

# International Nonproprietary Names for Pharmaceutical Substances

In accordance with paragraph 7 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,<sup>1</sup> notice is hereby given that the following are selected as recommended international nonproprietary names.

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

## Recommended International Nonproprietary Names (rec. INN): List 28<sup>2</sup>

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formulae</i>
alaninum alanine	L-alanine $C_3H_7NO_2$
alonacicum alonacic	N-[[[(2 <i>RS</i> ,4 <i>R</i> )-2-methyl-4-thiazolidinyl]carbonyl]-β-alanine, methyl ester $C_9H_{16}N_2O_3S$
ansoxetinum ansoxetine	(±)-6-[[α-[2-(dimethylamino)ethyl]benzyl]oxy]flavone $C_{26}H_{25}NO_3$
atipamezolum atipamezole	4-(2-ethyl-2-indanyl)imidazole $C_{14}H_{16}N_2$
azithromycinum azithromycin	(2 <i>R</i> ,3 <i>S</i> ,4 <i>R</i> ,5 <i>R</i> ,8 <i>R</i> ,10 <i>R</i> ,11 <i>R</i> ,12 <i>S</i> ,13 <i>S</i> ,14 <i>R</i> )-13-[(2,6-dideoxy-3- <i>C</i> -methyl-3- <i>O</i> -methyl-α- <i>L</i> -ribo-hexopyranosyl)oxy]-2-ethyl-3,4,10-trihydroxy-3,5,6,8,10,12,14-heptamethyl-11-[[[3,4,6-trideoxy-3-(dimethylamino)-β- <i>D</i> -xylo-hexopyranosyl]oxy]-1-oxa-6-azacyclopentadecan-15-one $C_{38}H_{72}N_2O_{12}$
bamaluzolum bamaluzole	4-[( <i>o</i> -chlorobenzyl)oxy]-1-methyl-1 <i>H</i> -imidazo[4,5- <i>c</i> ]pyridine $C_{14}H_{12}ClN_3O$
benafentrinum benafentrine	<i>cis</i> -4'-(1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-2-methylbenzo[ <i>c</i> ][1,6]naphthyridin-6-yl)acetanilide $C_{23}H_{27}N_3O_3$

<sup>1</sup> *Off. Rec. Wild Hlth Org.*, 1955, **60**, 3 (Resolution EB15.R7); 1969, **1973**, 10 (Resolution EB43.R9).

<sup>2</sup> Other lists of recommended international nonproprietary names can be found in *Cumulative List No. 6, 1982*.

