

## International Nonproprietary Names for Pharmaceutical Substances

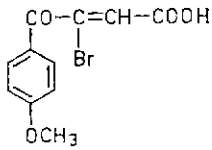
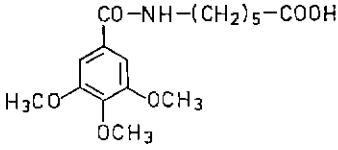
In accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,<sup>1</sup> notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Nonproprietary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

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. I.N.N.*): LIST 25<sup>2</sup>

<i>Proposed International Nonproprietary Name</i> (Latin, English)	<i>Chemical Name or Description, Molecular and Graphic Formulae</i>
acidum bromebricum bromebric acid	( <i>E</i> )-3- <i>p</i> -anisoyl-3-bromoacrylic acid C <sub>11</sub> H <sub>9</sub> BrO <sub>4</sub>
	
acidum capobenicum capobenic acid	6-(3,4,5-trimethoxybenzamido)hexanoic acid C <sub>16</sub> H <sub>23</sub> NO <sub>6</sub>
	

<sup>1</sup> See Annex, p. 28.

<sup>2</sup> Other lists of proposed international nonproprietary 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, 478; 1968, 22, 112, 407; 1969, 23, 183, 418; 1970, 24, 119, 413.

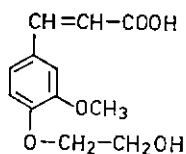
Lists of recommended international nonproprietary names were published in *Chron. Wild Hlth Org.*, 1955, 9, 185; *WHO Chronicle*, 1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421; 1967, 21, 538; 1968, 22, 463; 1969, 23, 490; 1970, 24, 526.

*Proposed International  
Nonproprietary Name  
(Latin, English)*

acidum cinameticum  
cinametic acid

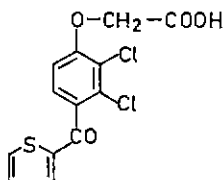
*Chemical Name or Description,  
Molecular and Graphic Formulae*

4-(2-hydroxyethoxy)-3-methoxycinnamic acid  
 $C_{12}H_{14}O_5$



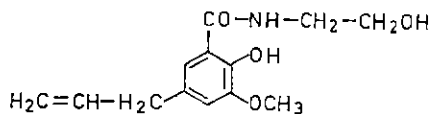
acidum tienilicum  
tienilic acid

[2,3-dichloro-4-(2-thenoyl)phenoxy]acetic acid  
 $C_{13}H_8Cl_2O_4S$



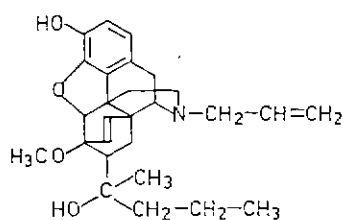
alibendolum  
alibendol

5-allyl-N-(2-hydroxyethyl)-3-methoxysalicylamide  
 $C_{13}H_{17}NO_4$



alletorpinum  
alletorphine 

17-allyl-17-demethyl-7 $\alpha$ -((R)-1-hydroxy-1-methylbutyl)-  
6,14-endo-ethenotetrahydroorpavine  
 $C_{27}H_{35}NO_4$

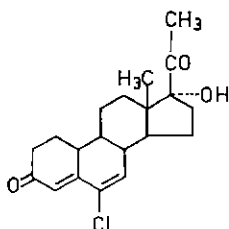


*Proposed International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

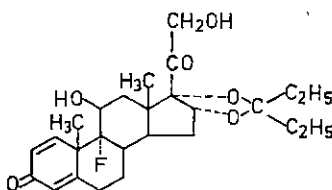
amadinonum  
amadinone

6-chloro-17-hydroxy-19-norpregna-4,6-diene-3,20-dione  
 $C_{20}H_{25}ClO_3$



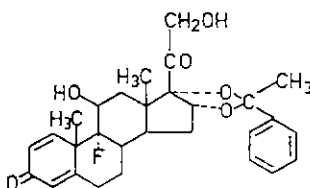
amcinafalum  
amcinafal

9-fluoro-11 $\beta$ ,16 $\alpha$ ,17,21-tetrahydroxypregna-1,4-diene-3,20-dione  
cyclic 16,17-acetal with 3-pentanone  
 $C_{26}H_{35}FO_6$



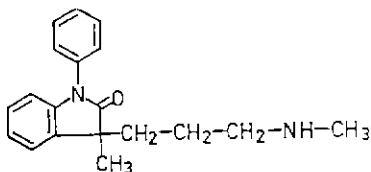
amcinafidum  
amcinafide

9-fluoro-11 $\beta$ ,16 $\alpha$ ,17,21-tetrahydroxypregna-1,4-diene-3,20-dione  
cyclic 16,17-acetal with acetophenone  
 $C_{29}H_{33}FO_6$



amedalinum  
amedalin

3-methyl-3-[3-(methylamino)propyl]-1-phenyl-2-indolinone  
 $C_{19}H_{22}N_2O$

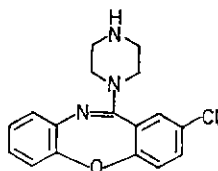


*Proposed International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description,  
Molecular and Graphic Formulae*

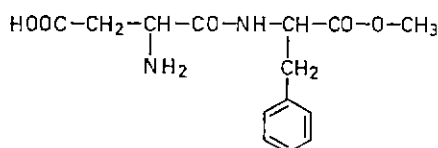
amoxapinum  
amoxapine

2-chloro-11-(1-piperazinyl)dibenz[*b,f*][1,4]oxazepine  
 $C_{17}H_{16}ClN_3O$



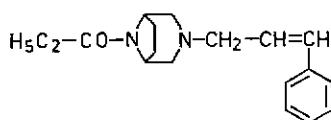
aspartamum  
aspartame

3-amino-*N*-( $\alpha$ -carboxyphenethyl)succinamic acid *N*-methyl ester  
 $C_{14}H_{18}N_2O_5$



