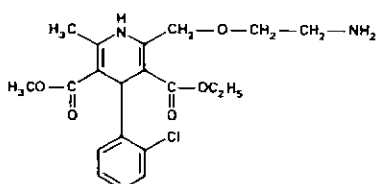
alte)
conazolum
conazole

cis-1-[2-(*p*-chlorophenyl)-3-(2,4-dichlorophenyl)-2,3-epoxypropyl]-1*H*-1,2,4-triazole
 $C_{17}H_{12}Cl_3N_3O$ 93479-96-0



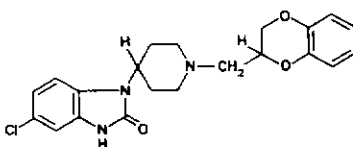
amlodipinum
amlodipine

3-ethyl 5-methyl ($\pm$)-2-[(2-aminoethoxy)methyl]-4-(*o*-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate
 $C_{20}H_{25}ClN_2O_5$ 88150-42-9



axamozidum
axamozide

($\pm$)-1-[1-(1,4-benzodioxan-2-ylmethyl)-4-piperidyl]-5-chloro-2-benzimidazolinone
 $C_{27}H_{22}ClN_3O_3$ 85076-06-8

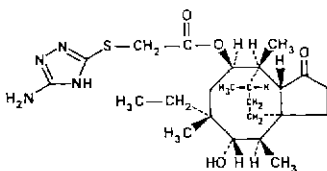


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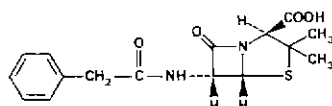
azamulinum
azamulin

[(5-amino-*s*-triazol-3-yl)thio]acetic acid, 8-ester with
(3*aS*,4*R*,5*S*,6*R*,8*R*,9*R*,9*aR*,10*R*)-6-ethyloctahydro-5,8-dihydroxy-4,6,9,10-
tetramethyl-3*a*,9-propano-3*aH*-cyclopentacycloocten-1(4*H*)-one
 $C_{24}H_{38}N_4O_4S$ 76530-44-4



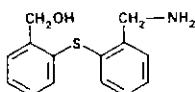
benzylpenicillinum
benzylpenicillin

(2*S*,5*R*,6*R*)-3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-4-thia-1-azabicy-
clo[3.2.0]heptane-2-carboxylic acid
 $C_{16}H_{18}N_2O_4S$ 61-33-6



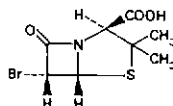
bipenamolum
bipenamol

o-[(α -amino-*o*-tolyl)thio]benzyl alcohol
 $C_{14}H_{15}NOS$ 79467-22-4



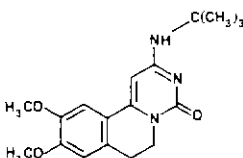
brobactamum
brobactam

(2*S*,5*R*,6*R*)-6-bromo-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-
carboxylic acid
 $C_8H_{10}BrNO_3S$ 26631-90-3



buquiterinum
buquiterine

2-(*tert*-butylamino)-6,7-dihydro-9,10-dimethoxy-4*H*-pyrimido[6,1-*a*]isoquinolin-
4-one
 $C_{18}H_{23}N_3O_3$ 76536-74-8

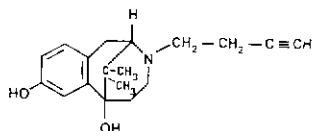


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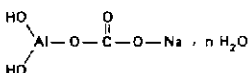
butinazocinum
butinazocine

(±)-3-(3-butynyl)-1,2,3,4,5,6-hexahydro-11,11-dimethyl-2,6-methano-3-benzazocine-6,8-diol
 $C_{18}H_{23}NO_2$ 93821-75-1



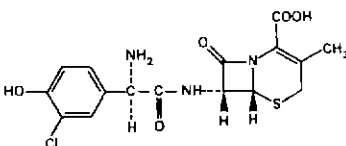
carbaldratum
carbaldrate

sodium (carbonato)dihydroxyaluminate(1-) hydrate
 $CH_2AlNaO_3 \cdot nH_2O$ 41342-54-5



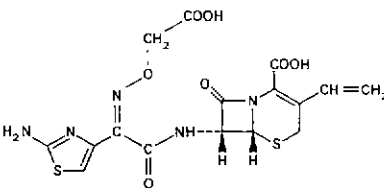
cefedrolorum
cefedrolor

(6R,7R)-7-[(R)-2-amino-2-(3-chloro-4-hydroxyphenyl)acetamido]-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
 $C_{18}H_{18}ClN_3O_5S$ 57847-69-5



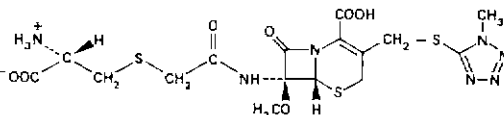
cefiximum
cefixime

(6R,7R)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-8-oxo-3-vinyl-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(Z)-[O-(carboxymethyl)oxime]
 $C_{18}H_{15}N_5O_7S_2$ 79350-37-1



cefminoxum
cefminox

(6R,7S)-7-[2-[[[(S)-2-amino-2-carboxyethyl]thio]acetamido]-7-methoxy-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
 $C_{18}H_{21}N_7O_7S_3$ 75481-73-1

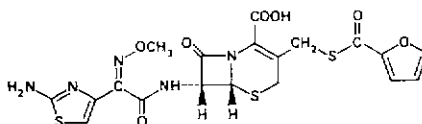


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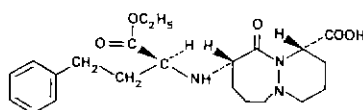
ceftiofurum
ceftiofur

(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-(mercaptomethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(*Z*)-(O-methyloxime), 2-furoate (ester)
C₁₉H₁₇N₅O₇S₃ 80370-57-6



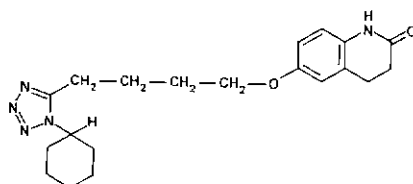
cilazaprilum
cilazapril

(1*S*,9*S*)-9-[[*(S)*-1-carboxy-3-phenylpropyl]amino]octahydro-10-oxo-6*H*-pyridazino[1,2-*a*][1,2]diazepine-1-carboxylic acid, 9-ethyl ester
C₂₂H₃₁N₃O₅ 88768-40-5



