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International Nonproprietary Names for Pharmaceutical Substances

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

Comments on, or formal objections to, the proposed names may be forwarded by any person to the Pharmaceuticals unit of the World Health Organization within four months of the date of their publication in the *WHO Chronicle*.

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.

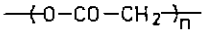
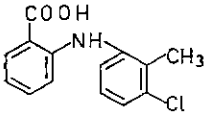
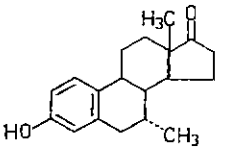
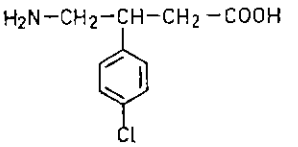
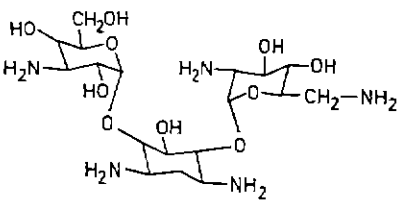
PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 24 [2]

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
acidum iozomicum iozomic acid	3,3'-[tetramethylenebis[oxy(2-hydroxytrimethylene)(acetylimino)]]-bis[2,4,6-triiodo-5-(*N*-methylacetamido)benzoic acid] $C_{34}H_{40}I_6N_4O_{12}$
acidum mycophenolicum mycophenolic acid	(*E*)-6-(4-hydroxy-6-methoxy-7-methyl-3-oxo-5-phthalanyl)-4-methyl-4-hexenoic acid $C_{17}H_{20}O_6$

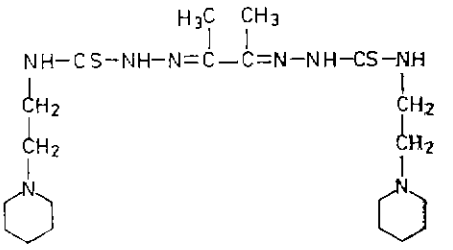
[1] See Annex, p. 24.

[2] Other lists of proposed international nonproprietary 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; 1966, 20, 216; 1967, 21, 70, 478; 1968, 22, 112, 407; 1969, 23, 183, 418; 1970, 24, 119.

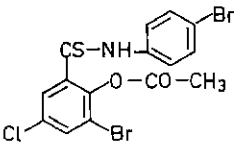
Lists of recommended international nonproprietary names were published in *Chron. Wld Hlth Org.*, 1955, 9, 185; *WHO Chronicle*, 1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421, 1967, 21, 538, 1968, 22, 463; 1969, 23, 490.

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
acidum polyglycolicum polyglycolic acid	poly(oxycarbonylmethylene) $(C_2H_2O_2)_n$ 
acidum tolfenamicum tolfenamic acid	*N*-(3-chloro-*o*-tolyl)anthranilic acid $C_{14}H_{12}ClNO_2$ 
almestronum almestrone	3-hydroxy-7α-methylestra-1,3,5(10)-trien-17-one $C_{19}H_{24}O_2$ 
baclofenum baclofen	β-(aminomethyl)-*p*-chlorohydrocinnamic acid $C_{10}H_{12}ClNO_2$ 
bekanamycinum bekanamycin	kanamycin B or L-*O*-3-amino-3-deoxy-α-D-glucopyranosyl-(1→4)-*O*-[2,6-diamino-2,6-dideoxy-α-D-glucopyranosyl-(1→6)]-2-deoxystreptamine $C_{18}H_{37}N_5O_{10}$ 

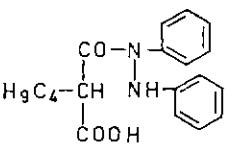
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
bitipazonum bitipazone	2,3-butanedione bis[4-(2-piperidinoethyl)thiosemicarbazone] $C_{20}H_{38}N_8S_2$



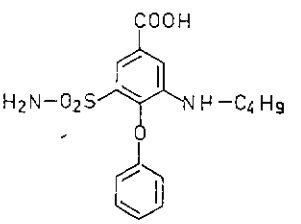
brotianidum brotianide	3,4′-dibromo-5-chlorothiosalicylanilide acetate (ester) $C_{15}H_{10}Br_2ClNO_2S$