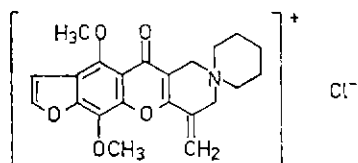
azaprocinum  
azaprocin

3-cinnamyl-8-propionyl-3,8-diazabicyclo[3.2.1]octan  
 $C_{18}H_{24}N_2O$



azaspirii chloridum  
azaspirium chloride

8,9-dihydro-4,11-dimethoxy-9-methylene-5-oxospiro[5*H*-furo-  
[3',2':6,7][1]benzopyrano[3,2-*c*]pyridine-7(6*H*),1'-piperidinium]  
chloride  
 $C_{22}H_{24}ClNO_5$

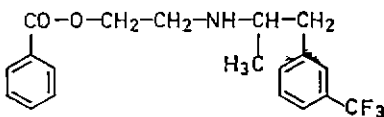


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Nonproprietary Name  
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Molecular and Graphic Formulae*

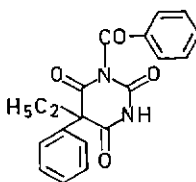
benfluorexum  
benfluorex

2- [[ $\alpha$ -methyl-*m*-(trifluoromethyl)phenethyl]amino]ethanol  
benzoate (ester)  
 $C_{19}H_{20}F_3NO_2$



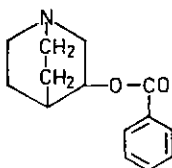
benzobarbitalum  
benzobarbital

1-benzoyl-5-ethyl-5-phenylbarbituric acid  
 $C_{19}H_{16}N_2O_4$



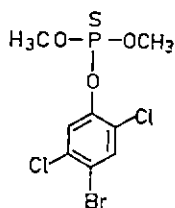
benzoclidinum  
benzoclidine

3-quinuclidinol benzoate (ester)  
 $C_{14}H_{17}NO_2$



bromofosum  
bromofos

*O*-(4-bromo-2,5-dichlorophenyl) *O,O*-dimethyl phosphorothioate  
 $C_8H_8BrCl_2O_3PS$

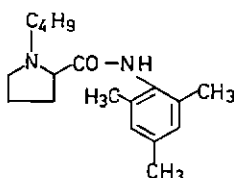


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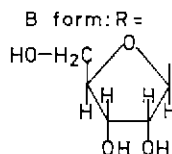
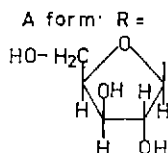
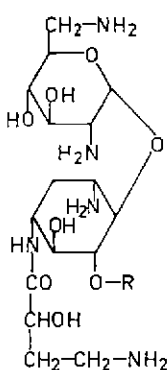
bumecainum  
bumecaine

1-butyl-2',4',6'-trimethyl-2-pyrrolidinecarboxanilide  
 $C_{18}H_{28}N_2O$



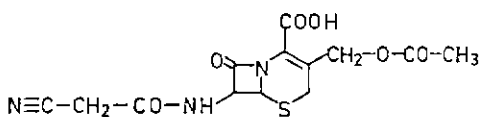
butirosinum  
butirosin

O-2,6-diamino-2,6-dideoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-  
O- $[\beta$ -D-xylofuranosyl-(1 $\rightarrow$ 5)]-N<sup>1</sup>-(4-amino-2-hydroxybutyryl)-  
2-deoxystreptamine (A form)  
mixture with  
O-2,6-diamino-2,6-dideoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-  
O- $[\beta$ -D-ribofuranosyl-(1 $\rightarrow$ 5)]-N<sup>1</sup>-(4-amino-2-hydroxybutyryl)-  
2-deoxystreptamine (B form)  
 $C_{21}H_{41}N_5O_{12}$



cefacetrilum  
cefacetrile

7-(2-cyanoacetamido)-3-(hydroxymethyl)-8-oxo-5-thia-  
1-azabicyclo[4.2.0]oct-2-ene-2-carboxylate acetate (ester)  
 $C_{13}N_{13}NaO_6S$

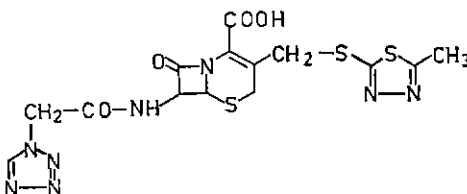


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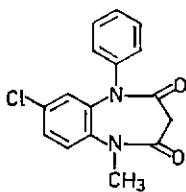
cefazolinum  
cefazolin

3-[[[(5-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-8-oxo-7-[2-(1*H*-tetrazol-1-yl)acetamido]-5-thia-1-azabicyclo[4.2.0]-oct-2-ene-2-carboxylic acid  
 $C_{14}H_{14}N_8O_4S_3$



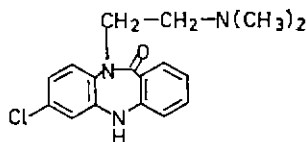
clobazamum  
clobazam

7-chloro-1-methyl-5-phenyl-1*H*-1,5-benzodiazepine-2,4(3*H*,5*H*)-dione  
 $C_{16}H_{13}ClN_2O_2$



