Reprinted from: *WHO Chronicle*, Vol. 20, No. 6, p. 216

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,[1] 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 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 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 16 [2]

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
acidum hydroxytoluinicum hydroxytoluinic acid	2-hydroxy-3-methylbenzoic acid $C_8H_8O_3$
acidum nafcaproicum nafcaproic acid	α,α-diethyl-1-naphthaleneacetic acid $C_{16}H_{18}O_2$
acidum sulfaloxicum sulfaloxic acid	4′{[(hydroxymethyl)carbamoyl]sulfamoyl}phtalanilic acid $C_{16}H_{15}N_3O_7S$
acidum tranexamicum tranexamic acid	*trans*-4-(aminomethyl)cyclohexanecarboxylic acid $C_8H_{15}NO_2$
alloclamidum alloclamide	2-(allyloxy)-4-chloro-*N*-[2-(diethylamino)ethyl]benzamide $C_{16}H_{23}ClN_2O_2$
alverinum alverine	*N*-ethyl-3,3′-diphenyldipropylamine $C_{20}H_{27}N$
amfepentorexum amfepentorex	*N*,α-dimethyl-*p*-pentylphenethylamine $C_{15}H_{25}N$
amicarbalidum amicarbalide	3,3′-diamidinocarbanilide $C_{15}H_{16}N_6O$
aminophenazoni cyclamas aminophenazone cyclamate	4-dimethylamino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one cyclohexylsulfamate $C_{13}H_{17}N_3O \cdot C_6H_{13}NO_3S$
amiodaronum amiodarone	2-butyl-3-benzofuranyl *p*-[2-diethylamino)ethoxy]-*m*,*m*-dilodophenyl ketone $C_{25}H_{29}I_2NO_3$
amprolium amprolium	1-[(4-amino-2-propyl-5-pyrimidinyl)methyl]-2-picolinium chloride $C_{14}H_{19}ClN_4$

[1] See Annex, p. 224.

[2] Other lists of proposed international non-proprietary names can be found in *Chron. Wld 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.

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

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
anagestonum anagestone	17-hydroxy-6α-methylpregn-4-en-20-one $C_{22}H_{34}O_2$
azabonum azabon	3-sulfanilyl-3-azabicyclo[3.2.2]nonane $C_{14}H_{20}N_2O_2S$
azacosterolum azacosterol	17β-{[3-dimethylamino)propyl]methylamino}androst-5-en-3β-ol $C_{25}H_{44}N_2O$
azintamidum azintamide	2-[(6-chloro-3-pyridazinyl)thio]-*N*,*N*-diethylacetamide $C_{10}H_{14}ClN_3OS$
barbexaclonum barbexaclone	(-)-*N*,α-dimethylcyclohexaneethylamine compound with 5-ethyl-5-phenylbarbituric acid $C_{12}H_{12}N_2O_3 \cdot C_{10}H_{22}N$
bencyclanum bencyclane	3-[(1-benzylcycloheptyl)oxy]-*N*,*N*-dimethylpropylamine $C_{19}H_{31}NO$
benfurodili hemisuccinas benfurodil hemisuccinate	2-(1-hydroxyethyl)-β-(hydroxymethyl)-3-methyl-5-benzofuranacrylic acid γ-lactone hydrogen succinate $C_{19}H_{18}O_7$
biclotymolum biclotymol	2,2'-methylenebis(6-chlorothymol) $C_{21}H_{26}Cl_2O_2$
bolandioli dipropionas bolandiol dipropionate	estr-4-ene-3β,17β-diol dipropionate $C_{24}H_{36}O_4$
bolmantalatum bolmantalate	17β-hydroxyestr-4-en-3-one 1-adamantanecarboxylate $C_{29}H_{40}O_3$
buclosamidum buclosamide	*N*-butyl-4-chlorosalicylamide $C_{11}H_{14}ClNO_2$
bunamidinum bunamidine	*N*,*N*-dibutyl-4-hexyloxy-1-naphthamidine $C_{25}H_{38}N_2O$
buquinolatum buquinolate	ethyl 4-hydroxy-6,7-diisobutoxy-3-quinolinecarboxylate $C_{20}H_{27}NO_5$
butanilicainum butanilicaine	2-(butylamino)-6'-chloro-*o*-acetoluidide $C_{13}H_{19}ClN_2O$
butaxaminum butaxamine	α-[1-(*tert*-butylamino)ethyl]-2,5-dimethoxybenzyl alcohol $C_{15}H_{25}NO_3$
butidrinum butidrine	α-[(*sec*-butylamino)methyl]-5,6,7,8-tetrahydro-2-naphthalene-methanol $C_{16}H_{25}NO$
butriptylinum butriptyline	10,11-dihydro-*N*,*N*,β-trimethyl-5*H*-dibenzo[*a*,*d*]cycloheptene-5-propylamine $C_{21}H_{27}N$
carbazocinum carbazocine	14-(cyclopropylmethyl)-1,2,3,4,4a,5,6,11-octahydro-5,11b-iminoethano-11b*H*-benzo[a]carbazole $C_{22}H_{28}N_2$
carpipraminum carpipramine	1'-[3-(10,11-dihydro-5*H*-dibenz[*b*,*f*]azepin-5-yl)propyl]-(1,4'-bipiperidine)-4'-carboxamide $C_{28}H_{38}N_4O$
cefaloglycinum cefaloglycin	7-(2-amino-2-phenylacetamido)-3-(hydroxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, acetate ester, inner salt $C_{18}H_{21}N_3O_6S$
clamoxyquinum clamoxyquine	5-chloro-7-{[(3-(diethylamino)propyl)amino]methyl}-8-quinolinol $C_{17}H_{24}ClN_3O$
clioquinolum clioquinol	5-chloro-7-iodo-8-quinolinol C_9H_5ClINO