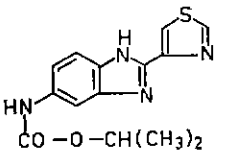
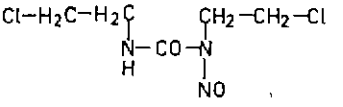
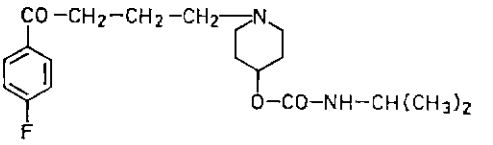
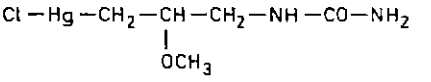
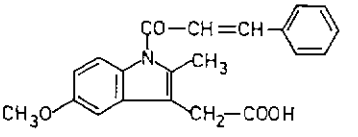


bumadizonum bumadizone	butylmalonic acid mono(1,2-diphenylhydrazide) $C_{19}H_{22}N_2O_3$

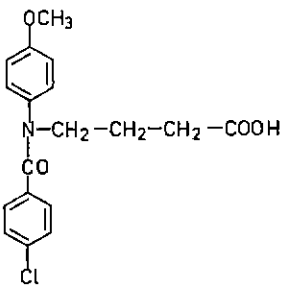


bumetanidum bumetanide	3-(butylamino)-4-phenoxy-5-sulfamoylbenzoic acid $C_{17}H_{20}N_2O_5S$

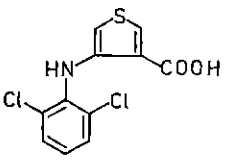


Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
cambendazolum cambendazole	isopropyl 2-(4-thiazolyl)-5-benzimidazolecarbamate $C_{14}H_{14}N_4O_2S$ 
carmustinum carmustine	1,3-bis(2-chloroethyl)-1-nitrosourea $C_5H_9Cl_2N_3O_2$ 
carperonum carperone	isopropylcarbamic acid ester with 4'-fluoro-4-(4-hydroxypiperidino)butyrophenone $C_{19}H_{27}FN_2O_3$ 
chlormerodrinum (^{197}Hg) chlormerodrin (^{197}Hg)	[3-(chloromercuri-^{197}*Hg*)-2-methoxypropyl)]urea $C_5H_{11}ClHgN_2O_2$ 
cinmetacinum cinmetacin	1-cinnamoyl-5-methoxy-2-methylindole-3-acetic acid $C_{21}H_{19}NO_4$ 

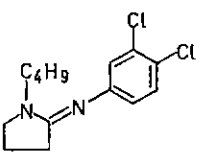
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
clanobutinum clanobutin	4-[*p*-chloro-*N*-(*p*-methoxyphenyl)benzamido]butyric acid $C_{18}H_{18}ClNO_4$



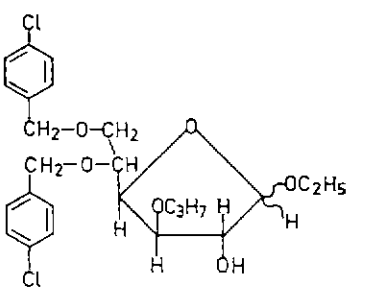
clantifenum clantifen	4-(2,6-dichloroanilino)-3-thiophenecarboxylic acid $C_{11}H_7Cl_2NO_2S$



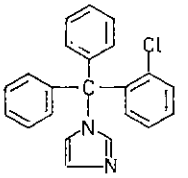
clenpirinum clenpirin	1-butyl-2-[(3,4-dichlorophenyl)imino]pyrrolidine $C_{14}H_{18}Cl_2N_2$



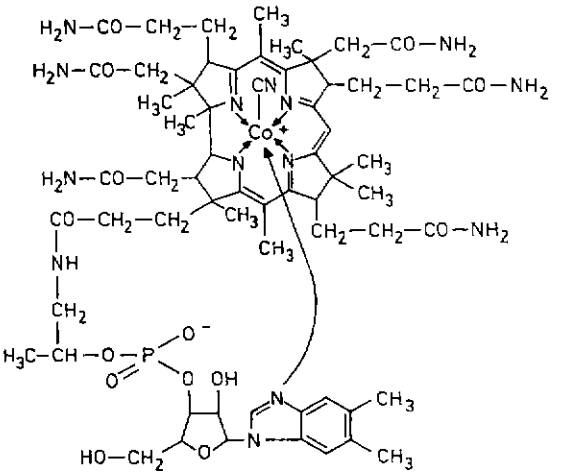
clobenosidum clobenoside	ethyl 5,6-bis-*O*-(*p*-chlorobenzyl)-3-*O*-propyl-D-glucofuranoside $C_{25}H_{32}Cl_2O_6$



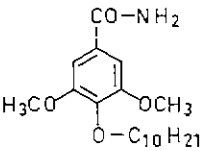
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
clotrimazolum clotrimazole	1-(*o*-chloro-α,α-diphenylbenzyl)imidazole $C_{22}H_{17}ClN_2$

