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## **INTERNATIONAL NON-PROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS**

**PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES (*Prop. I.N.N.*): LIST 18**

# International Non-Proprietary Names for Pharmaceutical Preparations

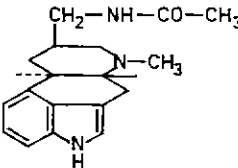
In accordance with article 3 of the Procedure for the Selection of Recommended International Non-Proprietary Names for Pharmaceutical Preparations,<sup>1</sup> notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Non-Proprietary Names.

Comments on, or formal objections to, the

proposed names may be forwarded by an person to the Pharmaceuticals unit of the World Health Organization within four months of the date of their publication in the *WHO Chronicle*.

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

## PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES (*Prop. I.N.N.*): LIST 18 <sup>2</sup>

<i>Proposed International Non-Proprietary Name</i> (Latin, English)	<i>Chemical Name or Description, Molecular and Graphic Formulae</i>
acetergaminum acetergamine	(+)- <i>N</i> -acetyl-9,10-dihydrolysergamine $C_{14}H_{19}N_2O$
	
acidum acexamicum acexamic acid	6-acetamidohexanoic acid $C_8H_{13}NO_3$
	$H_3C-CO-NH-CH_2-CH_2-CH_2-CH_2-CH_2-COOH$

<sup>1</sup> See Annex, p. 500.

<sup>2</sup> Other lists of proposed international non-proprietary names can be found in *Chron. Wild Hlth Org.*, 1953, 7, 299; 1954, 8, 216, 313; 1956, 10, 28; 1957, 11, 231; 1958, 12, 102; *WHO Chronicle*, 1959, 13, 105, 152; 1960, 14, 168, 244; 1961, 15, 314; 1962, 16, 385; 1963, 17, 389; 1964, 18, 433; 1965, 19, 446; 1966, 20, 216; 1967, 21, 70.

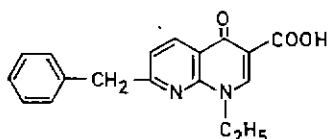
Lists of recommended international non-proprietary names were published in *Chron. Wild Hlth Org.*, 1955, 9, 185; *WHO Chronicle*, 1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421.

*Proposed International  
Non-Proprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

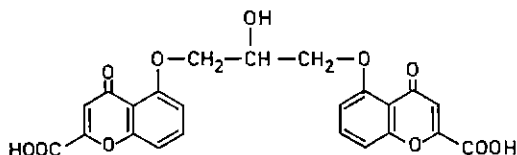
acidum amfonelicum  
amfonelic acid

7-benzyl-1-ethyl-1,4-dihydro-4-oxo-1,8-naphthyridine-3-carboxylic  
acid  
 $C_{15}H_{13}N_2O_3$



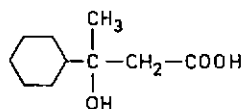
acidum cromoglicicum  
cromoglicic acid

5,5'-(2-hydroxytrimethylenedioxy)bis[4-oxo-4*H*-1-benzopyran-2-  
carboxylic acid]  
 $C_{23}H_{16}O_{11}$



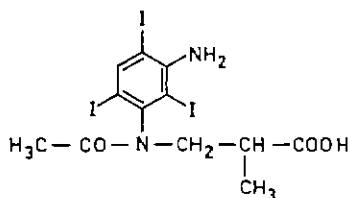
acidum cyclobutoicum  
cyclobutoic acid

$\beta$ -hydroxy- $\beta$ -methylcyclohexaneproponic acid  
 $C_{11}H_{18}O_3$



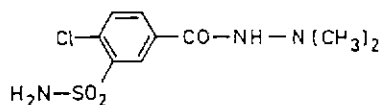
acidum iocetamicum  
iocetamic acid

*N*-acetyl-*N*-(3-amino-2,4,6-triiodophenyl)-2-methyl- $\beta$ -alanine  
 $C_{12}H_{13}I_3N_2O_3$



alipamidum  
alipamide

4-chloro-3-sulfamoylbenzoic acid 2,2-dimethylhydrazide  
 $C_{11}H_{12}ClN_2O_3S$

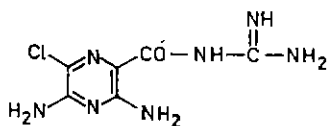


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Non-Proprietary Name  
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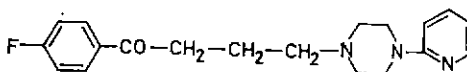
amiloridum  
amiloride

*N*-amidino-3,5-diamino-6-chloropyrazinecarboxamide  
 $C_5H_4ClN_5O$



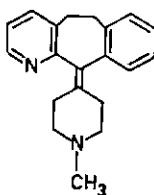
azaperonum  
azaperone

4'-fluoro-4-[4-(2-pyridyl)-1-piperazinyl]butyrophenone  
 $C_{18}H_{22}FN_2O$



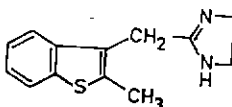
azatadinum  
azatadine

6,11-dihydro-11-(1-methyl-4-piperidylidene)-5*H*-benzo[5,6]cyclohepta-  
[1,2-*b*]pyridine  
 $C_{20}H_{22}N_2$



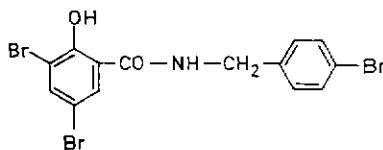
benazolinum  
benazoline

2-[(2-methylbenzo[*b*]thien-3-yl)methyl]-2-imidazoline  
 $C_{15}H_{11}N_2S$



bensalanum  
bensalan

3,5-dibromo-*N*-(*p*-bromobenzyl)salicylamide  
 $C_{14}H_{10}Br_3NO_2$

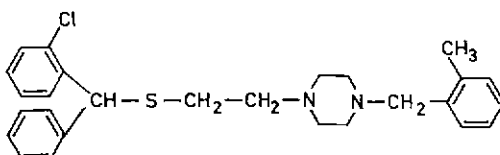


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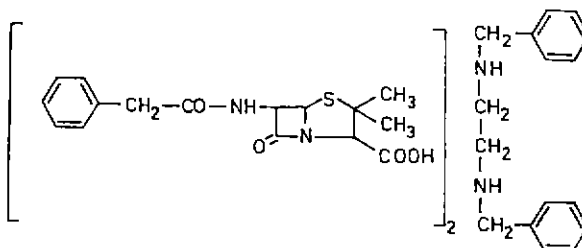
bentipiminum  
bentipimine