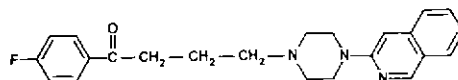
cilostazolum
cilostazol

6-[4-(1-cyclohexyl-1*H*-tetrazol-5-yl)butoxy]-3,4-dihydrocarbostyrl
C₂₀H₂₇N₅O₂ 73963-72-1



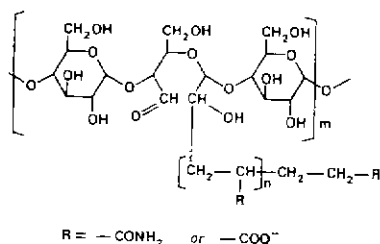
cinuperonum
cinuperone

4'-fluoro-4-[4-(3-isoquinolyl)-1-piperazinyl]butyrophenone
C₂₃H₂₄FN₂O 82117-51-9



crilanomerum
crilanomer

starch polymer with acrylonitrile

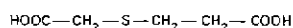


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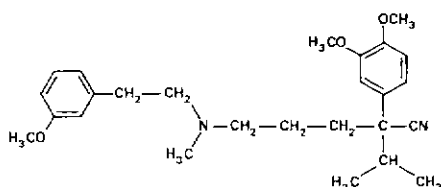
danosteinum
danosteine

3-[(carboxymethyl)thio]propionic acid
 $C_5H_8O_4S$ 4938-00-5



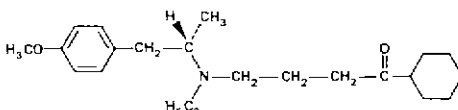
devapamilum
devapamil

2-(3,4-dimethoxyphenyl)-2-isopropyl-5-[(*m*-methoxyphenethyl)methylamino]valeronitrile
 $C_{28}H_{36}N_2O_3$ 92302-55-1



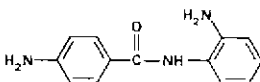
dexsecoverinum
dexsecoverine

(+)-(S)-1-cyclohexyl-4-[ethyl(*p*-methoxy-*o*-methylphenethyl)amino]-1-butanone
 $C_{22}H_{35}NO_2$ 90237-04-0



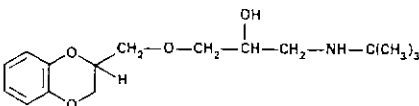
dinalinum
dinaline

2',4-diaminobenzanilide
 $C_{13}H_{13}N_3O$ 58338-59-3



dioxadilolum
dioxadilol

(±)-1-(1,4-benzodioxan-2-ylmethoxy)-3-(*tert*-butylamino)-2-propanol
 $C_{18}H_{25}NO_4$ 80743-08-4

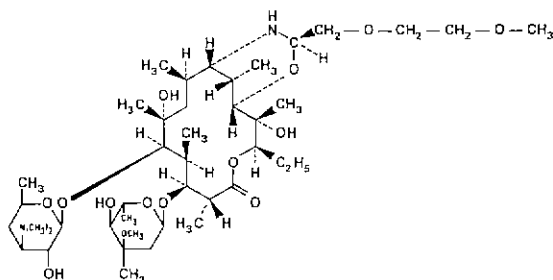


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

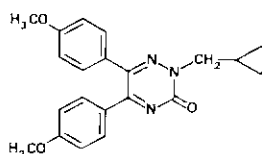
dirithromycinum
dirithromycin

(9S)-9-deoxy-11-deoxy-9,11[imino[2-(2-methoxyethoxy)ethylidene]oxy]erythromycin
 $C_{42}H_{78}N_2O_{14}$ 62013-04-1



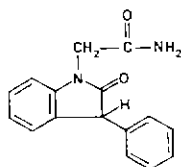
dizatrifonum
dizatrifone

2-(cyclopropylmethyl)-5,6-bis(*p*-methoxyphenyl)-as-triazin-3(2*H*)-one
 $C_{27}H_{21}N_3O_3$ 92257-40-4



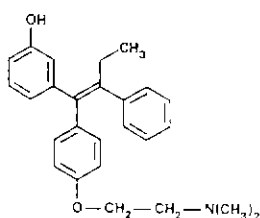
doliracetamum
doliracetam

(±)-2-oxo-3-phenyl-1-indolineacetamide
 $C_{18}H_{14}N_2O_2$ 84901-45-1



droloxifenum
droloxifene

(*E*)- α -[*p*-[2-(dimethylamino)ethoxy]phenyl]- α' -ethyl-3-stilbenol
 $C_{26}H_{28}NO_2$ 82413-20-5



Proposed International
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efrotomycinum
efrotomycin

An antibiotic produced by *Streptomyces lactamdurans*. Efrotomycin is a complex antibiotic with three components: efrotomycin A₁, efrotomycin A₂ and efrotomycin B
empirical molecular formula C₅₉H₈₈N₂O₂₀ 56592-32-6

Component A₁:

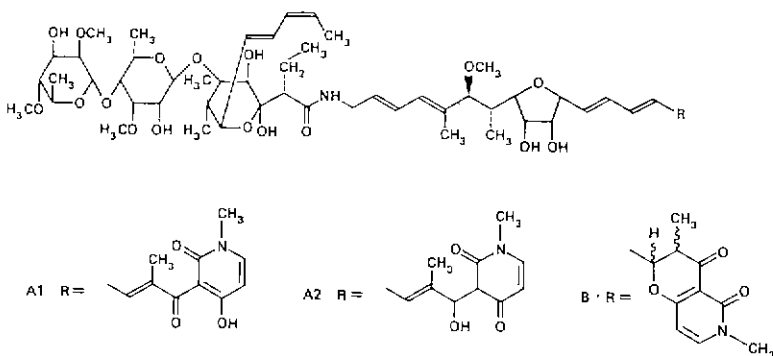
(α S,2R,3R,4R,6S)-4-[[6-deoxy-4-O-(6-deoxy-2,4-di-O-methyl- α -L-mannopyranosyl)-3-O-methyl- β -D-allopyranosyl]oxy]-N-[(2E,4E,6S,7R)-7-[(2S,3S,4R,5R)-5-[(1E,3E,5E)-6-(1,2-dihydro-4-hydroxy-1-methyl-2-oxonicotinoyl)-1,3,5-heptatrienyl]tetrahydro-3,4-dihydroxy-2-furyl]-6-methoxy-5-methyl-2,4-octadienyl]- α -ethyltetrahydro-2,3-dihydroxy-5,5-dimethyl-6-[(1E,3Z)-1,3-pentadienyl]-2H-pyran-2-acetamide