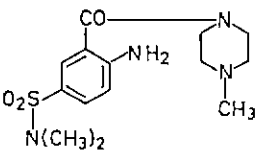
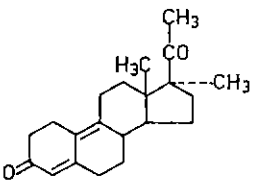
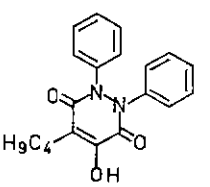
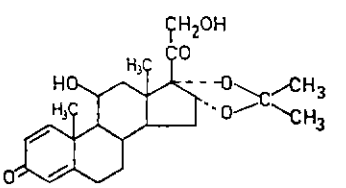


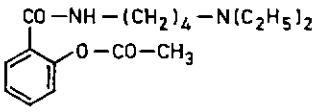
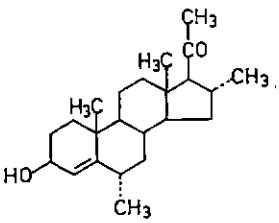
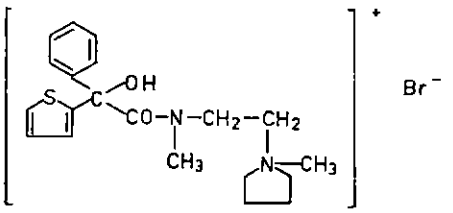
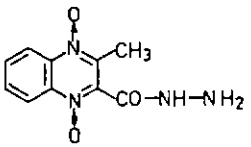
codactidum codactide	1-D-serine-17-L-lysine-18-L-lysinamide-α^{1-18}-corticotropin or H-D-Ser-L-Tyr-L-Ser-L-Met-L-Glu-L-His-L-Phe-L-Arg-L-Trp-Gly-L-Lys-L-Pro-L-Val-Gly-L-Lys-L-Lys-L-Lys-L-Lys-NH_2 $C_{101}H_{158}N_{30}O_{23}S$
cyanocobalaminum (^{57}Co) cyanocobalamin (^{57}Co)	vitamin B_{12} containing radioactive cobalt (^{57}Co) $C_{63}H_{88}CoN_{14}O_{14}P$
cyanocobalaminum (^{58}Co) cyanocobalamin (^{58}Co)	vitamin B_{12} containing radioactive cobalt (^{58}Co) $C_{63}H_{88}CoN_{14}O_{14}P$

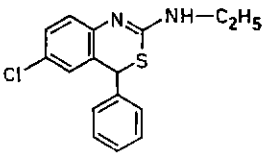
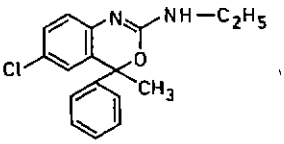
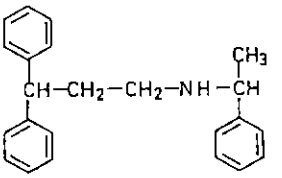
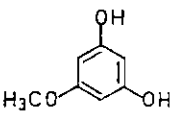


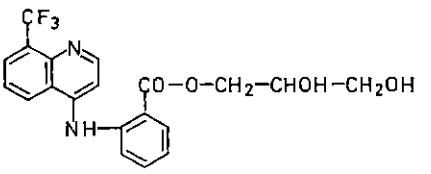
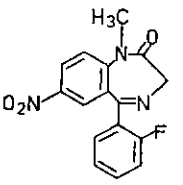
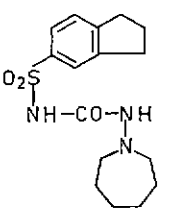
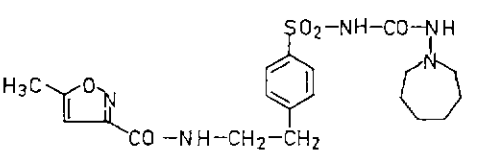
decimemidum decimemide	4-(decyloxy)-3,5-dimethoxybenzamide $C_{19}H_{31}NO_4$

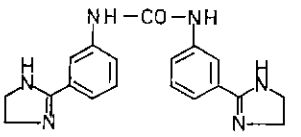
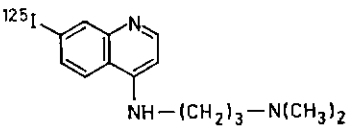
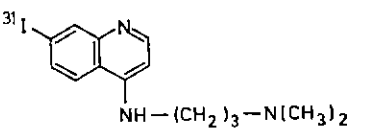
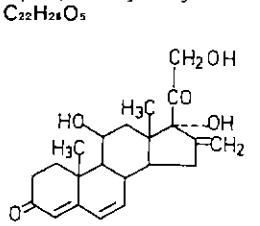