1-[2-[(*o*-chloro- $\alpha$ -phenylbenzyl)thio]ethyl]-4-(*o*-methylbenzyl)pipe-  
razine  
 $C_{27}H_{31}ClN_2S$



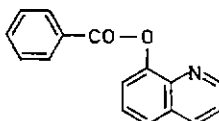
benzathini benzylpenicillinum  
benzathine benzylpenicillin

*N,N'*-dibenzylethylenediamine salt of benzylpenicillin  
 $C_{18}H_{26}N_2 \cdot 2C_{18}H_{18}N_2O_4S$



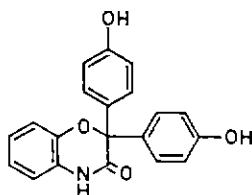
benzoxiquinum  
benzoxiquine

8-quinolinol benzoate (ester)  
 $C_{18}H_{11}NO_2$



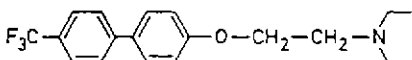
bisoxatinum  
bisoxatin

2,2-bis(*p*-hydroxyphenyl)-2*H*-1,4-benzoxazin-3(4*H*)-one  
 $C_{20}H_{15}NO_4$



boxidinum  
boxidine

1-[2-[[4'-(trifluoromethyl)-4-biphenyl]oxy]ethyl]pyrrolidine  
 $C_{18}H_{20}F_3NO$

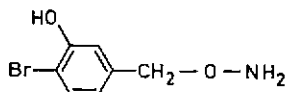


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brocresinum  
brocresine

$\alpha$ -(aminooxy)-6-bromo-*m*-cresol  
 $C_7H_7BrNO_2$

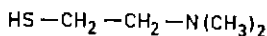


bromelaina  
bromelains

a concentrate of proteolytic enzymes derived from *Ananas comosus* Merr.

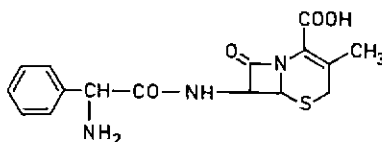
captaminum  
captamine

2-(dimethylamino)ethanethiol  
 $C_4H_{11}NS$



cefalexinum  
cefalexin

D-7-(2-amino-2-phenylacetamido)-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid  
 $C_{17}H_{17}N_2O_4S$

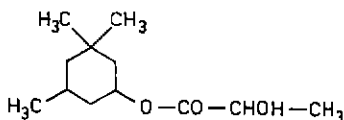


cellacefatum  
cellacefate

a mixed acetate and hydrogen phthalate ester of cellulose (about 50 per cent. of the hydroxyl groups are acetylated and about 25 per cent. are esterified with one of the carboxyl groups of phthalic acid)

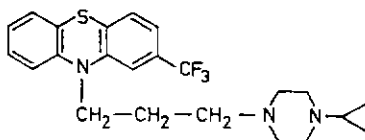
ciclactatum  
ciclactate

3,3,5-trimethylcyclohexyl lactate  
 $C_{12}H_{22}O_3$



ciclofenazinum  
ciclofenazine

10-[3-(4-cyclopropyl-1-piperazinyl)propyl]-2-(trifluoromethyl)phenothiazine  
 $C_{33}H_{28}F_3N_3S$

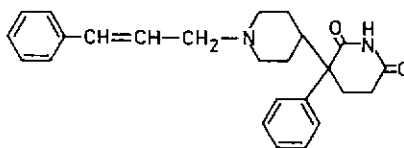


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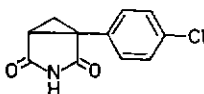
cinperenum  
cinperene

2-(1-cinnamyl-4-piperidyl)-2-phenylglutarimide  
 $C_{23}H_{28}N_2O_2$



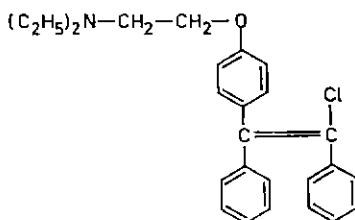
ciproximidum  
ciproximide

1-(*p*-chlorophenyl)-1,2-cyclopropanedicarboximide  
 $C_{11}H_8ClNO_2$



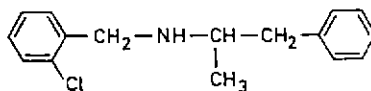
cisclolifenum  
cisclolifene

2-[*p*-(2-chloro-*cis*-1,2-diphenylvinyl)phenoxy]triethylamine  
 $C_{28}H_{28}ClNO$



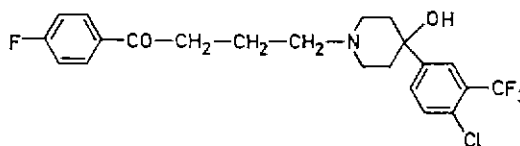
clobenzorexum  
clobenzorex

(+)-*N*-(*o*-chlorobenzyl)- $\alpha$ -methylphenethylamine  
 $C_{14}H_{17}ClN$



clofluperolum  
clofluperol

4-[4-(*p*-chloro-*m*-trifluoromethylphenyl)-4-hydroxypiperidino]-4'-fluorobutyrophenone  
 $C_{22}H_{22}ClF_4NO_2$

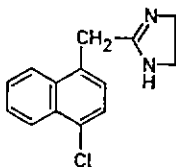


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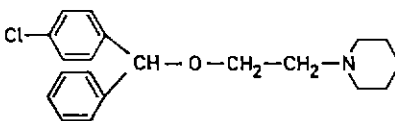
clonazolinum  
clonazoline

2-(4-chloro-1-naphthylmethyl)-2-imidazoline  
 $C_{14}H_{13}ClN_2$



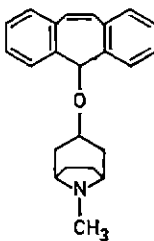
cloperastinum  
cloperastine

1-[2-[(p-chloro-α-phenylbenzyl)oxy]ethyl]piperidine  
 $C_{20}H_{24}ClNO$



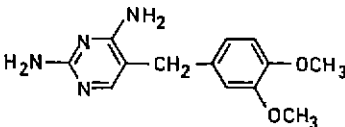
decitroplnum  
decitropine

3α-(5H-dibenzo[a,d]cyclohepten-5-yloxy)tropane  
 $C_{23}H_{25}NO$



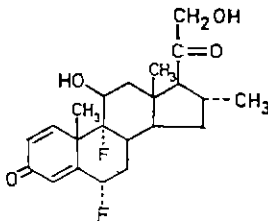
diaveridinum  
diaveridine

2,4-diamino-5-(3',4'-dimethoxybenzyl)pyrimidine  
 $C_{13}H_{14}N_4O_2$



diflucortolonum  
diflucortolone

6α,9-difluoro-11β,21-dihydroxy-16α-methylpregna-1,4-diene-3,20-dione  
 $C_{22}H_{28}F_2O_4$