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
clocortolonum clocortolone	9-chloro-6α-fluoro-11β,21-dihydroxy-16α-methylpregna-1,4-diene-3,20-dione $C_{22}H_{28}ClFO_3$
cloforexum cloforex	ethyl(*p*-chloro-α,α-dimethylphenethyl)carbamate $C_{13}H_{18}ClNO_2$
clomocyclinum clomocycline	7-chloro-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-*N*-(hydroxymethyl)-6-methyl-1,11-dioxo-2-naphthacenecarboxamide $C_{23}H_{25}ClN_2O_9$
cloracetadolum cloracetadol	β,β,β-trichloro-α-hydroxy-*p*-acetophenetidide $C_{10}H_{10}Cl_3NO_3$
clorofenum clorofene	4-chloro-α-phenyl-*o*-cresol $C_{13}H_{11}ClO$
clotiapinum clotiapine	2-chloro-11-(4-methyl-1-piperazinyl)dibenzo[*b,f*][1,4]thiazepine $C_{18}H_{18}ClN_3S$
colestyraminum colestyramine	a styrenedivinyl-benzene copolymer (about 2 per cent. divinylbenzene) containing quaternary ammonium groups
coumafosum coumafos	*O*-3-chloro-4-methyl-7-coumarinyl *O,O*-diethyl phosphorothioate $C_{14}H_{16}ClO_5PS$
crufomatum crufomate	4-*tert*-butyl-2-chlorophenyl methyl *N*-methylphosphoramidate $C_{12}H_{20}ClNO_3P$
cyacetacidum cyacetacide	cyanoacetic acid hydrazide $C_3H_5N_3O$
cyprazepamum cyprazepam	7-chloro-2-[(cyclopropylmethyl)amino]-5-phenyl-3*H*-1,4-benzodiazepine, 4-oxide $C_{19}H_{18}ClN_3O$
cyprolidolum cyprolidol	diphenyl[2-(4-pyridyl)cyclopropyl]methanol $C_{21}H_{19}NO$
cyproteronum cyproterone	6-chloro-17-hydroxy-1α,2α-methylenepregna-4,6-diene-3,20-dione $C_{22}H_{27}ClO_3$
dextranum 40 dextran 40	a polyanhydroglucose of weight-average molecular weight about 40 000 produced by the action of *Leuconostoc mesenteroides* on sucrose
dextranum 45 dextran 45	a polyanhydroglucose of weight-average molecular weight about 45 000 produced by the action of *Leuconostoc mesenteroides* on sucrose
dextranum 75 dextran 75	a polyanhydroglucose of weight-average molecular weight about 75 000 produced by the action of *Leuconostoc mesenteroides* on sucrose
dextranum 110 dextran 110	a polyanhydroglucose of weight-average molecular weight about 110 000 produced by the action of *Leuconostoc mesenteroides* on sucrose
dextranum 150 dextran 150	a polyanhydroglucose of weight-average molecular weight about 150 000 produced by the action of *Leuconostoc mesenteroides* on sucrose
dextrofeminum dextrofemine	(+)-α-methyl-*N*-(1-methyl-2-phenoxyethyl)phenethylamine $C_{18}H_{23}NO$
dicloxacillinum dicloxacillin	6-[3-(2,6-dichlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid $C_{19}H_{17}Cl_2N_3O_5S$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
difebarbamatum difebarbamate	1,3bis(3-butoxy-2-hydroxypropyl)-5-ethyl-5-phenylbarbituric acid dicarbamate ester $C_{28}H_{42}N_4O_9$
difluanazinum difluanazine	1-(2-anilinoethyl)-4-[4,4-bis(*p*-fluorophenyl)butyl]piperazine $C_{28}H_{33}F_2N_3$
dihydroergotaminum dihydroergotamine	dihydroergotamine $C_{33}H_{37}N_5O_5$
dimethyli sulfoxidum dimethyl sulfoxide	dimethyl sulfoxide C_2H_6OS