Component A₂:

(α S,2R,3R,4R,6S)-4-[[6-deoxy-4-O-(6-deoxy-2,4-di-O-methyl- α -L-mannopyranosyl)-3-O-methyl- β -D-allopyranosyl]oxy]-N-[(2E,4E,6S,7R)-7-[(2S,3S,4R,5R)-5-[(1E,3E,5E)-7-[(E)-1,4-dihydro-1-methyl-2,4-dioxo-3(2H)-pyridylidene]-7-hydroxy-6-methyl-1,3,5-heptatrienyl]tetrahydro-3,4-dihydroxy-2-furyl]-6-methoxy-5-methyl-2,4-octadienyl]- α -ethyltetrahydro-2,3-dihydroxy-5,5-dimethyl-6-[(1E,3Z)-1,3-pentadienyl]-2H-pyran-2-acetamide

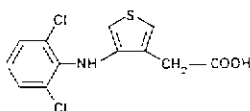
Component B:

(α S,2R,3R,4R,6S)-4-[[6-deoxy-4-O-(6-deoxy-2,4-di-O-methyl- α -L-mannopyranosyl)-3-O-methyl- β -D-allopyranosyl]oxy]- α -ethyltetrahydro-2,3-dihydroxy-N-[(2E,4E,6S,7R)-6-methoxy-5-methyl-7-[(2S,3S,4R,5R)-tetrahydro-3,4-dihydroxy-5-[(1E,3E)-4-(3,4,5,6-tetrahydro-3,6-dimethyl-4,5-dioxo-2H-pyrano[3,2-c]-pyridin-2-yl)-1,3-butadienyl]-2-furyl]-2,4-octadienyl]-5,5-dimethyl-6-[(1E,3Z)-1,3-pentadienyl]-2H-pyran-2-acetamide



elitenacum
eltenac

4-(2,6-dichloroanilino)-3-thiopheneacetic acid
C₁₂H₉Cl₂NO₂S 72895-88-6

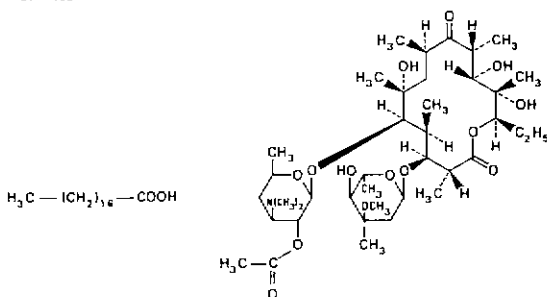


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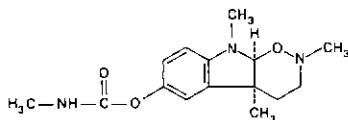
erythromycin acistras
erythromycin acistrate

erythromycin 2'-acetate, stearate (salt)
 $C_{57}H_{105}NO_{16}$ 96128-89-1



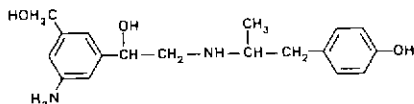
eseridinum
eseridine

(4a*S*,9a*S*)-2,3,4,4a,9,9a-hexahydro-2,4a,9-trimethyl-1,2-oxazino[6,5-*b*]indol-6-yl
methylcarbamate
 $C_{15}H_{21}N_3O_3$ 25573-43-7



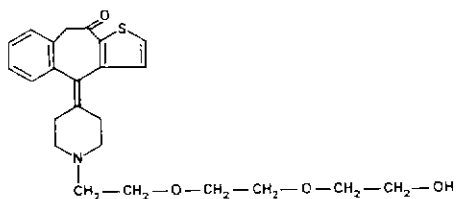
etanterolum
etanterol

5-amino- α -[[(*p*-hydroxy- α -methylphenethyl)amino]methyl]-*m*-xylene- α,α' -diol
 $C_{18}H_{24}N_2O_3$ 93047-39-3



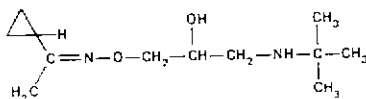
etolotifenum
etolotifen

4,9-dihydro-4-[1-[2-[2-(2-hydroxyethoxy)ethoxy]ethyl]-4-piperidylidene]-10*H*-
benzo[4,5]cyclohepta[1,2-*b*]thiophen-10-one
 $C_{24}H_{25}NO_4S$ 82140-22-5



falintololum
falintolol

cyclopropyl methyl ketone, ($\pm$)-(EZ)-O-[3-(*tert*-butylamino)-2-hydroxypropyl]-
oxime
 $C_{12}H_{24}N_2O_2$ 90581-63-8

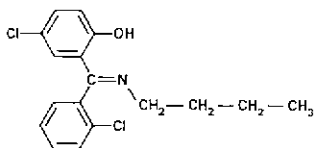


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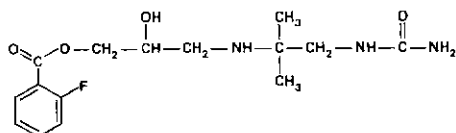
fengabinum
fengabine

(Z)-2-(N-butyl-o-chlorobenzimidoyl)-4-chlorophenol
C₁₇H₁₇Cl₂NO 80018-06-0



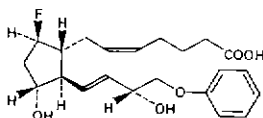
florfenicol
florfenicol

o-fluorobenzoic acid, 3-ester with (±)-[2-[(2,3-dihydroxypropyl)amino]-2-methylpropyl]urea
C₁₅H₂₂FN₃O₄ 87721-62-8



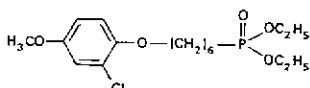
flunoprostum
flunoprost

(Z)-7-[(1R,2R,3R,5R)-5-fluoro-3-hydroxy-2-[(E)-(3R)-3-hydroxy-4-phenoxy-1-butenyl]cyclopentyl]-5-heptenoic acid
C₂₂H₂₉FO₅ 86348-98-3