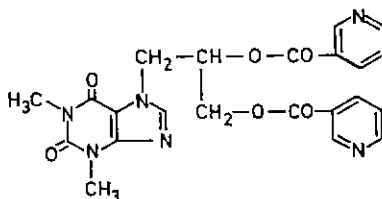


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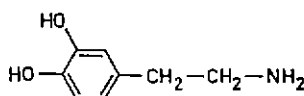
diniprophyllinum  
diniprophylline

7-(2,3-dihydroxypropyl)theophylline bis(nicotinate ester)  
 $C_{22}H_{26}N_6O_8$



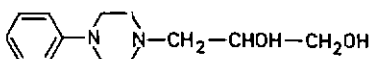
dopaminum  
dopamine

4-(2-aminoethyl)pyrocatechol  
 $C_8H_{11}NO_2$



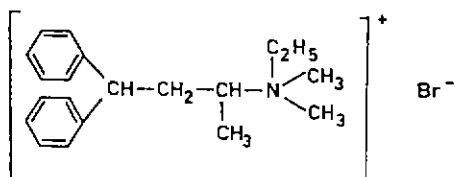
dropropizinum  
dropropizine

3-(4-phenyl-1-piperazinyl)-1,2-propanediol  
 $C_{15}H_{20}N_2O_2$



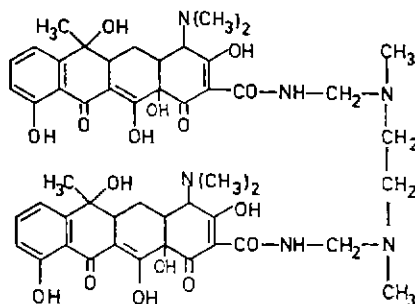
emepronii bromidum  
emepronium bromide

ethyldimethyl(1-methyl-3,3-diphenylpropyl)ammonium bromide  
 $C_{20}H_{28}BrN$



etamocyclinum  
etamocycline

*N,N*-(ethylenebis[(methylimino)methylene])bis[4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide]  
 $C_{50}H_{60}N_6O_{16}$

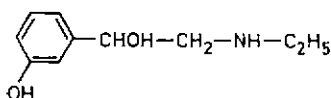


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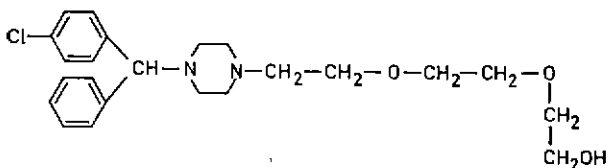
etilefrinum  
etilefrine

$\alpha$ -[(ethylamino)methyl]-*m*-hydroxybenzyl alcohol  
 $C_{10}H_{15}NO_2$



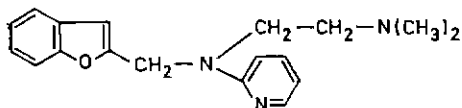
etodroxizinum  
etodroxizine

2-[2-[2-[4-(*p*-chloro- $\alpha$ -phenylbenzyl)-1-piperazinyl]ethoxy]ethoxy]  
ethanol  
 $C_{23}H_{31}ClN_2O_3$



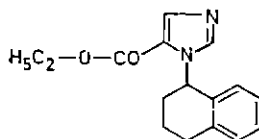
etofuradinum  
etofuradine

*N*-(benzofuran-2-ylmethyl)-*N*-2-pyridyl-*N'*,*N'*-dimethylethylenedia-  
mine  
 $C_{18}H_{21}N_3O$



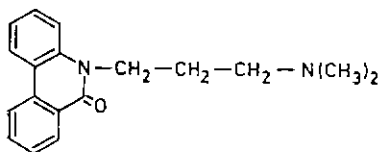
etonamum  
etonam

ethyl 1-(1,2,3,4-tetrahydro-1-naphthyl)imidazole-5-carboxylate  
 $C_{17}H_{19}N_2O_2$



fantridonum  
fantridone

5-[3-(dimethylamino)propyl]-6(5*H*)-phenanthridinone  
 $C_{17}H_{21}N_2O$

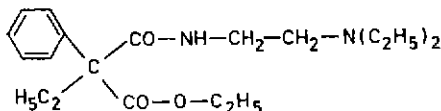


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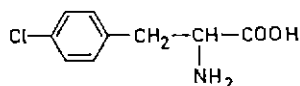
fenalamidum  
fenalamide

ethyl *N*-[2-(diethylamino)ethyl]-2-ethyl-2-phenylmalonamate  
 $C_{19}H_{26}N_2O_3$



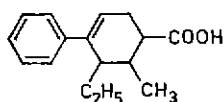
fencloninum  
fenclonine

3-(*p*-chlorophenyl)alanine  
 $C_8H_9ClNO_2$



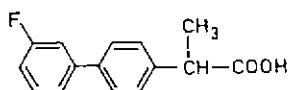
fenestrelum  
fenestrel

5-ethyl-6-methyl-4-phenyl-3-cyclohexene-1-carboxylic acid  
 $C_{17}H_{20}O_2$



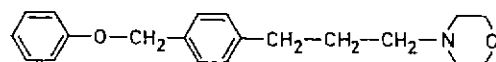
fluprofenum  
fluprofen

2-(3'-fluoro-4-biphenyl)propionic acid  
 $C_{15}H_{13}FO_2$



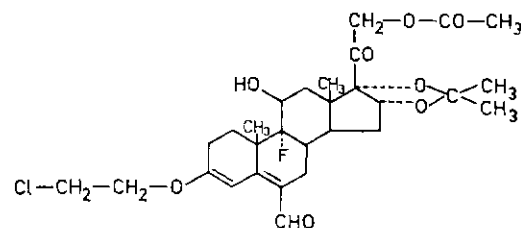
fomocainum  
fomocaine

1-[3-[4-(phenoxy)methyl]phenyl]propyl)morpholine  
 $C_{20}H_{25}NO_2$



formocortalum  
formocortal

3-(2-chloroethoxy)-9-fluoro-11 $\beta$ ,16 $\alpha$ ,17,21-tetrahydroxy-20-oxo-3,5-pregnadiene-6-carboxaldehyde cyclic 16,17-acetal with acetone 21-acetate  
 $C_{27}H_{41}ClFO_8$