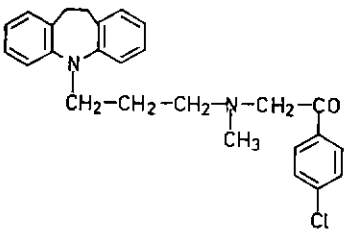
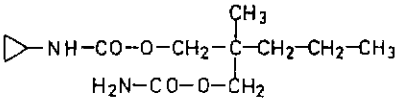
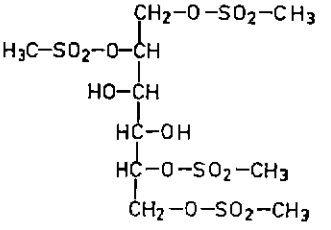
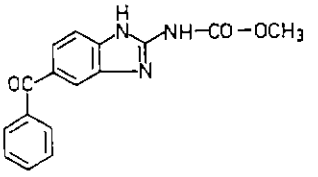
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
delfantrinum delfantrine	N^1,N^1-dimethyl-3-[(4-methyl-1-piperazinyl)carbonyl]sulfanilamide $C_{14}H_{22}N_4O_3S$ 
demegestonum demegestone	17-methyl-19-norpregna-4,9-diene-3,20-dione $C_{21}H_{28}O_2$ 
denpidazonum denpidazone	4-butyl-1,2-dihydro-5-hydroxy-1,2-diphenyl-3,6-pyridazinedione $C_{20}H_{20}N_2O_3$ 
desonidum desonide	11β,16α,17,21-tetrahydroxypregna-1,4-diene-3,20-dione cyclic 16,17-acetal with acetone $C_{24}H_{32}O_6$ 

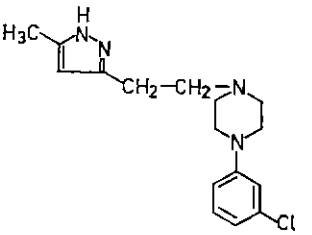
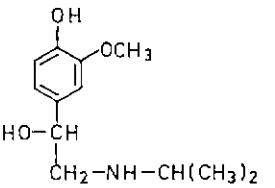
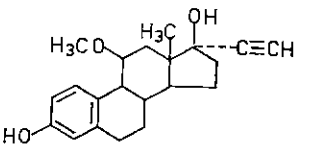
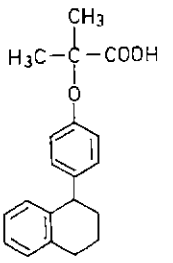
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
dibusadolum dibusadol	*N*-[4-(diethylamino)butyl]salicylamide acetate (ester) $C_{17}H_{28}N_2O_3$ 
dimepregnenum dimepregnen	3β-hydroxy-6α,16α-dimethylpregn-4-en-20-one $C_{23}H_{36}O_2$ 
dotefonii bromidum dotefonium bromide	1-methyl-1-[2-(*N*-methyl-α-2-thienylmandelamido)ethyl]pyrrolidinium bromide $C_{20}H_{27}BrN_2O_2S$ 
drazidoxum drazidox	3-methyl-2-quinoxalinecarboxylic acid hydrazide 1,4-dioxide $C_{10}H_{10}N_4O_3$ 

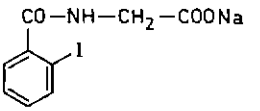
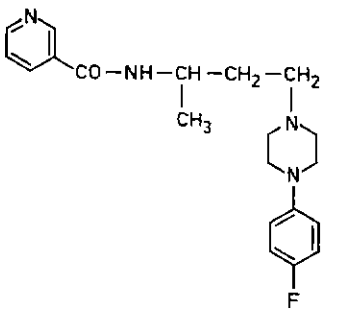
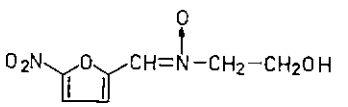
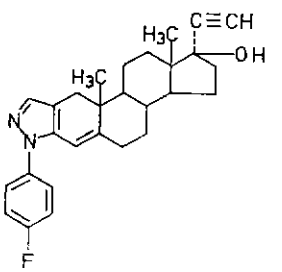
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
etasulinum etasuline	6-chloro-2-(ethylamino)-4-phenyl-4*H*-3,1-benzothiazine $C_{16}H_{15}ClN_2S$ 
etifoxinum etifoxine	6-chloro-2-(ethylamino)-4-methyl-4-phenyl-4*H*-3,1-benzoxazine $C_{17}H_{17}ClN_2O$ 
fendilinum fendiline	*N*-(3,3-diphenylpropyl)-α-methylbenzylamine $C_{23}H_{25}N$ 
ferri citratis (^{59}Fe) injectio ferric citrate (^{59}Fe) injection	a sterile solution containing radioactive iron (^{59}Fe) in the ferric state, 1 per cent w/v of sodium citrate, and sufficient sodium chloride to make the solution isotonic with blood
flamenolum flamenol	5-methoxyresorcinol $C_7H_8O_3$ 