benazeprilat benazeprilat	(3 <i>S</i> )-3-[[[(1 <i>S</i> )-1-carboxy-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-1 <i>H</i> -1-benzazepine-1-acetic acid $C_{22}H_{24}N_2O_5$
benazeprilum benazepril	(3 <i>S</i> )-3-[[[(1 <i>S</i> )-1-carboxy-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-1 <i>H</i> -1-benzazepine-1-acetic acid, 3-ethyl ester $C_{24}H_{28}N_2O_5$
bendacolum bendacolum	( $\alpha$ <i>R</i> , $\alpha'$ <i>S</i> ,2 <i>S</i> ,2' <i>R</i> )- $\alpha,\alpha'$ -(iminodimethylene)bis[1,4-benzodioxan-2-methanol] $C_{20}H_{23}NO_6$
benidipinum benidipine	( $\pm$ )-( <i>R</i> <sup>*</sup> )-3-[( <i>R</i> <sup>*</sup> )-1-benzyl-3-piperidyl] methyl 1,4-dihydro-2,6-dimethyl-4-( <i>m</i> -nitrophenyl)-3,5-pyridinedicarboxylate $C_{28}H_{31}N_3O_6$
benzetimidum benzetimide	( $\pm$ )-2-(1-benzyl-4-piperidyl)-2-phenylglutrimide $C_{23}H_{25}N_2O_2$
brequinarum brequinar	6-fluoro-2-(2'-fluoro-4-biphenyl)-3-methyl-4-quinolinecarboxylic acid $C_{23}H_{19}F_2NO_2$
brolaconazolum brolaconazole	( $\pm$ )-1-( <i>p</i> -bromo- $\beta$ -phenylphenethyl)imidazole $C_{17}H_{15}BrN_2$
cetamololum cetamolol	( $\pm$ )-2-[ <i>o</i> -(3-( <i>tert</i> -butylamino)-2-hydroxypropoxy)phenoxy]- <i>N</i> -methylacetamide $C_{16}H_{25}N_2O_4$
clanfenurum clanfenur	1-( <i>p</i> -chlorophenyl)-3-(6-fluoro- <i>N,N</i> -dimethylantraniloyl)urea $C_{16}H_{15}ClFN_3O_2$
clipoxaminum clipoxamine	( $\pm$ )-( $\alpha$ <i>R</i> <sup>*</sup> )-3-hydroxy-4-methyl- $\alpha$ -[(1 <i>S</i> <sup>*</sup> )-1-[(3-phenylpropyl)amino]ethyl]benzyl alcohol $C_{19}H_{25}NO_2$
crisnatolum crisnatol	2-[(6-chrysenylmethyl)amino]-2-methyl-1,3-propanediol $C_{23}H_{23}NO_2$
cromakalimum cromakalim	( $\pm$ )- <i>trans</i> -3-hydroxy-2,2-dimethyl-4-(2-oxo-1-pyrrolidinyl)-6-chromancarbonitrile $C_{18}H_{18}N_2O_3$
cysteinum cysteine	L-cysteine $C_3H_7NO_2S$
dalbraminolum dalbraminol	( $\pm$ )-1-phenoxy-3-[[2-[(1,3,5-trimethylpyrazol-4-yl)amino]ethyl]amino]-2-propanol $C_{17}H_{26}N_4O_2$
denipridum denipride	( $\pm$ )-4-amino-5-nitro- <i>N</i> -[1-(tetrahydrofurfuryl)-4-piperidyl]- <i>o</i> -anisamide $C_{18}H_{26}N_4O_5$
deprodonum deprodone	11 $\beta$ ,17-dihydroxypregna-1,4-diene-3,20-dione $C_{21}H_{32}O_4$
derpanicatum derpanicate	nicotinic acid, tetraester with <i>N,N'</i> -[dithiobis(ethyleneiminocarbonyl-ethylene)]bis[( <i>R</i> )-2,4-dihydroxy-3,3-dimethylbutyramide] $C_{48}H_{54}N_8O_{12}S_2$