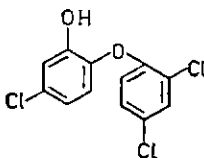
clobenzepamum  
clobenzepam

7-chloro-10-[2-(dimethylamino)ethyl]-5,10-dihydro-11*H*-dibenzo[*b,e*][1,4]diazepin-11-one  
 $C_{17}H_{19}ClN_3O$



cloxifenolum  
cloxifenol

5-chloro-2-(2,4-dichlorophenoxy)phenol  
 $C_{12}H_7Cl_3O_2$

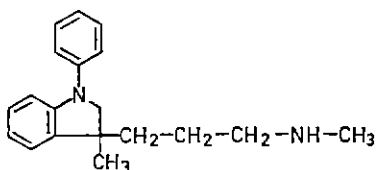


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Nonproprietary Name  
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*Chemical Name or Description,  
Molecular and Graphic Formulas*

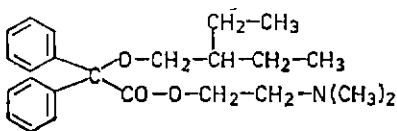
daledalinum  
daledalin

3-methyl-3-[3-(methylamino)propyl]-1-phenylindoline  
 $C_{19}H_{24}N_2$



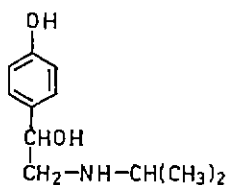
denaverinum  
denaverine

2-(dimethylamino)ethyl (2-ethylbutoxy)diphenylacetate  
 $C_{24}H_{33}NO_3$



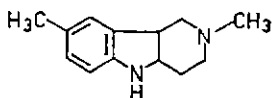
deterenolum  
deterenol

(±)-*p*-hydroxy-α-[(isopropylamino)methyl]benzyl alcohol  
 $C_{11}H_{17}NO_2$



dicarbinum  
dicarbine

2,3,4,4a,5,9b-hexahydro-2,8-dimethyl-1*H*-pyrido[4,3-*b*]indole  
 $C_{13}H_{16}N_2$



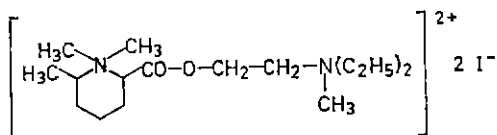


Proposed International  
Nonproprietary Name  
(Latin, English)

Chemical Name or Description,  
Molecular and Graphic Formulae

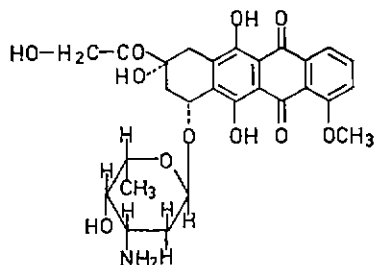
dicolinii iodidum  
dicolinium iodide

2-carboxy-1,1,6-trimethylpiperidinium iodide, ester with diethyl-  
(2-hydroxyethyl) methylammonium iodide  
 $C_{16}H_{34}I_2N_2O_2$



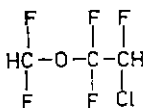
doxorubicinum  
doxorubicin

an antibiotic obtained from cultures of a mutant  
of *Streptomyces peuceticus*, or the same substance obtained by  
any other means  
(1*S*,3*S*)-3-glycoloyl-1,2,3,4,6,11-hexahydro-3,5,12-trihydroxy-  
10-methoxy-6,11-dioxo-1-naphthacenyl 3-amino-2,3,6-trideoxy-  
 $\alpha$ -L-*lyxo*-hexopyranoside  
 $C_{27}H_{29}NO_{11}$



enfluranum  
enflurane

2-chloro-1,1,2-trifluoroethyl difluoromethyl ether  
 $C_3H_2ClF_5O$

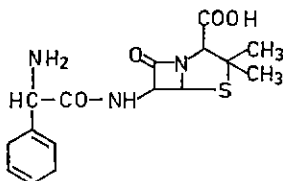


*Proposed International  
Nonproprietary Name  
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*Chemical Name or Description,  
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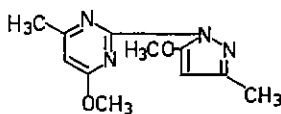
epicillinum  
epicillin

6-[D-2-amino-2-(1,4-cyclohexadien-1-yl)acetamido]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid  
 $C_{16}H_{21}N_3O_4S$



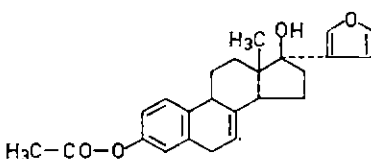
epirizolum  
epirizole

4-methoxy-2-(5-methoxy-3-methylpyrazol-1-yl)-6-methylpyrimidine  
 $C_{11}H_{14}N_4O_2$



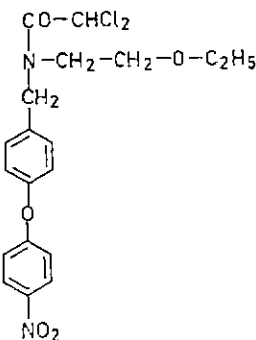
estofuratum  
estofurate

21,23-epoxy-19,24-dinor-17 $\alpha$ -chola-1,3,5(10),7,20,22-hexaene-3,17-diol 3-acetate  
 $C_{24}H_{36}O_4$



etofamidum  
etofamide

2,2-dichloro-N-(2-ethoxyethyl)-N-[(p-nitrophenoxy)benzyl]-acetamide  
 $C_{19}H_{20}Cl_2N_2O_5$

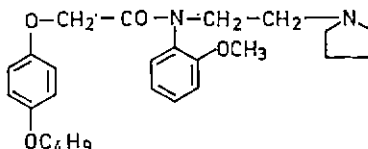


*Proposed International  
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fexicainum  
fexicaine