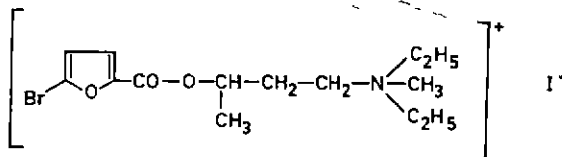


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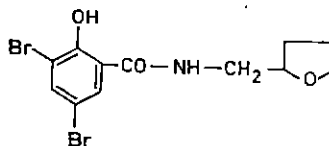
fubregonii iodidum  
fubregonium iodide

diethyl(3-hydroxybutyl)methylammonium iodide 5-bromo-2-furoate  
 $C_{14}H_{28}BrINO_3$



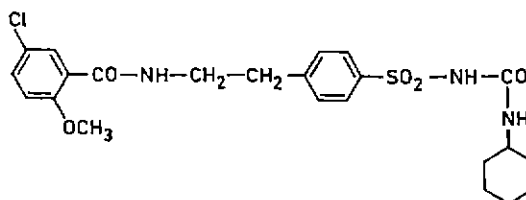
fursalanum  
fursalan

3,5-dibromo-*N*-(tetrahydrofurfuryl)salicylamide  
 $C_{12}H_{13}Br_2NO_3$



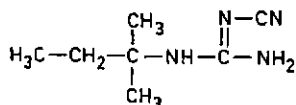
glibenclamidum  
glibenclamide

1-[4-[2-(5-chloro-2-methoxybenzamido)ethyl]phenylsulfonyl]-3-cyclohexylurea  
 $C_{23}H_{28}ClN_3O_3S$



guancidinum  
guancidine

1-cyano-3-*tert*-pentylguanidine  
 $C_7H_{11}N_4$

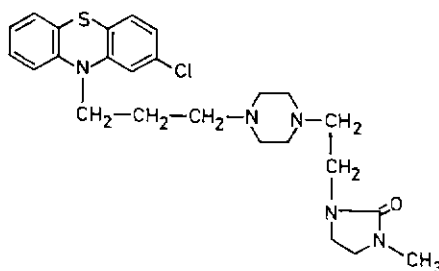


hypromellosum  
hypromellose

a mixed methyl and hydroxypropyl ether of cellulose (about 4 to 7 per cent. hydroxypropyl groups and 20 to 30 per cent. methoxyl groups)

imiclopazinum  
imiclopazine

1-(2-[4-[3-(2-chlorophenothiazin-10-yl)propyl]-1-piperazinyl]ethyl)-3-methyl-2-imidazolidinone  
 $C_{23}H_{22}ClN_6OS$

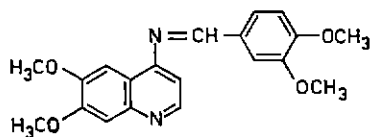


*Proposed International  
Non-Proprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

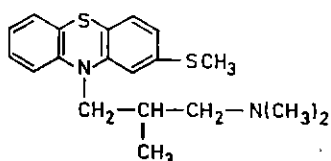
leniquinsinum  
leniquinsin

6,7-dimethoxy-4-(veratrylideneamino)quinoline  
 $C_{18}H_{20}N_2O_4$



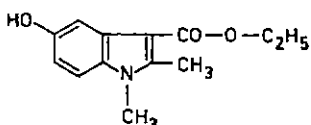
levometiomeprazinum  
levometiomeprazine

(-)-10-[3-(dimethylamino)-2-methylpropyl]-2-(methylthio)  
phenothiazine  
 $C_{17}H_{21}N_2S_2$



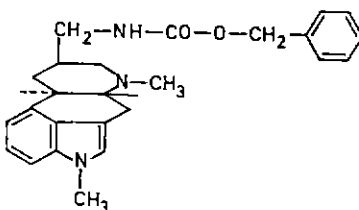
mecarbinatum  
mecarbinat

ethyl 5-hydroxy-1,2-dimethylindole-3-carboxylate  
 $C_{13}H_{15}NO_3$



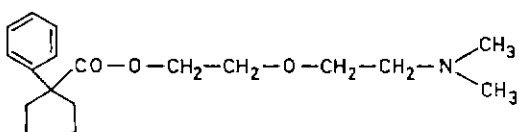
metergolinum  
metergoline

(+)-N-(carboxy)-1-methyl-9,10-dihydrolysergamine  
benzyl ester  
 $C_{23}H_{31}N_3O_2$



minepentatum  
minepentate

2-[2-(dimethylamino)ethoxy]ethyl 1-phenylcyclopentanecarboxylate  
 $C_{19}H_{27}NO_3$

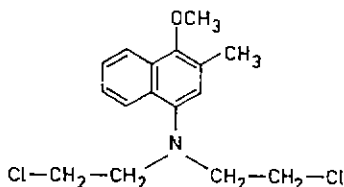


*Proposed International  
Non-Proprietary Name  
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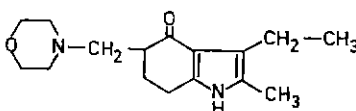
mitoclominum  
mitoclomine

*N,N*-bis(2-chloroethyl)-4-methoxy-3-methyl-1-naphthylamine  
 $C_{11}H_{13}Cl_2NO$



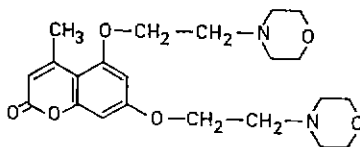
molindonum  
molindone

3-ethyl-6,7-dihydro-2-methyl-5-(morpholinomethyl)indol-4(5*H*)-one  
 $C_{14}H_{18}N_2O_2$



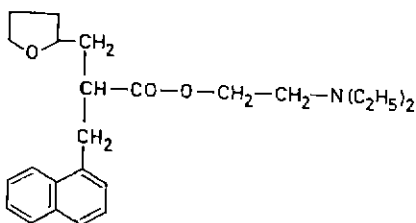
moxicoumonum  
moxicoumone

4-methyl-5,7-bis(2-morpholinoethoxy)coumarin  
 $C_{22}H_{26}N_2O_6$



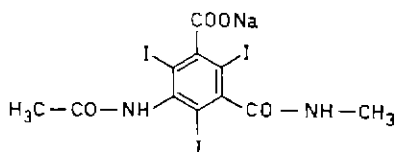
naftidrofurylum  
naftidrofuryl

2-(diethylamino)ethyl tetrahydro- $\alpha$ -(1-naphthylmethyl)-2-furanpropionate ester  
 $C_{21}H_{29}NO_4$



natrii radioitalamas ( $^{125}I$ )  
sodium radioitalamate ( $^{125}I$ )

sodium 5-acetamido-*ar,ar*-diiodo-*ar, ar*-iodo- $^{125}I$ -*N*-methylisophthalamate  
 $C_{11}H_{11}I_3N_2NaO_4$