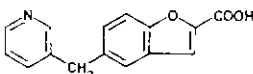
fosarilatum
fosarilate

diethyl [6-(2-chloro-4-methoxyphenoxy)hexyl]phosphonate
C₁₇H₂₈ClO₅P 73514-87-1



furegrelatum
furegrelate

5-(3-pyridylmethyl)-2-benzofuranecarboxylic acid
C₁₅H₁₁NO₃ 85666-24-6

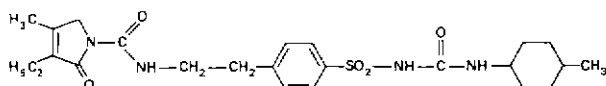


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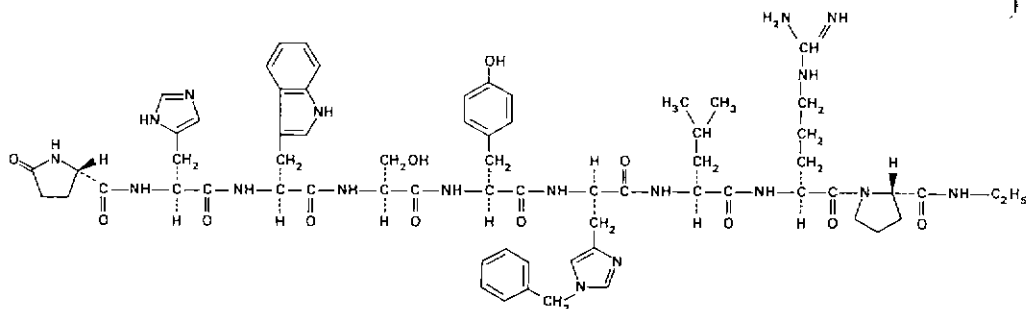
glimepiridum
glimepiride

1-[[p-[2-(3-ethyl-4-methyl-2-oxo-3-pyrroline-1-carboxamido)ethyl]phenyl]sulfonyl]-3-(4-methylcyclohexyl)urea
 $C_{24}H_{34}N_4O_5S$ 93479-97-1



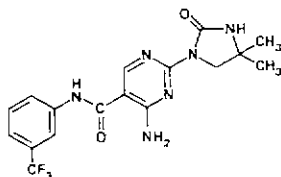
histrelinum
histrelin

5-oxo-L-prolyl-L-histidyl-L-tryptophyl-L-seryl-L-tyrosyl-N^ε-benzyl-D-histidyl-L-leucyl-L-arginyl-N-ethyl-L-prolinamide
 $C_{66}H_{86}N_{12}O_{12}$ 76712-82-8



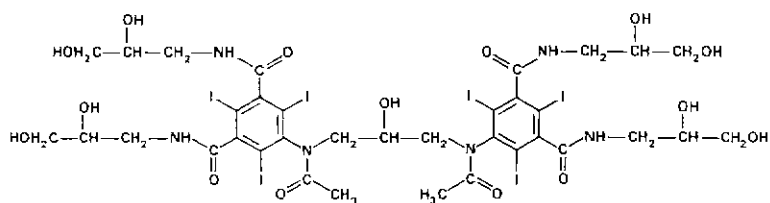
imanixilum
imanixil

4-amino-2-(4,4-dimethyl-2-oxo-1-imidazolidinyl)-a,a,a-trifluoro-5-pyrimidine-carboxy-m-toluidide
 $C_{17}H_{17}F_3N_4O_2$ 75689-93-9



iodixanolum
iodixanol

5,5'-[(2-hydroxytrimethylene)bis(acetylmino)]bis[N,N'-bis(2,3-dihydroxy-propyl)-2,4,6-triiodoisophthalamide]
 $C_{33}H_{44}I_4N_8O_{15}$ 92339-11-2

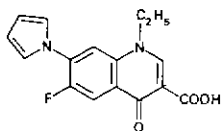


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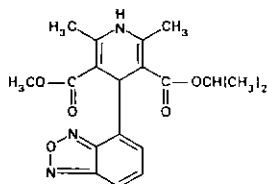
irloxacinum
irloxacin

1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-pyrrol-1-yl-3-quinolinecarboxylic acid
 $C_{18}H_{13}FN_2O_3$ 91524-15-1



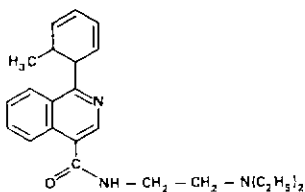
isrodipinum
isrodipine

isopropyl methyl 4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate
 $C_{19}H_{21}N_3O_5$ 75695-93-1



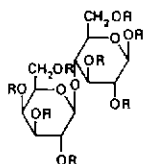
itrocainidum
itrocainide

N-[2-(diethylamino)ethyl]-1-*o*-tolyl-4-isoquinolinecarboxamide
 $C_{23}H_{27}N_3O$ 90828-99-2



lactalfatum
lactalfate

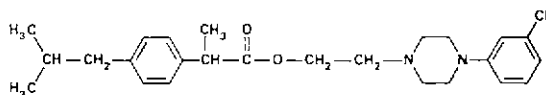
lactose octakis(hydrogen sulfate), basic aluminum salt
 $C_{12}H_{34}Al_3O_{75}S_8$ 96427-12-2



$R = -SO_3Al_3(OH)_5$

lobuprofenum
lobuprofen

2-[4-(*m*-chlorophenyl)-1-piperazinyl]ethyl (±)-*p*-isobutylhydratropate
 $C_{25}H_{33}ClN_2O_2$ 96128-90-4

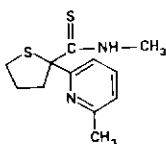


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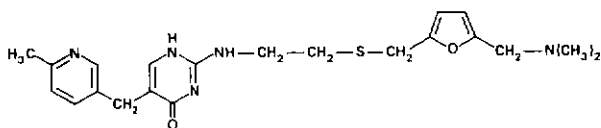
lucartamidum
lucartamide

(±)-tetrahydro-*N*-methyl-2-(6-methyl-2-pyridyl)thio-2-thiophenecarboxamide
 $C_{12}H_{16}N_2S_2$ 76743-10-7