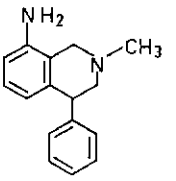
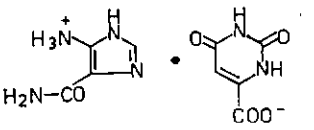
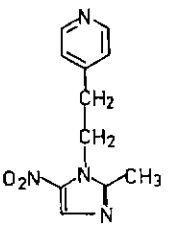
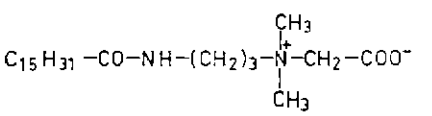
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
floctafeninum floctafenine	2,3-dihydroxypropyl *N*-[8-(trifluoromethyl)-4-quinolyl]anthranilate $C_{20}H_{17}F_3N_2O_4$ 
flunitrazepamum flunitrazepam	5-(*o*-fluorophenyl)-1,3-dihydro-1-methyl-7-nitro-2*H*-1,4-benzodiazepin-2-one $C_{16}H_{12}FN_3O_3$ 
glidazamidum glidazamide	1-(hexahydro-1*H*-azepin-1-yl)-3-(5-indansulfonyl)urea $C_{16}H_{23}N_3O_3S$ 
glisoxepidum glisoxepide	1-(hexahydro-1*H*-azepin-1-yl)-3-[[*p*-[2-(5-methyl-3-isoxazolecarboxamido)ethyl]phenyl]sulfonyl]urea $C_{20}H_{27}N_5O_5S$ 

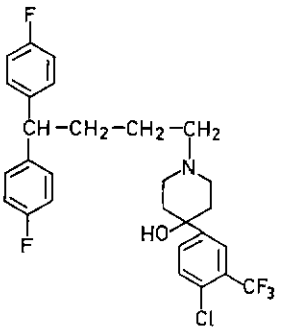
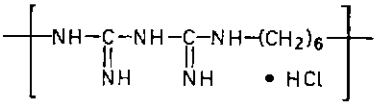
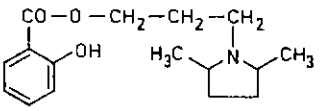
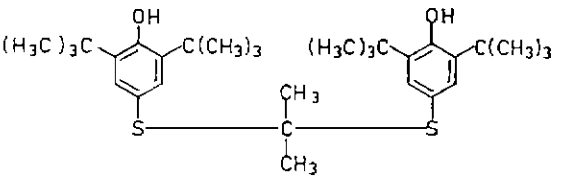
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
imidocarbum imidocarb	3,3′-di-2-imidazolin-2-ylcarbanilide $C_{19}H_{20}N_6O$ 
iometinum (^{125}I) iometin (^{125}I)	4-[[3-(dimethylamino)propyl]-amino]-7-iodoquinoline in which a portion of the molecules contain radioactive iodine (^{125}I) $C_{14}H_{18}IN_3$ 
iometinum (^{131}I) iometin (^{131}I)	4-[[3-(dimethylamino)propyl]-amino]-7-iodoquinoline in which a portion of the molecules contain radioactive iodine (^{131}I) $C_{14}H_{18}IN_3$ 
isoprednidenum isoprednidene	11β,17,21-trihydroxy-16-methylenepregna-4,6-diene-3,20-dione $C_{22}H_{26}O_5$ 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
Iopraminum Iopramine	4'-chloro-2-[[3-(10,11-dihydro-5*H*-dibenz[*b*,*f*]azepin-5-yl)propyl]-methylamino]acetophenone $C_{26}H_{27}ClN_2O$ 
Iorbamatum Iorbamate	2-(hydroxymethyl)-2-methylpentyl cyclopropanecarbamate carbamate (ester) $C_{12}H_{22}N_2O_4$ 
mannosulfanum mannosulfan	D-mannitol 1,2,5,6-tetramethanesulfonate $C_{10}H_{22}O_{14}S_4$ 
mebendazolum mebendazole	methyl 5-benzoyl-2-benzimidazolecarbamate $C_{16}H_{13}N_3O_3$ 