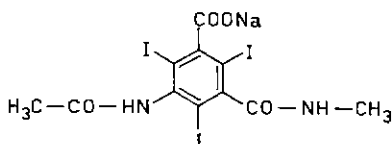


*Proposed International  
Non-Proprietary Name  
(Latin, English)*

natrii radioitalamas (<sup>131</sup>I)  
sodium radioitalamate (<sup>131</sup>I)

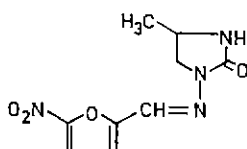
*Chemical Name or Description,  
Molecular and Graphic Formulae*

sodium 5-acetamido-*ar,ar*-diiodo-*ar*-iodo-<sup>131</sup>I-*N*-methylisophthalamate  
C<sub>11</sub>H<sub>13</sub>N<sub>2</sub>NaO<sub>4</sub>



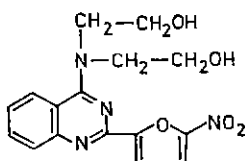
nifurimidum  
nifurimide

(±)-4-methyl-1-[(5-nitrofurfurylidene)amino]-2-imidazolidinone  
C<sub>7</sub>H<sub>10</sub>N<sub>2</sub>O<sub>4</sub>



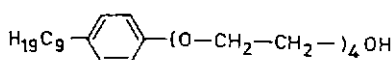
nifurquinazolum  
nifurquinazol

2,2'-[[2-(5-nitro-2-furyl)-4-quinazolinyl]imino]diethanol  
C<sub>18</sub>H<sub>16</sub>N<sub>2</sub>O<sub>5</sub>



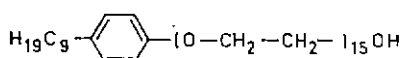
nonoxinolum 4  
nonoxinol 4

2-[2-[2-[2-(*p*-nonylphenoxy)ethoxy]ethoxy]ethoxy]ethanol  
C<sub>22</sub>H<sub>40</sub>O<sub>5</sub>



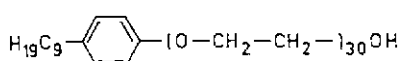
nonoxinolum 15  
nonoxinol 15

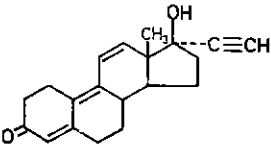
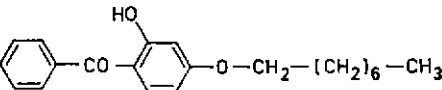
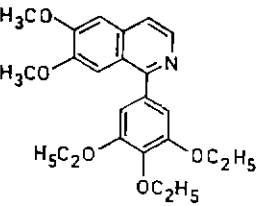
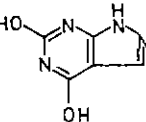
44-(*p*-nonylphenoxy)-3,6,9,12,15,18,21,24,27,30,33,36,39,42-tetradeca-  
oxatetratetracontan-1-ol  
C<sub>65</sub>H<sub>104</sub>O<sub>14</sub>



nonoxinolum 30  
nonoxinol 30

89-(*p*-nonylphenoxy)-3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,-  
57,60,63,66,69,72,75,78,81,84,87-nonacosaoxanonaoctacontan-1-ol  
C<sub>115</sub>H<sub>184</sub>O<sub>21</sub>



Proposed International Non-Proprietary Name (Latin, English)	Chemical Name or Description, Molecular and Graphic Formulae
norgestrienonum norgestrienone	<p>17-hydroxy-19-nor-17<math>\alpha</math>-pregna-4,9,11-trien-20-yn-3-one C<sub>22</sub>H<sub>32</sub>O<sub>2</sub></p> 
norleusactidum norleusactide	<p>D-seryl-L-tyrosyl-L-seryl-L-norieucyl-L-glutamyl-L-histidyl-L-phenylalanyl-L-arginyl-L-tryptophyl-glycyl-L-lysyl-L-propyl-L-valyl-glycyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-arganyl-L-prolyl-L-valyl-L-lysyl-L-valyl-L-tyrosyl-L-prolyl-L-valinamide C<sub>142</sub>H<sub>221</sub>N<sub>12</sub>O<sub>21</sub></p> <p>H - Ser - Tyr - Ser - Nle - Glu - His - Phe - Arg  <span style="border: 1px solid black; padding: 2px;">Try - Gly - Lys - Pro - Val - Gly - Lys - Lys</span>  <span style="border: 1px solid black; padding: 2px;">Arg - Arg - Pro - Val - Lys - Val - Tyr - Pro</span>  <span style="border: 1px solid black; padding: 2px;">Val - NH<sub>2</sub></span></p>
octabenzonum octabenzone	<p>2-hydroxy-4-(octyloxy)benzophenone C<sub>21</sub>H<sub>18</sub>O<sub>2</sub></p> 
octaverinum olivaverine	<p>6,7-dimethoxy-1-(3,4,5-triethoxyphenyl)isoquinoline C<sub>22</sub>H<sub>27</sub>NO<sub>5</sub></p> 
olivomycinum olivomycin	<p>an antibiotic obtained from cultures of <i>Actinomyces olivoreliculi</i>, or the same substance obtained by any other means</p>
oxipurinolum oxipurinol	<p>1<i>H</i>-pyrazolo[3,4-<i>d</i>]pyrimidine-4,6-diol C<sub>5</sub>H<sub>4</sub>N<sub>4</sub>O<sub>2</sub></p> 

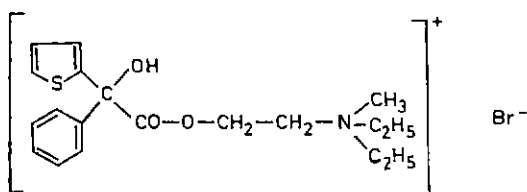


*Proposed International  
Non-Proprietary Name  
(Latin, English)*

oxitefonii bromidum  
oxitefonium bromide

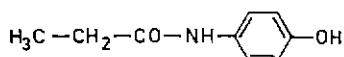
*Chemical Name or Description,  
Molecular and Graphic Formulae*

diethyl(2-hydroxyethyl)methylammonium bromide  $\alpha$ -phenyl-2-thio-  
pheneglycolate  
 $C_{15}H_{21}BrNO_3S$