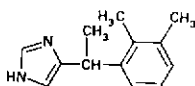
lupitidinum
lupitidine

2-[[[2-[[5-[(dimethylamino)methyl]furfuryl]thio]ethyl]amino]-5-[(6-methyl-3-pyridyl)methyl]-4(1*H*)-pyrimidinone
 $C_{21}H_{27}N_5O_2S$ 83903-06-4



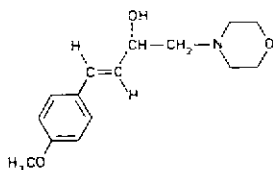
medetomidinum
medetomidine

(±)-4-(α ,2,3-trimethylbenzyl)imidazole
 $C_{13}H_{18}N_2$ 86347-14-0



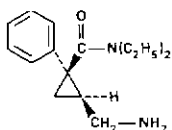
metostilenolum
metostilenol

(±)-(*E*)- α -(*p*-methoxystyryl)-4-morpholineethanol
 $C_{15}H_{21}NO_3$ 80304-55-8



midalcipranum
midalcipran

(±)-*cis*-2-(aminomethyl)-*N,N*-diethyl-1-phenylcyclopropanecarboxamide
 $C_{15}H_{21}N_2O$ 92623-85-3

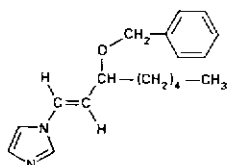


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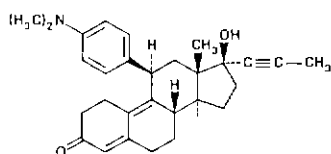
midazogrelum
midazogrel

(±)-1-[(E)-3-(benzyloxy)-1-octenyl]imidazole
C₁₈H₂₄N₂O 80614-27-3



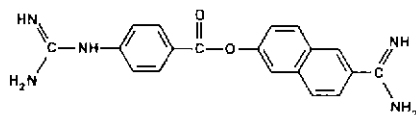
unif
mifepristone
mifepristone

11β-[p-(dimethylamino)phenyl]-17β-hydroxy-17-(1-propynyl)estra-4,9-dien-3-one
C₂₉H₃₅NO₂ 84371-65-3



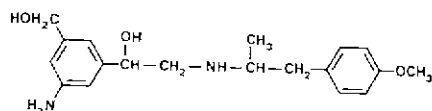
nafamostatium
nafamostat

6-amidino-2-naphthyl p-guanidinobenzoate or p-guanidinobenzoic acid, ester
with 6-hydroxy-2-naphthamide
C₁₉H₁₇N₅O₂ 81525-10-2



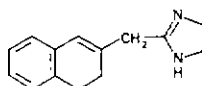
naminterolum
naminterol

5-amino-α-[[p-methoxy-α-methylphenethyl]amino]methyl]-m-xylene-α,α'-diol
C₁₉H₂₆N₂O₃ 93047-40-6



napamezolum
napamezole

2-[(3,4-dihydro-2-naphthyl)methyl]-2-imidazoline
C₁₄H₁₆N₂ 91524-14-0

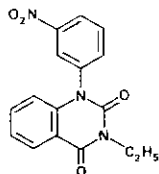


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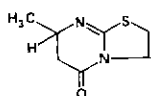
nitraquazonum
nitraquazone

3-ethyl-1-(*m*-nitrophenyl)-2,4(1*H*,3*H*)-quinazolinedione
C₁₆H₁₃N₃O₄ 56739-21-0



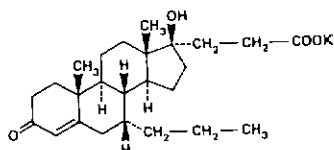
olpimedonum
olpimedone

(±)-2,3,6,7-tetrahydro-7-methyl-5*H*-thiazolo[3,2-*a*]pyrimidin-5-one
C₇H₁₀N₂OS 39567-20-9



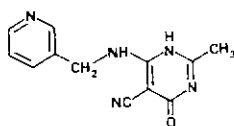
oxprenoas kalii
oxprenoate potassium

potassium 17-hydroxy-3-oxo-7α-propyl-17α-pregn-4-ene-21-carboxylate
C₂₅H₃₇KO₄ 76676-34-1



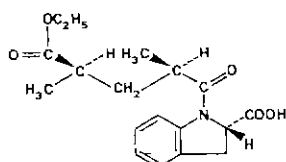
pelrinonum
pelrinone

1,4-dihydro-2-methyl-4-oxo-6-[(3-pyridylmethyl)amino]-5-pyrimidinecarboni-
trile
C₁₂H₁₁N₅O 94386-65-9



pentoprilum
pentopril

ethyl (α*R*,γ*R*,2*S*)-2-carboxy-α,γ-dimethyl-δ-oxo-1-indolinevalerate
C₁₈H₂₃NO₅ 82924-03-6

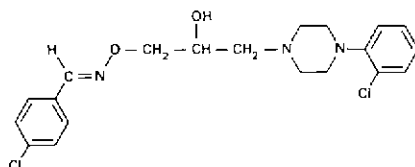


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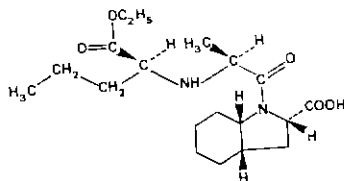
peracloponum
peraclopone

p-chlorobenzaldehyde (±)-(E)-O-[3-[4-(*o*-chlorophenyl)-1-piperazinyl]-2-hydroxypropyl]oxime
C₂₆H₂₃Cl₂N₃O₂ 96164-19-1



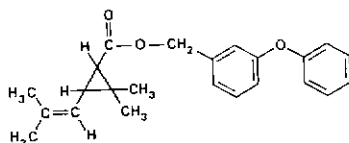
perindoprilum
perindopril

(2*S*,3*aS*,7*aS*)-1-[(*S*)-*N*-[(*S*)-1-carboxybutyl]alanyl]hexahydro-2-indolinecarboxylic acid, 1-ethyl ester
C₁₉H₃₂N₂O₅ 82834-16-0