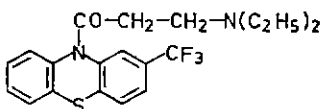
*Chemical Name or Description,  
Molecular and Graphic Formulae*

2-(*p*-butoxyphenoxy)-*N*-(*o*-methoxyphenyl)-*N*-[2-(1-pyrrolidinyl)-ethyl]acetamide  
 $C_{25}H_{34}N_2O_4$



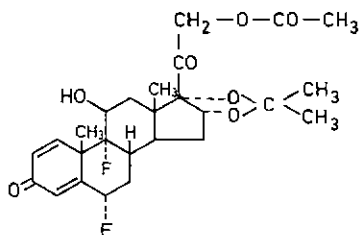
fluacizinum  
fluacizine

10-[3-(diethylamino)propionyl]-2-(trifluoromethyl)phenothiazine  
 $C_{20}H_{21}F_3N_2OS$



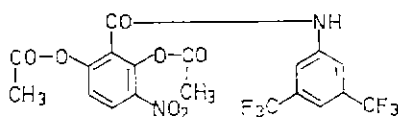
fluocinonidum  
fluocinonide

6 $\alpha$ ,9-difluoro-11 $\beta$ ,16 $\alpha$ ,17,21-tetrahydroxypregna-1,4-diene-3,20-dione, cyclic 16,17-acetal with acetone, 21-acetate  
 $C_{26}H_{32}F_2O_7$



flurantelum  
flurantel

2,6-dihydroxy-3-nitro-3',5'-bis(trifluoromethyl)benzanilide diacetate (ester)  
 $C_{19}H_{12}F_6N_2O_7$

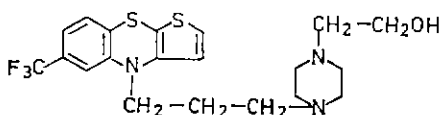


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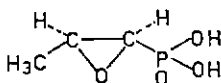
flutizenolum  
flutizenol

4-[3-[6-(trifluoromethyl)-4*H*-thieno[2,3-*b*][1,4]benzothiazin-4-yl]propyl]-1-piperazineethanol  
 $C_{26}H_{24}F_3N_3OS_2$



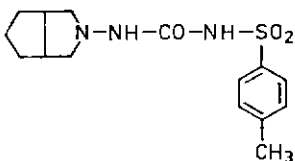
fosfomycinum  
fosfomycin

(-)-(1*R*,2*S*)-(1,2-epoxypropyl)phosphonic acid  
 $C_3H_7O_4P$



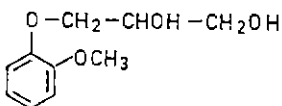
gliclazidum  
gliclazide

1-(3-azabicyclo[3.3.0]oct-3-yl)-3-(*p*-tolylsulfonyl)urea  
 $C_{15}H_{21}N_3O_3S$



guaifenesinum  
guaifenesin

3-(*o*-methoxyphenoxy)-1,2-propanediol  
 $C_{10}H_{14}O_4$



Proposed International  
Nonproprietary Name  
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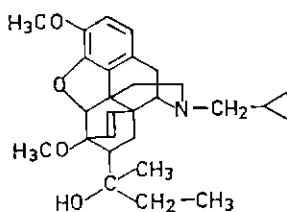
Chemical Name or Description,  
Molecular and Graphic Formulae

heliomycinum  
heliomycin

an antibiotic obtained from cultures of *Actinomyces flavochromogenes* var. *heliomycini* or the same substance obtained by any other means  
 $C_{23}H_{18}O_6$

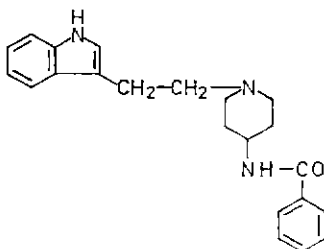
homprenorphinum  
homprenorphine

22-cyclopropyl-7 $\alpha$ -(*R*)-1-hydroxy-1-methylpropyl)-6,14-*endo*-ethenotetrahydrothebaine  
 $C_{28}H_{37}NO_4$



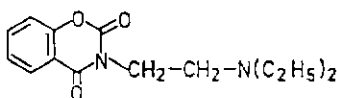
indoraminum  
indoramin

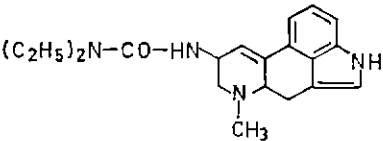

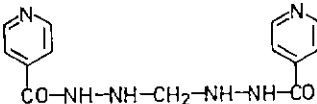
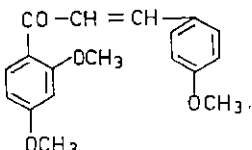
*N*-[1-(2-indol-3-ylethyl)-4-piperidyl]benzamide  
 $C_{22}H_{25}N_3O$



letimidum  
letimide

3-[2-(diethylamino)ethyl]-2*H*-1,3-benzoxazine-2,4(3*H*)-dione  
 $C_{14}H_{18}N_2O_3$



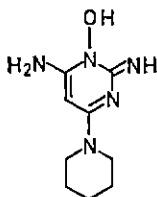
<i>Proposed International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description, Molecular and Graphic Formulae</i>
lisuridum lisuride	3-(9,10-didehydro-6-methylergolin-8 $\alpha$ -yl)-1,1-diethylurea C <sub>20</sub> H <sub>26</sub> N <sub>4</sub> O 
melinamidum melinamide	<i>N</i> -( $\alpha$ -methylbenzyl)linoleamide C <sub>26</sub> H <sub>41</sub> NO $\text{H}_3\text{C}-(\text{CH}_2)_4-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{CO}-\text{NH}-\text{CH}(\text{CH}_3)-\text{C}_6\text{H}_5$ 
metazidum metazide	isonicotinic acid 2,2'-methylenedihydrazide C <sub>13</sub> H <sub>14</sub> N <sub>6</sub> O <sub>2</sub> 
metochalconum metochalcone	2',4,4'-trimethoxychalcone C <sub>19</sub> H <sub>18</sub> O <sub>4</sub> 