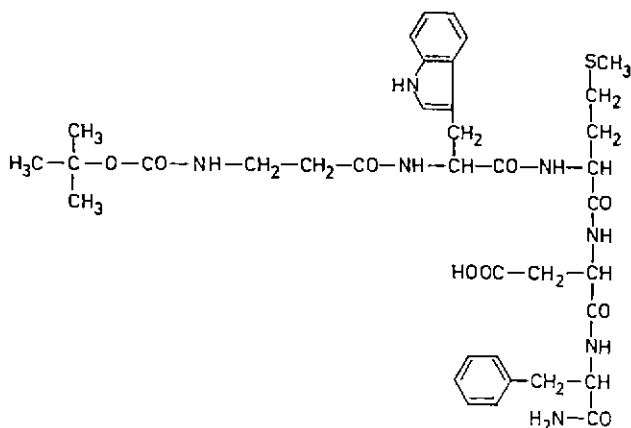
parapropamolum  
parapropamol

4'-hydroxypropionanilid  
 $C_9H_{11}NO_2$



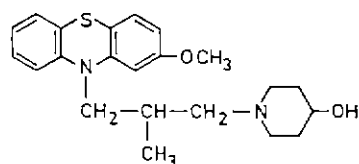
pentagastrinum  
pentagastrin

*N*-t-butyloxycarbonyl- $\beta$ -alanyl-L-tryptophyl-L-tryptophyl-L-methio-  
nyl-L-aspartyl-L-phenylalanine amide  
 $C_{57}H_{71}N_7O_8S$



perimetazinum  
perimetazine

1-[3-(2-methoxyphenothiazin-10-yl)-2-methylpropyl]-4-piperidinol  
 $C_{22}H_{23}N_2O_2S$

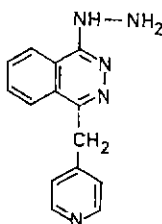


*Proposed International  
Non-Proprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

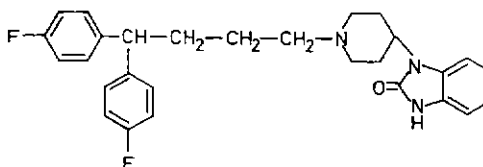
picodralazinum  
picodralazine

1-hydrazino-4-(4-pyridylmethyl)phthalazine  
 $C_{14}H_{13}N_5$



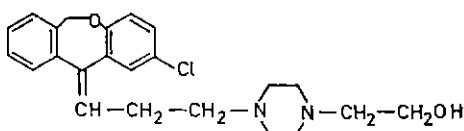
pimozidum  
pimozide

1-{1-[4,4-bis(*p*-fluorophenyl)butyl]-4-piperidyl}-2-benzimidazolinone  
 $C_{23}H_{23}F_2N_3O$



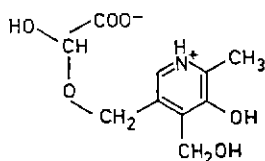
pinoxepinum  
pinoxepin

*cis*-4-[3-(2-chlorodibenz[*b,e*]oxepin-11(6*H*)-ylidene)propyl]-1-piperazineethanol  
 $C_{23}H_{24}ClN_2O_2$



piridoxilatum  
piridoxilate

[(5-hydroxy-4-hydroxymethyl-6-methyl-3-pyridyl)methoxy]-glycolic acid  
 $C_{10}H_{13}NO_6$



polisaponinum  
polisaponin

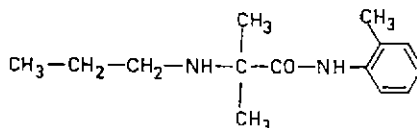
a mixture of all the steroid saponins isolated from the rhizome of  
*Dioscorea polystachya*

*Proposed International  
Non-Proprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

quatacaïnium  
quatacaine

2-methyl-2-(propylamino)-o-propionotoluidide  
 $C_{14}H_{22}N_2O$

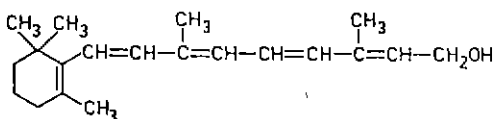


radiocesii chloridum ( $^{131}\text{Cs}$ )  
radiocesium chloride ( $^{131}\text{Cs}$ )

cesium chloride  
 $^{131}\text{CsCl}$

retinolum  
retinol

3,7-dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonate-  
traen-1-ol  
 $C_{26}H_{44}O$

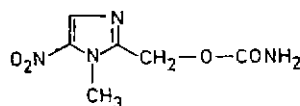


ribaminolum  
ribaminol

2-diethylammonium ethanol ribonucleate

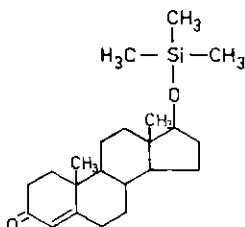
ronidazolium  
ronidazole

(1-methyl-5-nitroimidazol-2-yl)methyl carbamate  
 $C_6H_7N_3O_4$



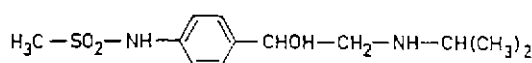
silandronum  
silandrone

17β-(trimethylsiloxy)androst-4-en-3-one  
 $C_{22}H_{34}O_2\text{Si}$



sotalolum  
sotalol

4'-[1-hydroxy-2-(isopropylamino)ethyl]methanesulfonanilide  
 $C_{17}H_{25}N_2O_3S$

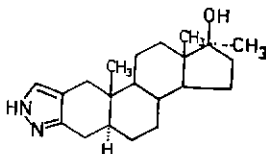


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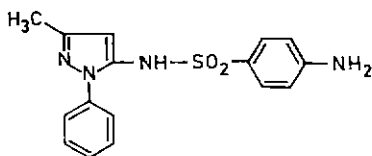
stanozololum  
stanozolol

17 $\beta$ -hydroxy-17 $\alpha$ -methylandrostando[3,2-*c*]pyrazole  
 $C_{21}H_{32}N_2O$



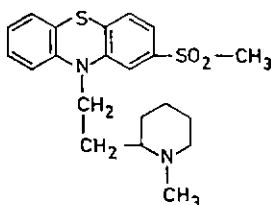
sulfapyrazolum  
sulfapyrazole

*N*<sup>1</sup>-(3-methyl-1-phenylpyrazol-5-yl)sulfanilamide  
 $C_{11}H_{11}N_3O_2S$