diminazenum diminazene	3,3′-(diazoamino)benzamidine $C_{14}H_{15}N_7$
dimpylatum dimpylate	*O,O*-diethyl 2-isopropyl-6-methyl-4-pyrimidinylphosphonothioate $C_{12}H_{21}N_2O_2PS$
dioxationum dioxation	a mixture consisting essentially of *cis*- and *trans*- *S,S*′-5,5′-*p*-dioxane-2,3-diyl (*O,O*-diethyl phosphorodithioate) $C_{12}H_{26}O_6P_2S_4$
dioxybenzonum dioxybenzone	2,2′-dihydroxy-4-methoxybenzophenone $C_{14}H_{12}O_4$
distigmini bromidum distigmine bromide	3-hydroxy-1-methylpyridinium bromide hexamethylenebis (*N*-methylcarbamate) $C_{22}H_{32}Br_2N_4O_4$
dodeclonii bromidum dodeclonium bromide	[2-(*p*-chlorophenoxy)ethyl]dodecyldimethylammonium bromide $C_{22}H_{39}BrClNO$
doxycyclinum doxycycline	4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide $C_{22}H_{24}N_2O_8$
embutramidum embutramide	*N*-(*β,β*-diethyl-*m*-methoxyphenethyl)-4-hydroxybutyramide $C_{17}H_{27}NO_3$
epinephrinum epinephrine	(-)-α-3,4-dihydroxyphenyl-*β*-methylaminoethanol $C_9H_{13}NO_3$ (synonym: adrenaline; in certain countries the name Adrenalin is a trademark)
estradioli undecylas estradiol undecylate	estradiol 17-undecanoate $C_{29}H_{44}O_3$
estrazinolum estrazinol	3-methoxy-8-aza-19-nor-17α-pregna-1,3,5-trien-20-yn-17-ol $C_{20}H_{25}NO_2$
etymidum etymide	2-ethoxy-*N*-methyl-*N*-[2-(methylphenethylamino)ethyl]-2,2-diphenylacetamide $C_{28}H_{34}N_2O_2$
fenamifurilum fenamifuril	tetrahydrofurfuryl (2-carbamoylphenoxy)acetate $C_{14}H_{17}NO_4$
fenamolum fenamole	5-amino-1-phenyl-1*H*-tetrazole $C_7H_7N_5$
fenimidum fenimide	3-ethyl-2-methyl-2-phenylsuccinimide $C_{13}H_{15}NO_2$
fenpentadiolum fenpentadiol	2-(*p*-chlorophenyl)-4-methyl-2,4-pentanediol $C_{12}H_{17}ClO_2$
flopropionum flopropione	2′,4′,6′-trihydroxypropiophenone $C_9H_{10}O_4$
floxuridinum floxuridine	2′-deoxy-5-fluorouridine $C_9H_{11}FN_2O_5$
flubanilatum flubanilate	ethyl-*N*-[2-(dimethylamino)ethyl]-*m*-(trifluoromethyl)carbanilate $C_{14}H_{19}F_3N_2O_2$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
flugestonum flugestone	9-fluoro-11β,17-dihydroxypregn-4-ene-3,20-dione $C_{21}H_{29}FO_4$
fluindarolum fluindarol	2-(α,α,α-trifluoro-*p*-tolyl)indan-1,3-dione $C_{16}H_9F_3O_2$
flumedroxonum flumedroxone	17-hydroxy-6α-(trifluoromethyl)pregn-4-ene-3,20-dione $C_{22}H_{29}F_3O_3$
flusalanum flusalan	3,5-dibromo-α,α,α-trifluoro-*m*-salicylotoluidide $Cl_{14}H_8Br_2F_3NO_2$
folescutolum folescutol	6,7-dihydroxy-4-(morpholinomethyl)coumarin $C_{14}H_{15}NO_5$
furazabolum furazabol	17-methyl-5α-androstano[2,3-*c*]furazan-17β-ol $C_{20}H_{30}N_2O_2$
furfenorexum furfenorex	(+)-*N*-methyl-*N*-(α-methylphenethyl)furfurylamine $C_{13}H_{19}NO$
gestonoroni caproas gestonorone caproate	17-hydroxy-19-norpregn-4-ene-3,20-dione hexanoate $C_{24}H_{34}O_4$
guaiactaminum guaiactamine	2-(*o*-methoxyphenoxy)triethylamine $C_{13}H_{21}NO_2$
guaiapatum guaiapate	1-{2-[2-(2-(*o*-methoxyphenoxy)ethoxy)ethoxy]ethyl}piperidine $C_{18}H_{29}NO_4$