*Proposed International  
Nonproprietary Name  
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minoxidilum  
minoxidil

6-amino-1,2-dihydro-1-hydroxy-2-imino-4-piperidinopyrimidine  
 $C_9H_{15}N_5O$

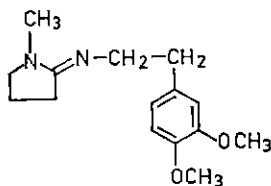


mitocarcinum  
mitocarcin

an antineoplastic antibiotic obtained from cultures of *Streptomyces* species (Michigan Department of Public Health culture number 24 281), or the same substance produced by any other means

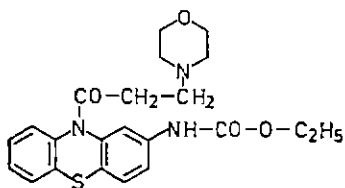
mixidinum  
mixidine

2-[(3,4-dimethoxyphenethyl)imino]-1-methylpyrrolidine  
 $C_{15}H_{22}N_2O_2$



moracizinum  
moracizine

ethyl 10-(3-morpholinopropionyl)phenothiazine-2-carbamate  
 $C_{22}H_{25}N_3O_4S$

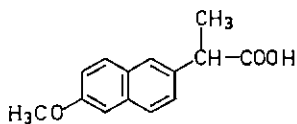


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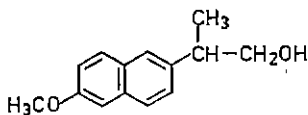
naproxenum  
naproxen

(+)-6-methoxy- $\alpha$ -methyl-2-naphthaleneacetic acid  
 $C_{14}H_{14}O_3$



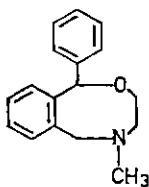
naproxolum  
naproxol

(-)-6-methoxy- $\beta$ -methyl-2-naphthaleneethanol  
 $C_{14}H_{16}O_2$



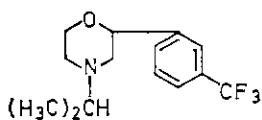
nefopamum  
nefopam

3,4,5,6-tetrahydro-5-methyl-1-phenyl-1*H*-2,5-benzoxazocine  
 $C_{17}H_{19}NO$



oxaflozanum  
oxaflozane

4-isopropyl-2-( $\alpha, \alpha, \alpha$ -trifluoro-*m*-tolyl)morpholine  
 $C_{14}H_{18}F_3NO$



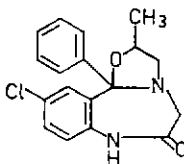


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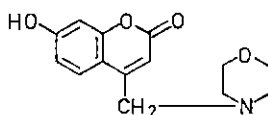
oxazolamum  
oxazolam

10-chloro-2,3,7,11b-tetrahydro-2-methyl-11b-phenyloxazolo-  
[3,2-*d*] [1,4]benzodiazepin-6(5*H*)-one  
 $C_{18}H_{17}ClN_2O_2$



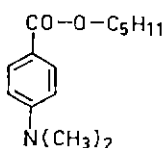
oxazonum  
oxazone

7-hydroxy-4-(morpholinomethyl)coumarin  
 $C_{14}H_{15}NO_4$



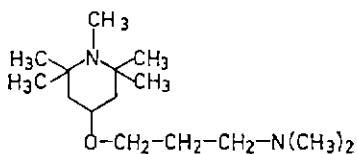
padimatum  
padimate

mixture of pentyl, isopentyl and 2-methylbutyl  
*p*-(dimethylamino)benzoates  
 $C_{14}H_{21}NO_2$



pemeridum  
pemerid

4-[3-(dimethylamino)propoxy]-1,2,2,6,6,-pentamethylpiperidine  
 $C_{15}H_{32}N_2O$

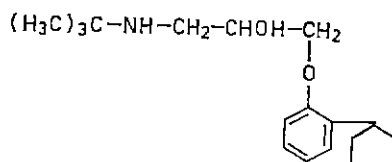


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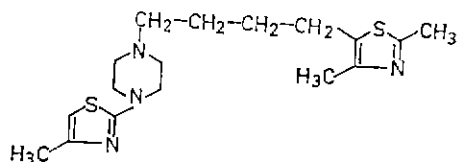
penbutololum  
penbutolol

1-(*tert*-butylamino)-3-(*o*-cyclopentylphenoxy)-2-propanol  
C<sub>18</sub>H<sub>29</sub>NO<sub>2</sub>



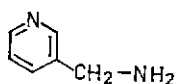
peratizolum  
peratizole

1-[4-(2,4-dimethyl-5-thiazolyl)butyl]-4-(4-methyl-2-thiazolyl)-  
piperazine  
C<sub>17</sub>H<sub>26</sub>N<sub>4</sub>S<sub>2</sub>



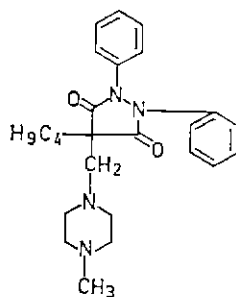
picolaminum  
picolamine

3-(aminomethyl)pyridine  
C<sub>6</sub>H<sub>8</sub>N<sub>2</sub>



pipebuzonium  
pipebuzone

4-butyl-4-[(4-methyl-1-piperazinyl)methyl]-1,2-diphenyl-  
3,5-pyrazolidinedione  
C<sub>25</sub>H<sub>32</sub>N<sub>4</sub>O<sub>2</sub>