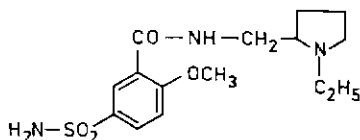
sulforidazinum  
sulforidazine

10-[2-(1-methyl-2-piperidyl)ethyl]-2-methylsulfonylphenothiazine  
 $C_{21}H_{24}N_2O_2S_2$



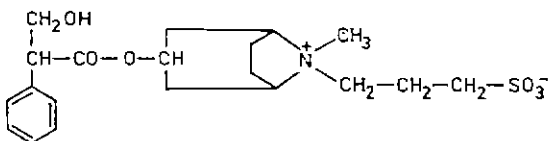
sulpiridum  
sulpiride

*N*'-[(1-ethyl-2-pyrrolidinyl)methyl]-2-methoxy-5-sulfamoylbenzamide  
 $C_{15}H_{21}N_3O_3S$



sultroponium  
sultroponium

8-(3-sulfopropyl)atropinium hydroxide inner salt  
 $C_{20}H_{29}NO_4S$



sutillaina  
sutillains

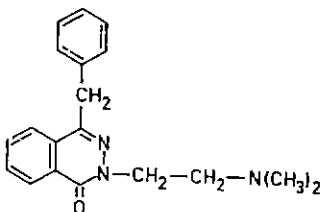
proteolytic enzymes derived from *Bacillus subtilis*

*Proposed International  
Non-Proprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

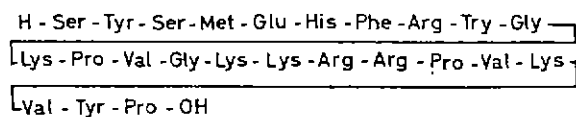
talastinum  
talastine

2-[2-(dimethylamino)ethyl]-4-benzyl-1(2*H*)phthalazinone  
 $C_{17}H_{21}N_3O$



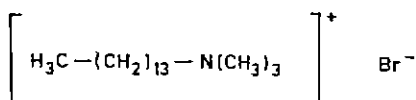
tetracosactidum  
tetracosactide

L-seryl-L-tyrosyl-L-seryl-L-methionyl-L-glutamyl-L-histidyl-L-phenylalanyl-L-arginyl-L-tryptophyl-glycyl-L-lysyl-L-prolyl-L-valyl-glycyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-prolyl-L-valyl-L-lysyl-L-valyl-L-tyrosyl-L-proline  
 $C_{133}H_{210}N_{30}O_{31}S$



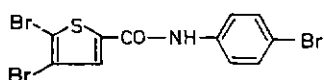
tetradonii bromidum  
tetradonium bromide

trimethyltetradecylammonium bromide  
 $C_{17}H_{35}BrN$



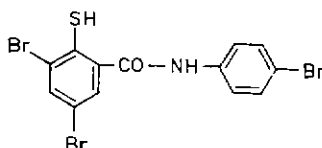
tibrofanum  
tibrofan

4,4',5-tribromo-2-thiophenecarboxanilide  
 $C_{11}H_4Br_3NOS$



tiosalanum  
tiosalan

3,4',5-tribromo-2-mercaptobenzanilide  
 $C_{11}H_4Br_3NOS$

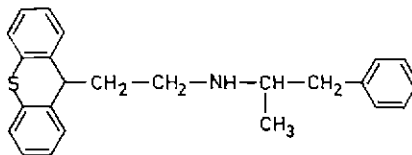


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*Chemical Name or Description,  
Molecular and Graphic Formulae*

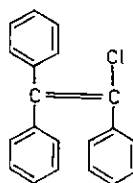
tixadilum  
tixadil

*N*-( $\alpha$ -methylphenethyl)thioxanthene-9-ethylamine  
 $C_{24}H_{29}NS$



transclomifenum  
transclomifene

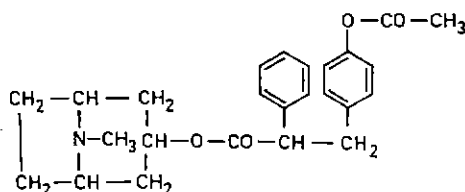
2-[*p*-(2-chloro-*trans*-1,2-diphenylvinyl)phenoxy]triethylamine  
 $C_{24}H_{27}ClNO$



$(C_2H_5)_2N-CH_2-CH_2-O$

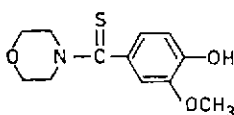
tropodifenum  
tropodifene

tropine 3-(*p*-hydroxyphenyl-2-phenylpropionate (ester) acetate  
(ester)  
 $C_{23}H_{29}NO_4$



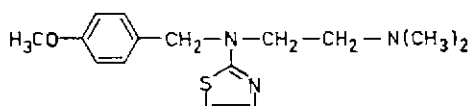
vanitilidum  
vanitilide

4-(thiovanilloyl)morpholine  
 $C_{13}H_{15}NO_3S$



zolaminum  
zolamine

2-[-(dimethylamino)ethyl](*p*-methoxybenzyl)amino)thiazole  
 $C_{19}H_{27}N_3OS$



## NAMES FOR RADICALS AND GROUPS

Some preparations for which a proposed international non-proprietary name has been established may be used in the form of salts or esters. The radicals or groups involved may be of complex composition and it is then inconvenient to refer to them in systematic

chemical nomenclature. The following shorter non-proprietary names for some such radicals and groups have been devised or selected, and they are suggested for use with proposed international non-proprietary names.

methylphenylmethylene	acetofenide
isopropylidene ether of a dihydric alcohol	acetonide
4,4'-diaminostilbene-2,2'-disulfonate	amsonate
camphorsulfonate	camsilate
cyclopentanepropionate	cipionate
<i>p</i> -chlorbenzenesulfonate	closilate
1,2-ethanedisulfonate	edisilate
4,4'-methylenebis(3-hydroxy-2-naphthoate)	embonate
heptanoate	enantate
ethanesulfonate	esilate
glucoheptonate	gluceptate
<i>o</i> -(4-hydroxybenzoyl)benzoate	hibenzate
2-hydroxyethanesulfonate	isetionate
<i>N</i> -methylglucamine	meglumine
methanesulfonate	mesilate
methylsulfate	metilsulfate
1,5-naphthalenedisulfonate	napadisillate
2-naphthalenesulfonate	napsilate
trimethylacetate	pivalate
stearoyl-glycolate	steaglate
8-chlorotheophyllinate	teoclote
<i>p</i> -toluenesulfonate	tosilate
2,4,5-trichlorophenolate	triclofenate