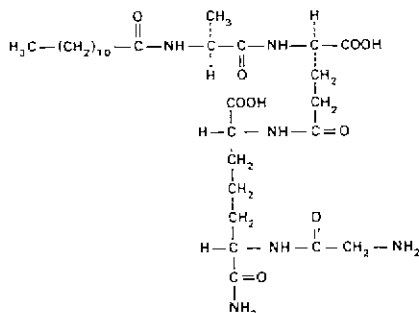
phenothrinum
phenothrin

m-phenoxybenzyl (±)-*cis*,*trans*-2,2-dimethyl-3-(2-methylpropenyl)cyclopropanecarboxylate
C₂₃H₂₄O₃ 26002-80-2



pimelauidum
pimelauide

erythro-6-carbamoyl-*N*²-[*N*-(*N*-lauroyl-L-alanyl)-*o*-γ-glutamyl]-*N*⁶-glycyl-α-lysine
C₂₉H₅₂N₆O₉ 78512-63-7

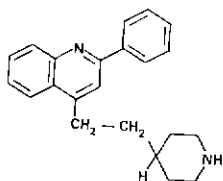


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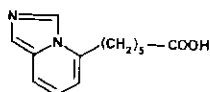
pipequalinum
pipequaline

2-phenyl-4-[2-(4-piperidyl)ethyl]quinoline
 $C_{22}H_{24}N_2$ 77472-98-1



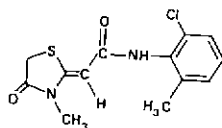
pirmagrelum
pirmagrel

imidazo[1,5-a]pyridine-5-hexanoic acid
 $C_{13}H_{15}N_2O_2$ 85691-74-3



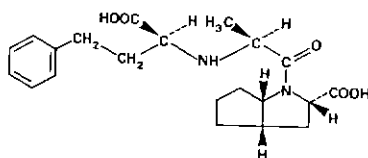
ralitolinum
ralitoline

(Z)-6'-chloro-3-methyl-4-oxo- $\Delta^{2,4}$ -thiazolidineaceto-o-toluidide
 $C_{13}H_{13}ClN_2O_2S$ 93738-40-0



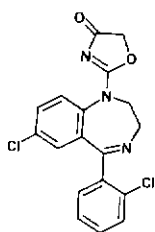
ramiprilatum
ramiprilat

(2S,3aS,6aS)-1-[(S)-N-[(S)-1-carboxy-3-phenylpropyl]alanyl]octahydrocyclopenta[b]pyrrole-2-carboxylic acid
 $C_{21}H_{28}N_2O_5$ 87269-97-4



reclazepamum
reclazepam

2-[7-chloro-5-(o-chlorophenyl)-2,3-dihydro-1H-1,4-benzodiazepin-1-yl]-2-oxazolin-4-one
 $C_{18}H_{13}Cl_2N_3O_2$ 76053-16-2

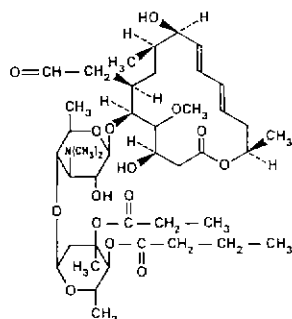


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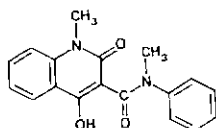
rokitamycinum
rokitamycin

[(4*R*,5*S*,6*S*,7*R*,9*R*,10*R*,11*E*,13*E*,16*R*)-7-(formylmethyl)-4,10-dihydroxy-5-methoxy-9,16-dimethyl-2-oxooxacyclohexadeca-11,13-dien-6-yl]-3,6-dideoxy-4-*O*-(2,6-dideoxy-3-*C*-methyl- α -*L*-ribo-hexopyranosyl)-3-(dimethylamino)- β -*D*-glucopyranoside 4''-butyrate 3''-propionate
 $C_{42}H_{68}NO_{15}$ 74014-51-0



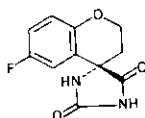
roquinimexum
roquinimex

1,2-dihydro-4-hydroxy-*N*,1-dimethyl-2-oxo-3-quinolinecarboxanilide
 $C_{18}H_{16}N_2O_3$ 84088-42-6



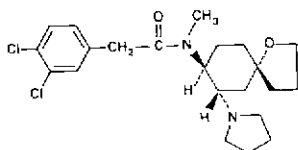
sorbinilum
sorbinil

(*S*)-6-fluorospiro-[chroman-4,4'-imidazolidine]-2',5'-dione
 $C_{11}H_8FN_2O_3$ 68367-52-2



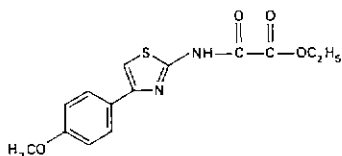
spiralinum
spiradoline

($\pm$)-2-(3,4-dichlorophenyl)-*N*-methyl-*N*-[(5*R**,7*S**,8*S**)-7-(1-pyrrolidinyl)-1-oxaspiro[4,5]dec-8-yl]acetamide
 $C_{22}H_{30}Cl_2N_2O_2$ 87151-85-7



tioxamastum
tioxamast

ethyl [4-(*p*-methoxyphenyl)-2-thiazolyl]oxamate
 $C_{14}H_{14}N_2O_4S$ 74531-88-7

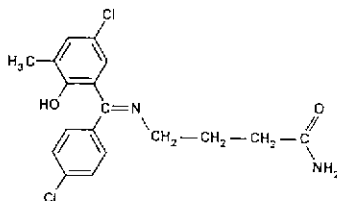


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Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

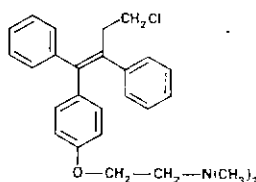
tolgabidum
tolgabide

(E)-4-[[5-chloro-*a*-(*p*-chlorophenyl)-3-methylsalicylidene]amino]butyramide
C₁₉H₁₈Cl₂N₂O₂ 88914-11-6



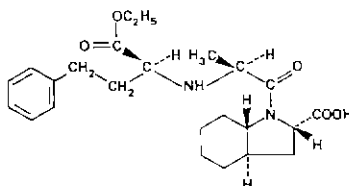
toremifenum
toremifene

2-[*p*-[(*Z*)-4-chloro-1,2-diphenyl-1-butenyl]phenoxy]-*N,N*-dimethylethylamine
C₂₈H₂₈ClNO 89778-26-7