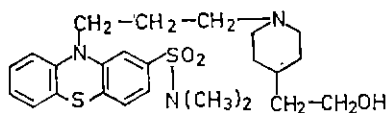


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Molecular and Graphic Formulas*

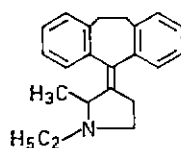
pipotiazinum  
pipotiazine

10-[3-[4-(2-hydroxyethyl)piperidino]propyl]-*N,N*-dimethyl-  
phenothiazine-2-sulfonamide  
 $C_{24}H_{33}N_3O_3S_2$



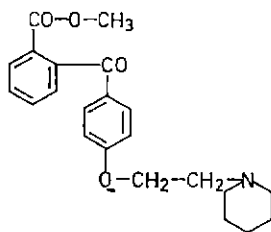
piroheptinum  
piroheptine

3-(10,11-dihydro-5*H*-dibenzo[*a,d*]cyclohepten-5-ylidene)-  
1-ethyl-2-methylpyrrolidine  
 $C_{22}H_{25}N$



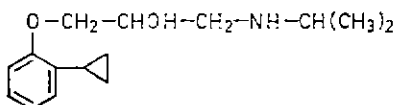
pitofenonum  
pitofenone

methyl *o*-[*p*-(2-piperidinoethoxy)benzoyl]benzoate  
 $C_{22}H_{25}NO_4$



procinololum  
procinolol

1-(*o*-cyclopropylphenoxy)-3-(isopropylamino)-2-propanol  
 $C_{15}H_{23}NO_2$

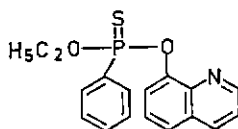


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Nonproprietary Name  
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*Chemical Name or Description,  
Molecular and Graphic Formulae*

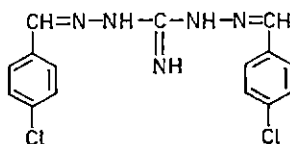
quintiofosum  
quintiofos

O-ethyl O-(8-quinolyl) phenylphosphonothioate  
C<sub>17</sub>H<sub>16</sub>NO<sub>2</sub>PS



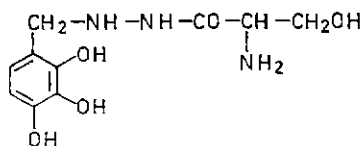
robenidinum  
robenidine

1,3-bis[(p-chlorobenzylidene)amino]guanidine  
C<sub>15</sub>H<sub>13</sub>Cl<sub>2</sub>N<sub>5</sub>



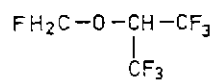
serazidum  
serazide

DL-serine 2-(2,3,4-trihydroxybenzyl)hydrazide  
C<sub>10</sub>H<sub>15</sub>N<sub>3</sub>O<sub>5</sub>



sevofluranum  
sevoflurane

fluoromethyl 2,2,2-trifluoro-1-(trifluoromethyl)ethyl ether  
C<sub>4</sub>H<sub>3</sub>F<sub>7</sub>O

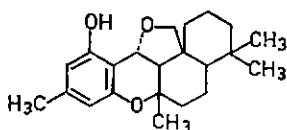


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*Chemical Name or Description,  
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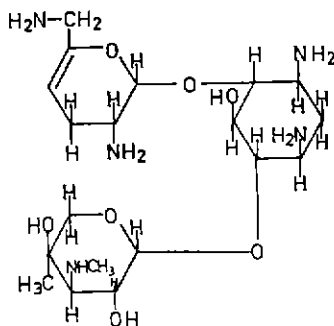
siccaninum  
siccanin

(13a*S*)-1,2,3,4,4a*β*,5,6,6a,11*β*,13*β*-decahydro-4,4,6a*β*,9-tetramethyl-13*H*-benzo[*a*]furo[2,3,4-*mn*]xanthen-11-ol  
C<sub>22</sub>H<sub>30</sub>O<sub>3</sub>



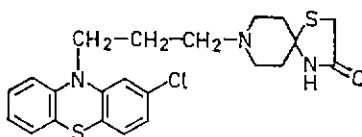
sisomicinum  
sisomicin

*O*-2,6-diamino-2,3,4,6-tetradeoxy- $\alpha$ -D-glycero-hex-4-enopyranosyl-(1 $\rightarrow$ 4)-*O*-[3-deoxy-4-*C*-methyl-3-(methylamino)- $\beta$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)]-2-deoxy-D-streptamine  
C<sub>19</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>



spiclomazinum  
spiclomazine

8-[3-(2-chloro-10-phenothiazinyl)propyl]-1-thia-4,8-diazaspiro[4,5]decan-3-one  
C<sub>22</sub>H<sub>24</sub>ClN<sub>3</sub>OS<sub>2</sub>

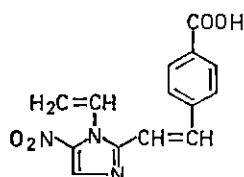


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Nonproprietary Name  
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**Chemical Name or Description,  
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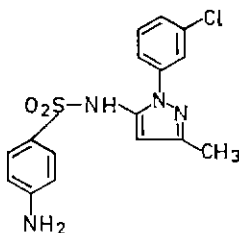
stirimazolum  
stirimazole

*p*-[2-(5-nitro-1-vinyl-2-imidazolyl)vinyl]benzoic acid  
C<sub>14</sub>H<sub>11</sub>N<sub>3</sub>O<sub>4</sub>