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## CORRIGENDA

Vol. 16, No. 10

### PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES (*Prop. I.N.N.*): LIST 12

p. 390: *delete*

meractinomycinum  
meractinomycin

*insert*

dactinomycinum  
dactinomycin

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### PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES (*Prop. I.N.N.*): LIST 13

p. 398: *delete*

virgimycinum  
virgimycin

*insert*

virginiamycinum  
virginiamycin

PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES (*Prop. I.N.N.*): LIST 17

p. 71: <i>delete</i>	<i>insert</i>
antridonit chloridum	isometamidii chloridum
antridonium chloride	isometamidium chloride
<i>delete</i>	<i>insert</i>
cinnopropazonum	azapropazonum
cinnopropazone	azapropazone
p. 76: <i>delete</i>	<i>insert</i>
nonoxynolum	nonoxinolum 9
nonoxynol	nonoxinol 9

Annex

**PROCEDURE FOR THE SELECTION OF RECOMMENDED INTERNATIONAL NON-PROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS \***

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

1. Proposals for recommended international non-proprietary 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 Non-proprietary Names", appended to this procedure. The name used by the person discovering or first developing and marketing a pharmaceutical preparation 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 non-proprietary name is being considered.

A. Such notice shall be given by publication in the *Chronicle of the World Health Organization*<sup>1</sup> 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.

\* Text adopted by the Executive Board of WHO in resolution EB15.R7 (*Off. Rec. Wld Hlth Org.*, 1955, 60, 3).

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



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*.

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*.

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 non-proprietary 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 non-proprietary name.

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

A. request that it be recognized as the non-proprietary 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.

## **GENERAL PRINCIPLES FOR GUIDANCE IN DEVISING INTERNATIONAL NON-PROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS \***

1. Names should be distinctive in sound and spelling. They should not be inconveniently long and should not be liable to confusion with names already in common use.

2. The name for a substance belonging to a group of pharmacologically related substances should show this relationship. The name should be free from any anatomical, physiological, pathological or therapeutic suggestion.

The above primary principles are to be implemented by utilization of the following secondary principles.

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

4. Syllables such as "methylhydro", "methoxy", and "chlor" should preferably be abbreviated (to "medro", "meto", "clo", etc.).

5. In the naming of substances which are acids, existing names generally used in chemistry which include the word "acidum" ("acid") should be used, if the name is adequate for practical use in therapy and pharmacy. In other circumstances, the substance should be named by a single word and not by a name which includes the word "acid". Where the word "acid" is not used in the name, as is customary in the penicillin series, a salt should preferably be named without modification of the parent acid name, e.g., "oxacillin" and "oxacillin sodium".

6. Names 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). Exceptions may have to be made for those cases in which pharmacological activity may reside in both parts of the salt or ester.

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.

\* Text adopted by the Executive Board of WHO in resolution EB37.R9 (*Off. Rec. Wld Hlth Org.*, 1966, 148, 9).

7. The use of an isolated letter or number should be avoided; hyphenated construction is also undesirable.
8. To facilitate translation and pronunciation "f" should preferably be used instead of "ph", "t" instead of "th", "e" instead of "ae" or "oe", and "i" instead of "y".
9. 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.
10. Group relationship in names (see item 2) should preferably be shown by using common syllables in the following list. Where a syllable or a group of syllables is shown without any hyphens it may be used anywhere in the name. The syllable, or group of syllables, should, if possible, be used only for such substances.
- Subsidiary group relationships should be shown by devising names which show similarities to and are analogous with a previously named substance, the parent substance.
- At the end of the list are general chemical syllables. Should they come into conflict with other suggested syllables, the suffix conveying the best information should be used.

<i>Latin</i>	<i>English</i>	<i>French</i>	
-andr-	-andr-	-andr-	} steroids, androgenic
or -stan-	or -stan-	or -stan-	
or -ster-	or -ster-	or -ster-	
-apol-	-apol-	-apol-	polysulfonic anticoagulants
-arolum	-arol	-arol	anticoagulants
-bamatum	-bamate	-bamate	tranquillizers of the propanediol and pentanediol series
barb	barb	barb	barbituric acids
bol	bol	bol	anabolic steroids
-cainum	-caine	-caine	local anaesthetics
cef-	cef-	céf-	antibiotics with cephalosporanic acid nucleus
-cillinum	-cillin	-cilline	penicillins: derivatives of carboxy-6-amino-penicillanic acid
-cort-	-cort-	-cort-	steroids, glucocorticoids and mineralocorticoids, other than prednisolone derivatives
-crinum	-crine	-crine	acridine derivatives, antimicrobial
-curonium	-curonium	-curonium	curare-like drugs
-cyclinum	-cycline	-cycline	antibiotics, tetracycline derivatives
-dionum	-dione	-dione	antiepileptics derived from oxazolidinedione
-estr-	-estr-	-estr-	estrogenic drugs
-gest-	-gest-	-gest-	steroids, progestative
gli-	gli-	gli-	sulfonamide oral antidiabetics
io-	io-	io-	iodine-containing contrast media
-mer-	-mer-	-mer-	mercury-containing drugs, antimicrobial or diuretic
-mito-	-mito-	-mito-	nucleotoxic, antineoplastic agents
-moxinum	-moxine	-moxine	monoamine oxidase inhibitors
-mycinum	-mycin-	-mycine	antibiotics, produced by <i>Streptomyces</i> strains
nifur-	nifur-	nifur-	5-nitrofur derivatives
-orexum	-orex	-orex	anorexigenic agents
-praminum	-pramine	-pramine	dibenzazepine, compounds of the imipramine type
-quinum	-quine	-quine	quinoline derivatives
-serpinum	-serpine	-serpine	derivatives of <i>Rauwolfia</i> alkaloids
-stigminum	-stigmine	-stigmine	anticholinesterases
sulfa-	sulfa-	sulfa-	sulfonamides, used as antimicrobials
-tizidum	-tizide	-tizide	diuretics which are thiazide derivatives
-toinum	-toine	-toine	antiepileptics which are hydantoin derivatives
-verinum	-verine	-vérine	spasmolytics with a papaverine-like action
-inum	-ine	-ine	alkaloids and organic bases
-onum	-one	-one	ketones
-onium	-onium	-onium	quaternary amines