guaifyllinum guaifylline	3-(*o*-methoxyphenoxy)-1,2-propanediol compound with theophylline $C_7H_8N_4O_2 \cdot C_{10}H_{14}O_4$
guanaclinum guanacline	[2-(3,6-dihydro-4-methyl-1(2*H*)-pyridyl)]-ethylguanidine $C_9H_{18}N_4$
guanoctinum guanoctine	(1,1,3,3-tetramethylbutyl)guanidine $C_9H_{21}N_3$
guanoxyfenum guanoxyfen	(3-phenoxypropyl)guanidine $C_{10}H_{15}N_3O$
halocarbanum halocarban	4,4′-dichloro-3-(trifluoromethyl)carbanilide $C_{14}H_9Cl_2F_3N_2O$
haloxonum haloxon	3-chloro-7-hydroxy-4-methylcoumarin bis(2-chloroethyl)phosphate $C_{14}H_{14}Cl_3O_6P$
heptaverinum heptaverine	*N*,*N*-dimethyl-γ-phenyl-$\Delta_{2,7}$-norbornanepropylamine $C_{18}H_{25}N$
hydroxycarbamidum hydroxycarbamide	hydroxyurea $CH_4N_2O_2$
ibuprofenum ibuprofen	α-*p*-isobutylphenylpropionic acid $C_{13}H_{18}O_2$
imidolinum imidoline	1-(*m*-chlorophenyl)-3-[2-(dimethylamino)ethyl]-2-imidazolidinone $C_{13}H_{18}ClN_3O$
imolaminum imolamine	4-[2-(diethylamino)ethyl]-5-imino-3-phenyl-Δ_2-1,2,4-oxadiazoline $C_{14}H_{20}N_4O$
insulini injectio biphasica biphasic insulin injection	a sterile suspension of beef insulin crystals in a neutral solution of pork insulin
ketaminum ketamine	2-(*o*-chlorophenyl)-2-(methylamino)cyclohexanone $C_{13}H_{16}ClNO$
lactulosum lactulose	4-*O*-β-D-galactopyranosyl-*D*-fructose $C_{12}H_{22}O_{11}$
mebezonii iodidum mebezonium iodide	(methylenedi-1,4-cyclohexylene)bis[trimethylammonium iodide] $C_{19}H_{40}I_2N_2$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
medibazinum medibazine	1-(diphenylmethyl)-4-piperonylpiperazine $C_{25}H_{26}N_2O_2$
medrysonum medrysone	11β-hydroxy-6α-methylpregn-4-ene-3,20-dione $C_{22}H_{32}O_3$
mefrusidum mefruside	4-chloro-N^1-methyl-N^1-(tetrahydro-2-methylfurfuryl)-m-benzenedisulfonamide $C_{13}H_{19}ClN_2O_5S_2$
mesoridazinum mesoridazine	10-[2-(1-methyl-2-piperidyl)ethyl]-2-(methylsulfinyl)phenothiazine $C_{21}H_{26}N_2OS_2$
metabromsalanum metabromsalan	3,5-dibromosalicylanilide $C_{13}H_9Br_2NO_2$
metalliburum metallibure	1-methyl-6-(1-methylallyl)-2,5-dithiobiurea $C_7H_{14}N_4S_2$
metazamidum metazamide	1-(*p*-methoxyphenyl)-5-methyl-4-imidazolin-2-one $C_{11}H_{12}N_2O_2$
meticranum meticrane	6-methylthiochroman-7-sulfonamide 1,1-dioxide $C_{10}H_{13}NO_4S_2$
metindizatum metindizate	2-(hexahydro-1-methyl-3-indolinyl)ethyl benzilate $C_{25}H_{31}NO_3$
metofenazatum metofenazate	2-{4-[3-(2-chlorophenothiazin-10-yl)propyl]-1-piperazinyl}ethyl 3,4,5-trimethoxybenzoate ester $C_{31}H_{36}ClN_3O_5S$
metrifonatum metrifonate	dimethyl(2,2,2-trichloro-1-hydroxyethyl)phosphonate $C_4H_8O_4PCl_3$
metylperonum metylperone	4′-fluoro-4-(4-methylpiperidino)butyrophenone $C_{16}H_{22}FNO$
metyridinum metyridine	2-(2-methoxyethyl)pyridine $C_8H_{11}NO$
mithramycinum mithramycin	an antibiotic substance obtained from cultures of *Streptomyces tanashiensis*, or the same substance produced by any other means
nafiverinum nafiverine	1,4-piperazinediethanol α-methyl-1-naphthaleneacetate ester $C_{34}H_{38}N_2O_4$