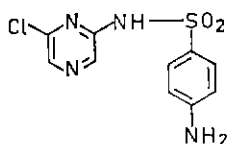
sulfaclozazolum  
sulfaclozazole

*N*'-[1-(*m*-chlorophenyl)-3-methyl-5-pyrazolyl]sulfanilamide  
C<sub>16</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>2</sub>S



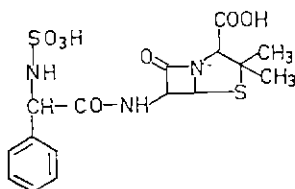
sulfaclozinum  
sulfaclozine

*N*'-(6-chloropyrazinyl)sulfanilamide  
C<sub>10</sub>H<sub>9</sub>ClN<sub>4</sub>O<sub>2</sub>S



suncillinum  
suncillin

3,3-dimethyl-7-oxo-6-[2-phenyl-D-2-(sulfoamino)acetamido]-  
4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid  
C<sub>16</sub>H<sub>19</sub>N<sub>3</sub>O<sub>7</sub>S<sub>2</sub>

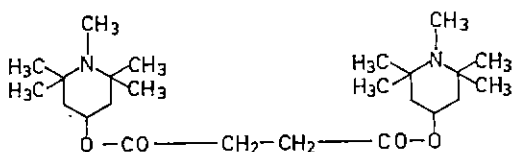


*Proposed International  
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suxemeridum  
suxemerid

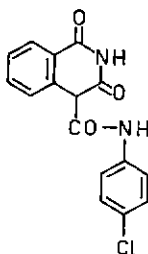
*Chemical Name or Description,  
Molecular and Graphic Formulae*

bis(1,2,2,6,6-pentamethyl-4-piperidyl) succinate  
 $C_{24}H_{44}N_2O_4$



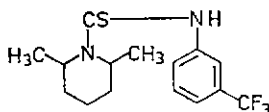
tesicamum  
tesicam

4'-chloro-1,2,3,4-tetrahydro-1,3-dioxo-4-isoquinolinecarboxanilide  
 $C_{16}H_{11}ClN_2O_3$



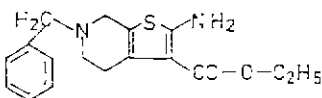
ticarbodinum  
ticarbodine

$\alpha,\alpha,\alpha$ -trifluoro-2,6-dimethylthio-1-piperidinecarboxy-*m*-toluidide  
 $C_{15}H_{19}F_3N_2S$



tinoridinum  
tinoridine

ethyl 2-amino-6-benzyl-4,5,6,7-tetrahydrothieno[2,3-*c*]pyridine-3-carboxylate  
 $C_{17}H_{20}N_2O_2S$

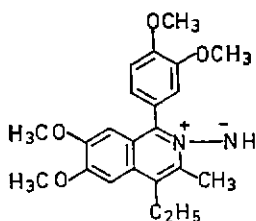


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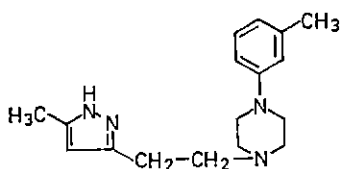
tofisolinum  
tofisoline

1-(3,4-dimethoxyphenyl)-4-ethyl-6,7-dimethoxy-  
3-methylisoquinoline 2-imide  
 $C_{22}H_{26}N_2O_4$



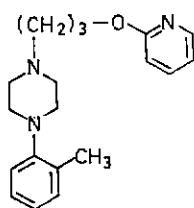
tolpiprazolum  
tolpiprazole

1-[2-(5-methylpyrazol-3-yl)ethyl]-4-*m*-tolylpiperazine  
 $C_{17}H_{24}N_4$



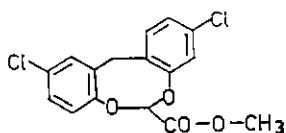
toprilidinum  
toprilidine

1-[3-(2-pyridyloxy)propyl]-4-*o*-tolylpiperazine  
 $C_{19}H_{25}N_3O$



treloxinatum  
treloxinate

methyl 2,10-dichloro-12*H*-dibenzo[*d,g*][1,3]dioxocin-6-carboxylate  
 $C_{18}H_{12}Cl_2O_4$



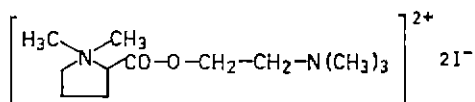


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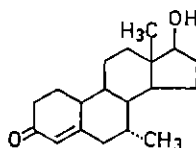
trepiril iodidum  
trepirium iodide

2-carboxy-1,1-dimethylpyrrolidinium iodide, ester with  
(2-hydroxyethyl)trimethylammonium iodide  
 $C_{12}H_{26}I_2N_2O_2$



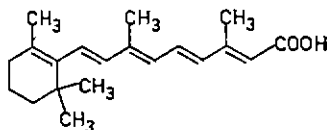
trestolonum  
trestolone

17 $\beta$ -hydroxy-7 $\alpha$ -methylestr-4-en-3-one  
 $C_{19}H_{28}O_2$



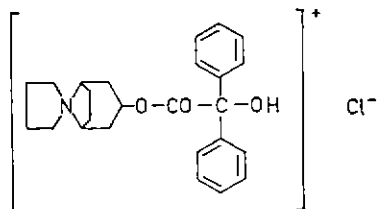
tretinoinum  
tretinoin

*all trans*-retinoic acid  
 $C_{20}H_{28}O_2$



tropsii chloridum  
trospium chloride

3 $\alpha$ -hydroxyspiro[1 $\alpha$ H,5 $\alpha$ H-nortropane-8,1'-pyrrolidinium]  
chloride benzilate  
 $C_{25}H_{30}ClNO_3$