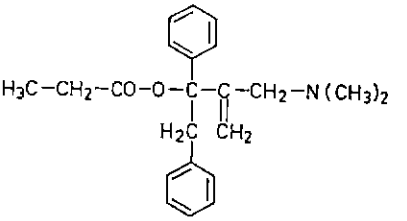
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
mepiprazolum mepiprazole	1-(*m*-chlorophenyl)-4-[2-(5-methylpyrazol-3-yl)ethyl]piperazine $C_{16}H_{21}ClN_4$ 
metiprenalinum metiprenaline	α-[(isopropylamino)methyl]vanillyl alcohol $C_{12}H_{19}NO_3$ 
mitosperum mitosper	an antineoplastic antibiotic obtained from cultures of an *Aspergillus* of the *glaucus* group, or the same substance obtained by any other means
moxestrolum moxestrol	11β-methoxy-19-nor-17α-pregna-1,3,5(10)-trien-20-yne-3,17-diol $C_{21}H_{26}O_3$ 
nafenopinum nafenopin	2-methyl-2-[*p*-(1,2,3,4-tetrahydro-1-naphthyl)phenoxy]propionic acid $C_{20}H_{22}O_3$ 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
natrii iodidum (^{125}I) sodium iodide (^{125}I)	radioactive sodium iodide (^{125}I) NaI
natrii iodohippuras (^{131}I) sodium iodohippurate (^{131}I)	sodium *o*-iodohippurate in which a portion of the molecules contain radioactive iodine (^{131}I) $C_9H_7INNaO_3$ 
niaprazinum niaprazine	*N*-[3-[4-(*p*-fluorophenyl)-1-piperazinyl]-1-methylpropyl]nicotinamide $C_{20}H_{25}FN_4O$ 
nifunginum nifungin	an antifungal antibiotic obtained from cultures of *Aspergillus giganteus*, or the same substance obtained by any other means
nifuratronum nifuratrone	*N*-(2-hydroxyethyl)-α-(5-nitro-2-furyl)nitrone $C_7H_8N_2O_5$ 
nivacortolum nivacortol	2'-(*p*-fluorophenyl)-2'*H*-17α-pregna-2,4-dien-20-yno[3,2-c]pyrazol-17-ol $C_{28}H_{31}FN_2O$ 

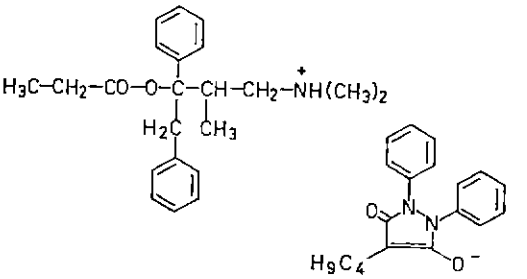
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
nomifensinum nomifensine	8-amino-1,2,3,4-tetrahydro-2-methyl-4-phenylisoquinoline $C_{17}H_{18}N_2$ 
orazamidum orazamide	5-aminoimidazole-4-carboxamide orotate $C_4H_8N_4O \cdot C_5H_4N_2O_4$ 
panidazolum panidazole	4-[2-(2-methyl-5-nitroimidazol-1-yl)ethyl]pyridine $C_{11}H_{12}N_4O_2$ 
pendecamainum pendecamaine	(carboxymethyl)dimethyl(3-palmitamidopropyl)ammonium hydroxide inner salt $C_{23}H_{46}N_2O_3$ 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
penfluridolum penfluridol	4-(4-chloro-α,α,α-trifluoro-*m*-tolyl)-1-[4,4-bis(*p*-fluorophenyl)butyl]-4-piperidinol $C_{28}H_{27}ClF_5NO$ 
polihexanidum polihexanide	poly(iminoimidocarbonyliminoimidocarbonyliminohexamethylene monohydrochloride) $(C_4H_{17}N_5.HCl)_n$ 
pranosalum pranosal	2,5-dimethyl-1-pyrrolidinepropanol salicylate (ester) $C_{16}H_{23}NO_3$ 
probucolum probucol	acetone bis(3,5-di-*tert*-butyl-4-hydroxyphenyl)mercaptole $C_{31}H_{48}O_2S_2$ 

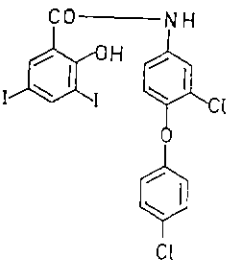
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
proxibutenum proxibutene	3-[(dimethylamino)methyl]-1,2-diphenyl-3-buten-2-ol propionate (ester) $C_{22}H_{27}NO_2$