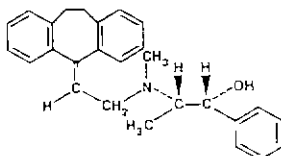
trandolaprilum
trandolapril

(2*S*,3*aR*,7*aS*)-1-[(*S*)-*N*-[(*S*)-1-carboxy-3-phenylpropyl]alanyl]hexahydro-2-indolinecarboxylic acid, 1-ethyl ester
C₂₄H₃₄N₂O₅ 87679-37-6



trecadrinum
trecadrine

(1*R*,2*S*)- α -[1-[[2-(10,11-dihydro-5*H*-dibenzo[*a,d*]cyclohepten-5-ylidene)ethyl]-methylamino]ethyl]benzyl alcohol
C₂₇H₂₉NO 90845-56-0

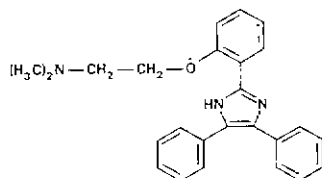


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

trifenagrelum
trifenagrel

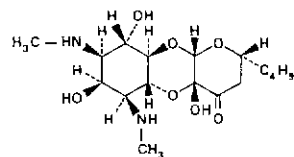
2-[o-[2-(dimethylamino)ethoxy]phenyl]-4,5-diphenylimidazole
 $C_{25}H_{25}N_3O$ 84203-09-8



trosp

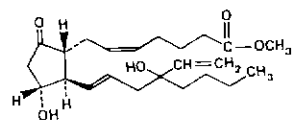
trospetomycinum
trospetomycin

(2*R*,4*aR*,5*aR*,6*S*,7*S*,8*R*,9*S*,9*aS*,10*aS*)-2-butyldecahydro-4*a*,7,9-trihydroxy-6,8-bis(methylamino)-4*H*-pyrano[2,3-*b*][1,4]benzodioxin-4-one
 $C_{17}H_{30}N_2O_7$ 88669-04-9



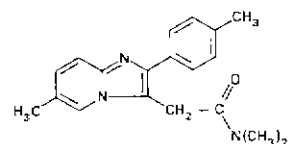
viprostolum
viprostol

(±)-methyl (Z)-7-[(1*R*,2*R*,3*R*)-2-[(*E*)-(4*RS*)-4-butyl-4-hydroxy-1,5-hexadienyl]-3-hydroxy-5-oxocyclopentyl]-5-heptenoate
 $C_{23}H_{38}O_5$ 73647-73-1



zolpidemum
zolpidem

N,N,6-trimethyl-2-*p*-tolylimidazo[1,2-*a*]pyridine-3-acetamide
 $C_{19}H_{21}N_3O$ 82626-48-0



AMENDMENTS TO PREVIOUS LISTS

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International Nonproprietary Names (Prop. INN): List 51

p. 14	<i>delete</i>	<i>insert</i>
	taltibridum	metibridum
	taltibride	metibride

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International Nonproprietary Names (Prop. INN): List 52

p. 23	interferonum alfa
	interferon alfa

replace the sentence preceding the table and the table itself by the following:

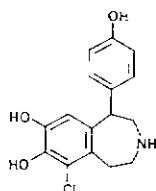
In the case of interferon alfa-2 it is necessary to qualify the number by a letter depending on the amino-acid group occupying positions 23 and 34 respectively in the peptide chain:

	Position	
	23	34
alfa-2a	Lys	His
alfa-2b	Arg	His
alfa-2c	Arg	Arg

p. 23	<i>delete</i>	<i>insert</i>
	metamizolum	metamizolum natricum
	metamizole	metamizole sodium

p. 24	fenoldopamum
	fenoldopam

complete chemical structure with an -OH group as follows:



Annex 1

PROCEDURE FOR THE SELECTION OF RECOMMENDED INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES*

The following procedure shall be followed by the World Health Organization in the selection of recommended international nonproprietary names for pharmaceutical substances, in accordance with the World Health Assembly resolution WHA3.11:

1. Proposals for recommended international nonproprietary names shall be submitted to the World Health Organization on the form provided therefor.

2. Such proposals shall be submitted by the Director-General of the World Health Organization to the members of the Expert Advisory Panel on the International Pharmacopoeia and Pharmaceutical Preparations designated for this purpose, for consideration in accordance with the "General principles for guidance in devising International Nonproprietary Names", appended to this procedure. The name used by the person discovering or first developing and marketing a pharmaceutical substance shall be accepted, unless there are compelling reasons to the contrary.

3. Subsequent to the examination provided for in article 2, the Director-General of the World Health Organization shall give notice that a proposed international nonproprietary name is being considered.

A. Such notice shall be given by publication in the *Chronicle of the World Health Organization*¹ and by letter to Member States and to national pharmacopoeia commissions or other bodies designated by Member States.

(i) Notice may also be sent to specific persons known to be concerned with a name under consideration.

B. Such notice shall:

- (i) set forth the name under consideration;
- (ii) identify the person who submitted a proposal for naming the substance, if so requested by such person;
- (iii) identify the substance for which a name is being considered;
- (iv) set forth the time within which comments and objections will be received and the person and place to whom they should be directed;
- (v) state the authority under which the World Health Organization is acting and refer to these rules of procedure.

C. In forwarding the notice, the Director-General of the World Health Organization shall request that Member States take such steps as are necessary to prevent the acquisition of proprietary rights in the proposed name during the period it is under consideration by the World Health Organization.

4. Comments on the proposed name may be forwarded by any person to the World Health Organization within four months of the date of publication, under article 3, of the name in the *Chronicle of the World Health Organization*.¹

5. A formal objection to a proposed name may be filed by any interested person within four months of the date of publication, under article 3, of the name in the *Chronicle of the World Health Organization*.¹

A. Such objection shall:

- (i) identify the person objecting;
- (ii) state his interest in the name;
- (iii) set forth the reasons for his objection to the name proposed.

6. Where there is a formal objection under article 5, the World Health Organization may either reconsider the proposed name or use its good offices to attempt to obtain withdrawal of the objection. Without prejudice to the consideration by the World Health Organization of a substitute name or names, a name shall not be selected by the World Health Organization as a recommended international nonproprietary name while there exists a formal objection thereto filed under article 5 which has not been withdrawn.

7. Where no objection has been filed under article 5, or all objections previously filed have been withdrawn, the Director-General of the World Health Organization shall give notice in accordance with subsection A of article 3 that the name has been selected by the World Health Organization as a recommended international nonproprietary name.