nafoxidinum nafoxidine	1-{2-[*p*-(3,4-dihydro-6-methoxy-2-phenyl-1-naphthyl)phenoxy]ethyl} pyrrolidine $C_{29}H_{31}NO_2$
naftalofosum naftalofos	*N*-hydroxynaphthylimide diethyl phosphate $C_{16}H_{16}NO_6P$
naftazonum naftazone	1,2-naphthaquinone 2-semicarbazone $C_{11}H_9N_3O_2$
naftypramidum naftypramide	α-isopropyl-α-[2-(dimethylamino)ethyl]-1-naphthaleneacetamide $C_{19}H_{28}N_2O$
nifuradenum nifuradene	1-[(5-nitrofurfurylidene)amino]-2-imidazolidinone $C_8H_8N_4O_4$
nifurdazilum nifurdazil	1-(2-hydroxyethyl)-3-[(5-nitrofurfurylidene)amino]-2-imidazolidinone $C_{10}H_{12}N_4O_5$
nifurmeronum nifurmerone	chloromethyl 5-nitro-2-furyl ketone $C_6H_4ClNO_4$
nifurprazinum nifurprazine	3-amino-6-[2-(5-nitro-2-furyl)vinyl]pyridazine $C_{10}H_8N_4O_3$
nifursemizonum nifursemizone	5-nitro-2-furaldehyde 2-ethylsemicarbazone $C_8H_{10}N_4O_4$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
nitrazepamum nitrazepam	1,3-dihydro-7-nitro-5-phenyl-2*H*-1,4-benzodiazepin-2-one $C_{15}H_{10}N_3O_3$
nogalamycinum nogalamycin	an antibiotic substance obtained from cultures of *Streptomyces nogalater*, or the same substance produced by any other means
norfenefrinum norfenefrine	β-aminomethyl-α-3-hydroxyphenylethanol $C_8H_{11}NO_2$
obidoximi chloridum obidoxime chloride	1,1′-(oxydimethylene)bis[4-formylpyridinium chloride]dioxime $C_{14}H_{16}Cl_2N_4O_3$
octafonii chloridum octafonium chloride	benzyldiethyl{2-[4-(2,2,4-trimethylpentyl)phenoxy]ethyl}ammonium chloride $C_{27}H_{42}ClNO$
oleum radio-ethiodatum (^{131}I) radio-ethiodized oil (^{131}I)	an iodine addition product of the ethyl ester of the fatty acid of poppy-seed oil, containing 475 mg/ml (37 per cent. by weight) of iodine. A portion of this iodine is the radioactive isotope ^{131}I.
oxybenzonum oxybenzone	2-hydroxy-4-methoxybenzophenone $C_{14}H_{12}O_3$
oxyclozanidum oxyclozanide	3,5,6,3′,5′-pentachloro-2,2′-dihydroxybenzanilide $C_{13}H_6Cl_5NO_3$
oxyfedrinum oxyfedrine	L-3[(β-hydroxy-α-methylphenethyl)amino]-3′-methoxypropiophenone $C_{19}H_{23}NO_3$
paraflutizidum paraflutizide	6-chloro-3,4-dihydro-3-(*p*-fluorobenzyl)-2*H*-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide $C_{14}H_{13}ClFN_3O_4S_2$
pecilocinum pecilocin	an antibiotic substance obtained from cultures of *Paecilomyces varioti banier*, or the same substance produced by any other means
penamecillinum penamecillin	acetate ester of the hydroxymethyl ester of Penicillin G $C_{19}H_{22}N_2O_6S$
penimepicyclinum penimepicycline	4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-*N*-{[4-(2-hydroxyethyl)-1-piperazinyl]methyl}-6-methyl-1,11-dioxo-2-naphthacenecarboxamide salt with penicillin V $C_{45}H_{56}N_6O_{14}S$
pentorexum pentorex	α,α,β-trimethylphenethylamine $C_{11}H_{17}N$
pifenatum pifenate	ethyl α,α-diphenyl-2-piperidinepropionate $C_{22}H_{27}NO_2$
pipobromanum pipobroman	1,4-bis(3-bromopropionyl)piperazine $C_{10}H_{16}Br_2N_2O_2$