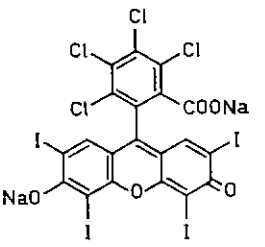
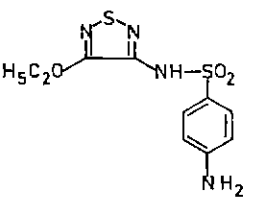
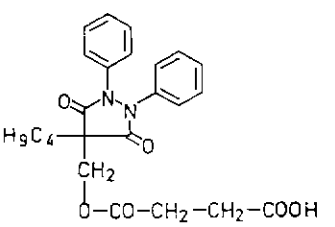


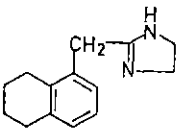
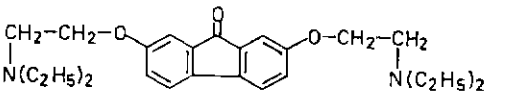
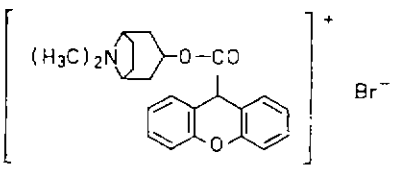
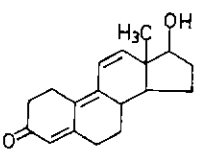
proxifezonum proxifezone	(+)-4-(dimethylamino)-3-methyl-1,2-diphenyl-2-butanol propionate (ester) compound with 4-butyl-1,2-diphenyl-3,5-pyrazolidinedione (1 : 1) $C_{22}H_{29}NO_2 \cdot C_{19}H_{20}N_2O_2$



rafoxanidum rafoxanide	3'-chloro-4'-(*p*-chlorophenoxy)-3,5-diiodosalicylanilide $C_{19}H_{11}Cl_2I_2NO_3$



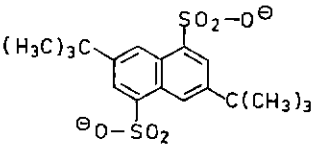
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
roseum bengalense natricum (^{131}I) rose bengal sodium (^{131}I)	disodium 4,5,6,7-tetrachloro-2′,4′,5′,7′-tetraiodofluorescein in which a portion of the molecules contain radioactive iodine (^{131}I) $C_{20}H_2Cl_4I_4Na_2O_5$
	
seroalbuminum humanum iodinatum (^{125}I) iodinated (^{125}I) human serum albumin	human serum albumin iodinated with radioactive iodine (^{125}I)
seroalbuminum humanum iodinatum (^{131}I) iodinated (^{131}I) human serum albumin	human serum albumin iodinated with radioactive iodine (^{131}I)
sulfatrozolum sulfatrozole	*N*′-(4-ethoxy-1,2,5-thiadiazol-3-yl)sulfanilamide $C_{10}H_{12}N_4O_3S_2$
	
suxibuzonum suxibuzone	4-butyl-4-(hydroxymethyl)-1,2-diphenyl-3,5-pyrazolidinedione hydrogen succinate (ester) $C_{24}H_{26}N_2O_6$
	

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
tefazolinum tefazoline	2-[(5,6,7,8-tetrahydro-1-naphthyl)methyl]-2-imidazoline $C_{14}H_{18}N_2$ 
tiloronum tilorone	2,7-bis[2-(diethylamino)ethoxy]fluoren-9-one $C_{28}H_{34}N_2O_3$ 
tosactidum tosactide	α^{1-24}-corticotropin (human) or H-L-Ser-L-Tyr-L-Ser-L-Met-L-Glu-L-His-L-Phe-L-Arg-L-Trp-Gly-L-Lys-L-Pro-L-Val-Gly-L-Lys-L-Lys-L-Arg-L-Arg-L-Pro-L-Val-L-Lys-L-Val-L-Tyr-L-Pro-L-Asp-L-Ala-Gly-L-Glu-OH $C_{150}H_{230}N_{44}O_{38}S$
trantelinii bromidum trantelinium bromide	8-methyltropinium bromide xanthene-9-carboxylate $C_{23}H_{24}BrNO_3$ 
trenbolonum trenbolone	17β-hydroxyestra-4,9,11-trien-3-one $C_{18}H_{22}O_2$ 
xenonum (^{133}Xe) xenon (^{133}Xe)	radioactive xenon (^{133}Xe) Xe

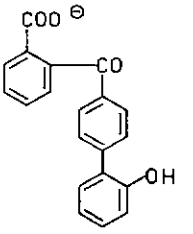
Names for Radicals and Groups

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 systematic 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.