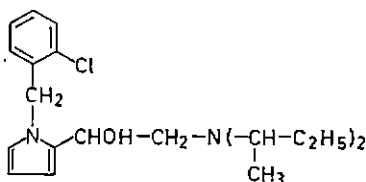


*Proposed International  
Nonproprietary Name*  
(Latin, English)

*Chemical Name or Description,  
Molecular and Graphic Formulae*

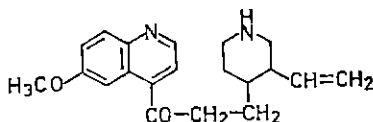
viminolum  
viminol

1-(*o*-chlorobenzyl)- $\alpha$ -[(di-*sec*-butylamino)methyl]pyrrole-  
2-methanol  
 $C_{21}H_{31}ClN_2O$



viquidilum  
viquidil

1-(6-methoxy-4-quinolyl)-3-(3-vinyl-4-piperidyl)-1-propanone  
 $C_{20}H_{24}N_2O_2$



vistatolonum  
vistatolon

an antiviral antibiotic obtained from cultures of *Penicillium  
stoloniferum*, or the same substance produced by any other means

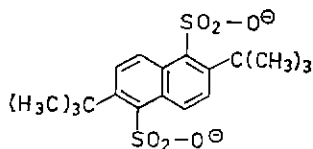
## NAMES FOR RADICALS AND GROUPS

Some preparations for which a proposed international nonproprietary 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 system-

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

2,6-di-*tert*-butyl-1,5-naphthalenedisulfonate

dibudinate



## AMENDMENTS TO PREVIOUS LIST

Vol. 23, No. 9

### PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 22

p. 427	<i>delete</i>	<i>insert</i>
	dexbenzetimidum	dexetimidum
	dexbenzetimide	dexetimide

#### p. 445 NAMES FOR RADICALS AND GROUPS

<i>delete</i>	<i>insert</i>
triolamine	trolamine

Vol. 24, No. 3

### PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 23

p. 119	<i>delete</i>	<i>insert</i>
	acidum difenoxilicum	difenoxinum
	difenoxilic acid	difenoxin

Vol. 24, No. 9

### PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 24

p. 430	<i>delete</i>	<i>insert</i>
	afoxanidum	rafoxanidum
	afoxanide	rafoxanide
	Reprint of List 24	
p. 20	<i>delete</i>	<i>insert</i>
	iloronum	tiloronum
	ilorone	tilorone

## INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS

CUMULATIVE LIST No. 2, 1967

p. 31	<i>delete</i>	<i>insert</i>
	demethylchlortetracyclinum	demeclocyclinum
	demethylchlortetracycline	demeclocycline

## Annex

### 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*<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.
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

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

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

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.

### **GENERAL PRINCIPLES FOR GUIDANCE IN DEVISING INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES \***

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, where appropriate, show this relationship. Names that are likely to convey to a patient an anatomical, physiological, pathological or therapeutic suggestion should be avoided.

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. In devising a name from the systematic chemical name of a substance, syllables such as "methylhydro", "methoxy" and "chlor" should preferably be abbreviated, for example, to "medro", "meto", and "clo"; the derived name should not be chemically misleading.

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.

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

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\* Text revised by the Expert Committee on Nonproprietary Names for Pharmaceutical Substances (unpublished reports WHO/Pharm/67.443, WHO/Pharm/68.447, and WHO/Pharm/70.458).

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>	
-actidum	-actide	-actide	} synthetic polypeptides with a corticotrophin-like action
-andr-	-andr-	-andr-	
or -stan-	or -stan-	or -stan-	
or -ster-	or -ster-	or -ster-	} steroids, androgenic
-arolum	-arol	-arol	
-bamatum	-bamate	-bamate	
barb	barb	barb	anticoagulants of the coumarin type
bol	bol	bol	tranquillizers of the propanediol and pentanediol series
-cainum	-caine	-caïne	barbituric acids, hypnotic activity
cef-	cef-	cef-	anabolic steroids
-cillinum	-cillin	-cilline	local anaesthetics
cort	cort	cort	antibiotics with cephalosporanic acid nucleus
			penicillins: derivatives of 6-amino-penicillanic acid
			steroids, glucocorticoids and mineralocorticoids, other than prednisolone derivatives
-crinum	-crine	-crine	acridine derivatives
-curium	-curium	-curium	curare-like drugs
-cyclinum	-cycline	-cycline	antibiotics, tetracycline derivatives
-estr-	-estr-	-estr-	estrogenic drugs
-forminum	-formin	-formine	guanidine oral antidiabetics
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
-moxinum	-moxin	-moxine	monoamine oxidase inhibitors
-mycinum	-mycin	-mycine	antimicrobial antibiotics, produced by <i>Streptomyces</i> strains
			5-nitrofur derivatives
nifur-	nifur-	nifur-	anorexigenic agents
-orexum	-orex	-orex	dibenzazepine, compounds of the imipramine type
-praminum	-pramine	-pramine	quinoline derivatives
-quinum	-quine	-quine	derivatives of <i>Rauwolfia</i> alkaloids
-serpinum	-serpine	-serpine	sulfonamides, used as antimicrobials
sulfa-	sulfa-	sulfa-	diuretics which are thiazide derivatives
-tizidum	-tizide	-tizide	antiepileptics which are hydantoin derivatives
-toinum	-toin	-toïne	spasmolytics with a papaverine-like action
-verinum	-verine	-vérine	alkaloids and organic bases
-inum	-ine	-ine	ketones
-onum	-one	-one	quaternary ammonium compounds
-ium	-ium	-ium	