prednazatum prednazate	11β,17,21-trihydroxypregna-1,4-diene-3,20-dione,21-(hydrogen succinate),compound with 4-[3-(2-chlorophenothiazin-10-yl)propyl]-1-piperazineethanol $C_{25}H_{32}O_8 \cdot C_{21}H_{26}ClN_3OS$
prednisoloni steaglas prednisolone steaglate	the stearate ester of 11β,17,21-trihydroxypregna-1,4-diene-3,20-dione 21-glycolate $C_{41}H_{64}O_8$
procarbazinum procarbazine	*N*-isopropyl-α-(2-methylhydrazino)-*p*-toluamide $C_{12}H_{19}N_3O$
proglumidum proglumide	D,L-4-benzamido-*N*,*N*-dipropylglutaramic acid $C_{18}H_{26}N_2O_4$
prolintanum prolintane	1-(α-propylphenethyl)pyrrolidine $C_{15}H_{23}N$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
propipocainum propipocaine	3-piperidino-4′-propoxypropiophenone $C_{17}H_{25}NO_2$
propiramum propiram	*N*-(1-methyl-2-piperidinoethyl)-*N*-2-pyridylpropionamide $C_{16}H_{25}N_3O$
propyperonum propyperone	4′-fluoro-4-(4-piperidino-4-propionylpiperidino)butyrophenone $C_{23}H_{33}FN_2O_2$
protionamidum protionamide	2-propylthioisonicotinamide $C_9H_{12}N_2S$
pyridaronum pyridarone	2-(4-pyridyl)-benzofuran $C_{13}H_9NO$
pyrimitatum pyrimitate	*O,O*-diethyl *O*-[2-dimethylamino-6-methyl-4-pyrimidinyl] phosphorothioate $C_{11}H_{20}N_3O_3PS$
pyritidii bromidum pyritidium bromide	3-amino-8-[(2-amino-6-methyl-4-pyrimidinyl)amino]-6-(*p*-aminophenyl)-5-methylphenanthridinium bromide-1′-methobromide $C_{28}H_{27}Br_2N_7$
pyrrolifenum pyrrolifene	α-benzyl-β-methyl-α-phenyl-1-pyrrolidinepropanol acetate $C_{23}H_{29}NO_2$
quinetalatum quinetalate	6-(diethylcarbamoyl)-3-cyclohexene-1-carboxylic acid compound with 4-{[2-(dimethylamino)ethyl]amino}-6-methoxyquinoline(2: 1) $C_{14}H_{19}N_3O \cdot 2C_{12}H_{19}NO_3$
racefeminum racefemine	(±)-α-methyl-*N*-(1-methyl-2-phenoxyethyl)phenethylamine $C_{18}H_{23}NO$
racemelfalanum racemelfalan	(±)-3-{*p*-[bis(2-chloroethyl)amino]phenyl}alanine $C_{13}H_{18}Cl_2N_2O_2$
radiomerisoprolum (^{197}Hg) radiomerisoprol (^{197}Hg)	1-(hydroxymercuri-^{197}*Hg*)-2-propanol $C_3H_8HgO_2$
sulformetoxinum sulformetoxine	*N*′-(5,6-dimethoxy-4-pyrimidinyl)sulfanilamide $C_{12}H_{14}N_4O_4S$
sulisobenzonum sulisobenzone	5-benzoyl-4-hydroxy-2-methoxybenzenesulfonic acid $C_{14}H_{12}O_6S$
terodilinum terodiline	*N-tert*-butyl-1-methyl-3,3-diphenylpropylamine $C_{20}H_{27}N$
testosteroni ketolauras testosterone ketolaurate	testosterone 3-oxododecanoate $C_{31}H_{48}O_4$
tetramisolum tetramisole	(±)-2,3,5,6-tetrahydro-6-phenylimidazo[2,1-*b*]thiazole $C_{11}H_{12}N_2S$
tiamizidum tiamizide	4-chloro-*N*-methyl-3-(methylsulfamoyl)benzamide $C_8H_{11}ClN_2O_3S$
tioguaninum tioguanine	2-aminopurine-6-thiol $C_5H_5N_5S$
tiotixenum tiotixene	*N,N*-dimethyl-9-[3-(4-methyl-1-piperazinyl)propylidene] thioxanthene-2-sulfonamide $C_{23}H_{29}N_3O_2S_2$
tioxolonum tioxolone	4-hydroxy-1,3-benzoxathiol-2-one $C_7H_4O_3S$
tolycainum tolycaine	methyl 2-[2-(diethylamino)acetamido]-*m*-toluate $C_{15}H_{22}N_2O_3$