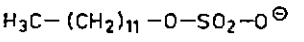
3,7-di-*tert*-butyl-1,5-naphthalenedisulfonate — bunapsilate
$C_{18}H_{22}O_6S_2^{2-}$



o-[(2′-hydroxy-4-biphenylyl)carbonyl]benzoate — fendizoate
$C_{20}H_{13}O_4^-$



n-dodecylsulfate — laurilsulfate
$C_{12}H_{25}O_4S^-$



AMENDMENTS TO PREVIOUS LISTS

Vol. 21, No. 11

PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 18

	delete	*insert*
p. 490:	natrii radioiotalamas (^{125}I) sodium radioiotalamate (^{125}I)	natrii iotalamas (^{125}I) sodium iotalamate (^{125}I)
p. 491:	natrii radioiotalamas (^{131}I) sodium radioiotalamate (^{131}I)	natrii iotalamas (^{131}I) sodium iotalamate (^{131}I)
p. 495:	radiocesii chloridum (^{131}Cs) radiocesium chloride (^{131}Cs)	cesii (^{131}Cs) chloridum cesium (^{131}Cs) chloride

Vol. 22, No. 3

PROPOSED INTERNATIONAL NONPROPRIETARY NAMES (*Prop. I.N.N.*): LIST 19

	delete	*insert*
p. 119:	kellofyllinum kellofylline	visnafyllinum visnafylline

Vol. 23, No. 9

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

	delete	*insert*
p. 428:	ecinaminum ecinamine	etifelminum etifelmine
p. 433:	*delete*	
	laramycinum laramycin	an antibiotic obtained from cultures of *Streptomyces bikiniensis var. laranensis*, or the same substance obtained by any other means

Vol. 24, No. 3

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

	delete	*insert*
p. 131:	mofedionum mofedione	oxazidionum oxazidione

INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL PREPARATIONS

CUMULATIVE LIST No. 2, 1967

	delete	*insert*
p. 65:	natrii radiochromas (^{51}Cr)	natrii chromas (^{51}Cr)
	sodium radiochromate (^{51}Cr)	sodium chromate (^{51}Cr)
	natrii radio-iodidum (^{131}I)	natrii iodidum (^{131}I)
	sodium radio-iodide (^{131}I)	sodium iodide (^{131}I)
	natrii radiophosphas (^{32}P)	natrii phosphas (^{32}P)
	sodium radiophosphate (^{32}P)	sodium phosphate (^{32}P)
p. 69:	*delete*	*insert*
	oleum radio-ethiodatum (^{131}I)	oleum ethiodatum (^{131}I)
	radio-ethiodized oil (^{131}I)	ethiodized (^{131}I) oil
p. 83:	*delete*	*insert*
	radio-aurum (^{198}Au) colloidale	aurum (^{198}Au) colloidale
	radio gold (^{198}Au) colloidal	gold (^{198}Au) colloidal
	radiocyanocobalaminum (^{60}Co)	cyanocobalaminum (^{60}Co)
	radiocyanocobalamin (^{60}Co)	cyanocobalamin (^{60}Co)
	radiomerisoprolum (^{197}Hg)	merisoprolum (^{197}Hg)
	radiomerisoprol (^{197}Hg)	merisoprol (^{197}Hg)
p. 84:	*delete*	*insert*
	radioselenomethioninum (^{75}Se)	selenomethioninum (^{75}Se)
	radioselenomethionine (^{75}Se)	selenomethionine (^{75}Se)
	radiotolpovidonum (^{131}I)	tolpovidonum (^{131}I)
	radiotolpovidone (^{131}I)	tolpovidone (^{131}I)
p. 94:	*delete*	*insert*
	triacetyloleandomycinum	troleandomycinum
	triacetyloleandomycin	troleandomycin

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* [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 pre-

* 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).

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

iudice to the consideration by the World Health Organization of a substitute name or names, a name shall not be selected by the World Health Organization as a recommended international nonproprietary name while there exists a formal objection thereto filed under article 5 which has not been withdrawn.

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

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

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

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

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

* 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/70.455)

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*	
-actidum	-actide	-actide	synthetic polypeptides with a corticotrophin-like action
-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	steroids, androgenic
-arolum	-arol	-arol	anticoagulants of the coumarin type
-bamatum	-bamate	-bamate	tranquillizers of the propanediol and pentanediol series
barb	barb	barb	barbituric acids, hypnotic activity
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
-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 *Streptomyces* strains
nifur-	nifur-	nifur-	5-nitrofuran 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 *Rauwolfia* alkaloids
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	-vérine	spasmolytics with a papaverine-like action
-inum	-ine	-ine	alkaloids and organic bases
-onum	-one	-one	ketones
-ium	-ium	-ium	quaternary amines