8. In forwarding a recommended international nonproprietary name to Member States under article 7, the Director-General of the World Health Organization shall:

A. request that it be recognized as the nonproprietary name for the substance; and

B. request that Member States take such steps as are necessary to prevent the acquisition of proprietary rights in the name, including prohibiting registration of the name as a trade-mark or trade-name.

* Text adopted by the Executive Board of WHO in resolution EB15.R7 (*Off. Rec. World Health Org.*, 1955, 60, 3) and amended by the Board in resolution EB43.R9 (*Off. Rec. World Health Org.*, 1969, 173, 10).

¹ The title of this publication was changed to *WHO Chronicle* in January 1959.

GENERAL PRINCIPLES FOR GUIDANCE IN DEVISING INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES

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

2. The INN for a substance belonging to a group of pharmacologically related substances should, where appropriate, show this relationship. Names that are likely to convey to a patient an anatomical, physiological,

pathological or therapeutic suggestion should be avoided.

These primary principles are to be implemented by using the following secondary principles

3. In devising the INN of the first substance in a new pharmacological group, consideration should be given to the possibility of devising suitable INN for related substances, belonging to the new group.

4. In devising INN for acids, one-word names are preferred; their salts should be named without modifying the acid name, e.g. "oxacillin" and "oxacillin sodium", "ibufenac" and "ibufenac sodium".

5. INN for substances which are used as salts should in general apply to the active base or the active acid. Names for different salts or esters of the same active substance should differ

only in respect of the name of the inactive acid or the inactive base

For quaternary ammonium substances, the cation and anion should be named appropriately as separate components of a quaternary substance and not in the amine-salt style.

6. The use of an isolated letter or number should be avoided; hyphenated construction is also undesirable.

7. To facilitate the translation and pronunciation of INN, "f" should be

used instead of "ph", "t" instead of "th", "e" instead of "ae" or "oe", and "i" instead of "y"; the use of the letters "h" and "k" should be avoided.

8. Provided that the names suggested are in accordance with these principles, names proposed by the person discovering or first developing and marketing a pharmaceutical preparation, or names already officially in use in any country, should receive preferential consideration.

9. Group relationship in INN (see Guiding Principle 2) should if possible be shown by using a common stem. The following list contains examples of stems for groups of substances, particularly for new groups. There are many other stems in active use.¹ Where a stem is shown without any hyphens it may be used anywhere in the name.

<i>Latin</i>	<i>English</i>	
-acum	-ac	} anti-inflammatory agents of the ibufenac group synthetic polypeptides with a corticotrophin-like action analgesics
-acidum	-actide	
-adolum	-adol	
-adol-	-adol-	
-astum	-ast	} anti-asthmatic, anti-allergic substances not acting primarily as antihistaminics antihistaminics substances of the diazepam group β -lactamase inhibitors steroids, anabolic anti-inflammatory analgesics of the phenylbutazone group antifibrillants with local anaesthetic activity local anaesthetics antibiotics, derivatives of cephalosporanic acid antibiotics, derivatives of 6-aminopenicillanic acid corticosteroids, except those of the prednisolone group peripheral vasodilators of the nifedipine group substances of the clofibrate group hypoglycemics of the phenformin group steroids, progestogens sulfonamide hypoglycemics iodine-containing contrast media quaternary ammonium compounds anti-inflammatory substances of the indometacin group antibiotics, produced by <i>Streptomyces</i> strains antiprotozoal substances of the metronidazole group β -adrenergic blocking agents of the propranolol group antibacterial agents of the nalidix acid group sulpiride derivatives anti-inflammatory substances of the ibuprofen group prostaglandins hypophyseal hormone release-stimulating peptides bronchodilators, phenethylamine derivatives H ₂ -receptor antagonists folic acid antagonists spasmolytics with a papaverine-like action vinca type alkaloids
-astinum	-astine	
-azepamum	-azepam	
-bactamum	-bactam	
bol	bol	
-buzonium	-buzone	
-cain-	-cain-	
-cainum	-caine	
cef-	cef-	
-cillinum	-cillin	
cort	cort	
-dipinum	-dipine	
-fibratum	-fibrate	
-forminum	-formin	
gest	gest	
gli-	gli-	
io-	io-	
-ium	-ium	
-metacinum	-metacin	
-mycinum	-mycin	
-nidazolium	-nidazole	
-ololum	-olol	
-oxacinum	-oxacin	
-pridum	-pride	
-profenum	-profen	
prost	prost	
-relinum	-relin	
-terolum	-terol	
-tidinum	-tidine	
-trexatum	-trexate	
-verinum	-verine	
vin-	vin-	
-vin-	-vin-	

¹ A more extensive listing of stems is contained in the working document Pharm S/Nom 15 which is regularly updated and can be requested from Pharmaceuticals, WHO, Geneva

Annex 2
NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES:
TWENTIETH REPORT OF THE WHO EXPERT COMMITTEE

In its twentieth report¹ the WHO Expert Committee on Nonproprietary Names for Pharmaceutical Substances reviewed the general principles for devising, and the procedures for selecting, international nonproprietary names (INN) in the light of developments in pharmaceutical compounds in recent years. The most significant recent change has been the extension to the naming of synthetic chemical substances of the practice previously used for substances originating in or derived from natural products. This practice involves employing a characteristic "stem" indicative of a common property of the members of a group. The reasons for, and the implications of, the change are fully discussed. Also

reported is the intention to change the practice with regard to the nomenclature of individual members of polymeric series.

Other sections of the report concern instructions to be followed by bodies making application for international nonproprietary names, the availability of computer-printed cumulative lists of international nonproprietary names, information supplied by WHO Member States concerning their official use of national or international names for pharmaceutical products, and proposals relative to the withdrawal of international nonproprietary names allocated to substances that are no longer in use.

The official texts relating to the procedures for selecting, and general

guidance for devising, international nonproprietary names are reproduced in two annexes to the report. Other annexes give examples of international nonproprietary names that incorporate selected stems, the most frequently used initial groups of letters in international nonproprietary names, a historical review of the programme of selecting international nonproprietary names, some useful literature references, and a model of the form to be used in all applications for international nonproprietary names.

¹ WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances. Twentieth Report of the WHO Expert Committee*), ISBN 92 4 120581 4. Price: Sw. fr. 6 -