Proposed International Non-Proprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
triclacetamolum triclacetamol	2,2,2-trichloro-4'-hydroxyacetanilide $C_8H_6Cl_3NO_2$
triclocarbanum triclocarban	3,4,4'-trichlorocarbanilide $C_{13}H_9Cl_3N_2O$
triclodazolum triclodazol	3-(2,2,2-trichloro-1-hydroxyethyl)-5,5-diphenyl-4-imidazolidinone $C_{17}H_{15}Cl_3N_2O_2$
trifluperidolum trifluperidol	4'-fluoro-4-[4-hydroxy-4-(α,α,α-trifluoro-*m*-tolyl)piperidino]butyrophenone $C_{22}H_{23}F_4NO_2$
trioxysalenum trioxysalen	6-hydroxy-β,2,7-trimethyl-5-benzofuranacrylic acid, δ-lactone $C_{14}H_{12}O_3$
tylosinum tylosin	an antibiotic substance obtained from cultures of *Streptomyces fradiae*, or the same substance produced by any other means
urokinasum urokinase	a plasminogen activator isolated from human urine
vasopressini injectio vasopressin injection	a sterile aqueous solution containing the pressor principle of the posterior lobe of the pituitary body
verapamilum verapamil	5-[(3,4-dimethoxyphenethyl)methylamino]-2-(3,4-dimethoxy phenyl)-2-isopropylvaleronitrile $C_{27}H_{38}N_2O_4$
vinglycinatum vinglycinate	deacetylvincaleukoblastine 4-ester with *N,N*-dimethylglycine $C_{48}H_{63}N_5O_9$
vintiamolum vintiamol	*N*[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-{2-[(2-benzoylvinyl)thio]-4-hydroxy-1-methyl-1-butenyl}formamide $C_{21}H_{24}N_4O_3S$
viridofulvinum viridofulvin	an antibiotic substance obtained from cultures of *Streptomyces viridogriseus*, or the same substance produced by any other means
xantinoli nicotinas xantinol nicotinate	7-[2-hydroxy-3-[(2-hydroxyethyl)methylamino]propyl]theophylline nicotinate $C_{14}H_{21}N_5O_4 \cdot C_6H_5NO_2$

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.

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

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

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

B. Such notice shall:

(i) set forth the name under consideration;

(ii) identify the person who submitted a proposal for naming the substance, if so requested by such person;

(iii) identify the substance for which a name is being considered;

(iv) set forth the time within which comments and objections will be received and the person and place to whom they should be directed;

(v) state the authority under which the World Health Organization is acting and refer to these rules of procedure.

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

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

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.

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

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

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 " and " chlor " should preferably be abbreviated (to " medro " and " 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.

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 " and " e " instead of " ae " or " oe ".

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.

Latin	*English*	*French*	
-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	steroids, androgenic
-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	-caïne	local anaesthetics
cef-	cef-	cef-	antibiotics with cefalosporanic 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
-curinum	-curine	-curine	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

Latin	*English*	*French*	
gly-	gly-	gly-	antidiabetics, oral
io-	io-	io-	iodine-containing contrast media
iod or -io-	iod or -io-	iod or -io-	iodine-containing compounds not used as contrast media
-mer-	-mer-	-mer-	mercury-containing drugs, antimicrobial or diuretic
mito-	mito-	mito-	nucleotoxic, antineoplastic agents
-moxinum	-moxin	-moxine	monoamine, oxidase inhibitors
-mycinum	-mycin	-mycine	antibiotics, produced by *Streptomyces* strains
nifur-	nifur-	nifur-	5-nitrofuran derivatives
-orexum	-orex	-orex	anorexigenic agents
-praminum	-pramine	-pramine	dibenzepine, compounds of the imipramine type
-quinum	-quine	-quine	quinoline derivatives
-serpinum	-serpine	-serpine	derivatives of *Rauwolfia* alkaloids
-stigminum	-stigmine	-stigmine	anticholinesterases
sulfa-	sulfa-	sulfa-	sulfonamides, used as antimicrobials
-tizidum	-tizide	-tizide	diuretics which are thiazide derivatives
-toinum	-toin	-toïne	antiepileptics which are hydantoin derivatives
-verinum	-verine	-verine	spasmolytics with a papaverine-like action
-inum	-ine	-ine	alkaloids and organic bases
-onum	-one	-one	ketones
-onium	-onium	-onium	quaternary amines

CORRIGENDA

INTERNATIONAL NON-PROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS

Vol. 18, No. 11, p. 434

delete	*insert*
amfetylinum	fenetyllinum
amfetyline	fenetylline

Vol. 18, No. 11, p. 435

delete	*insert*
cepalonium	cefalonium
cepalonium	cefalonium
delete	*insert*
cepaloramum	cefaloramum
cepaloram	cefaloram

Vol. 19, No. 11, p. 451

delete	
hetacillinum hetacillin	6-[(2,2-dimethyl-4-phenyl-5-oxazolidinylidene)amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
insert	
hetacillinum hetacillin	6-(2,2-dimethyl-5-oxo-4-phenyl-1-imidazolidinyl)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid

CUMULATIVE LIST OF INTERNATIONAL NON-PROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS *

p. 14

delete	
chlorophenothanum technicum (1) technical chlorophenothane	1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane with a proportion of 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)ethane
insert	
clofenotanum clofenotane	1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane

p. 19

delete	*insert*
digitoxosidum (1) digitoxoside	digitoxinum digitoxin

* World Health Organization (1962) *Cumulative list of proposed international non-proprietary names for pharmaceutical preparations*, Geneva.