doreptidum doreptide	(2 <i>S</i> )- <i>N</i> -[( <i>aR</i> )- <i>a</i> -[(carbamoylmethyl)carbamoyl]- <i>a</i> -ethylbenzyl]-2-pyrrolidinecarboxamide $C_{17}H_{24}N_4O_3$
doxacurii chloridum doxacurium chloride	(1 <i>R</i> ,2 <i>S</i> ;1 <i>S</i> ,2 <i>R</i> )-1,2,3,4-tetrahydro-2-(3-hydroxypropyl)-6,7,8-trimethoxy-2-methyl-1-(3,4,5-trimethoxybenzyl)isoquinolinium chloride, succinate (2:1) $C_{38}H_{78}Cl_2N_2O_{16}$
efetozolum efetozole	(±)-2-methyl-1-( <i>a</i> -methylbenzyl)imidazole $C_{12}H_{14}N_2$
flutemazepamum flutemazepam	7-chloro-5-( <i>o</i> -fluorophenyl)-1,3-dihydro-3-hydroxy-1-methyl-2 <i>H</i> -1,4-benzodiazepin-2-one $C_{18}H_{12}ClFN_2O_2$
gepironum gepirone	3,3-dimethyl- <i>N</i> -[4-[4-(2-pyrimidinyl)-1-piperazinyl]butyl]glutarimide $C_{19}H_{28}N_5O_2$
histidinum histidine	L-histidine $C_6H_9N_3O_2$
ibudilastum ibudilast	1-(2-isopropylpyrazolo[1,5- <i>a</i> ]pyridin-3-yl)-2-methyl-1-propanone $C_{14}H_{18}N_2O$
idenastum idenast	2-[4-[4-( <i>p</i> -fluorophenyl)-1-piperazinyl]butyl]-1-( <i>p</i> -methoxyphenyl)-3-indazolinone $C_{28}H_{31}FN_4O_2$
insulinum arginum insulin argine	30 <sup>a</sup> -L-arginine-30 <sup>b</sup> -L-arginineinsulin (human) $C_{2588}H_{4077}N_{753}O_{758}S_6$
irsogladinum irsogladine	2,4-diamino-6-(2,5-dichlorophenyl)-s-triazine $C_9H_7Cl_2N_5$
isamoltanum isamoltan	(±)-1-(isopropylamino)-3-( <i>o</i> -pyrrol-1-ylphenoxy)-2-propanol $C_{16}H_{22}N_2O_2$
isoleucinum isoleucine	L-isoleucine $C_6H_{13}NO_2$
leucinum leucine	L-leucine $C_6H_{13}NO_2$
levdropropizinium levdropropizine	(-)-( <i>S</i> )-3-(4-phenyl-1-piperazinyl)-1,2-propanediol $C_{13}H_{20}N_2O_2$
levomoprololum levomoprolol	(-)-( <i>S</i> )-1-(isopropylamino)-3-( <i>o</i> -methoxyphenoxy)-2-propanol $C_{13}H_{21}NO_3$
libenzaprilum libenzapril	<i>N</i> <sup>2</sup> -[(3 <i>S</i> )-1-(carboxymethyl)-2,3,4,5-tetrahydro-2-oxo-1 <i>H</i> -1-benzazepin-3-yl]-L-lysine $C_{18}H_{25}N_3O_3$
linsidominum linsidomine	3-morpholinosydnone imine $C_8H_{10}N_4O_2$

lomefloxacinum lomefloxacin	(±)-1-ethyl-6,8-difluoro-1,4-dihydro-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid $C_{17}H_{19}F_2N_3O_3$
lysinum lysine	L-lysine $C_6H_{14}N_2O_2$
mivacurii chloridum mivacurium chloride	(R)-1,2,3,4-tetrahydro-2-(3-hydroxypropyl)-6,7-dimethoxy-2-methyl-1-(3,4,5-trimethoxybenzyl)isoquinolinium chloride, (E)-4-octenedioate (2:1) $C_{38}H_{50}Cl_2N_2O_{14}$
montirelinum montirelin	N-[(3R,6R)-6-methyl-5-oxo-3-thiomorpholinyl]carbonyl-L-histidyl-L-prolinamide $C_{17}H_{24}N_6O_4S$
moveitiprilum moveitipril	(-)-1-[(2S)-3-mercapto-2-methylpropionyl]-L-proline, ester with N-(cyclohexyl-carbonyl)thio-D-alanine $C_{19}H_{30}N_2O_5S$
naxaprostenum naxaprostene	α-[(2E,3aS,4R,5R,6aS)-4-[(1E,3S)-3-cyclohexyl-3-hydroxypropenyl]hexahydro-5-hydroxy-2(1H)-pentalenylidene]-m-toluic acid $C_{25}H_{32}O_4$
neraminolum neraminol	(±)-1-(1H-indazol-4-yloxy)-3-[[2-(2,6-xylidino)ethyl]amino]-2-propanol $C_{20}H_{26}N_4O_2$
norfloxacinum succinilum norfloxacin succinil	7-[4-(3-carboxypropionyl)-1-piperazinyl]-1-ethyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid $C_{20}H_{22}FN_3O_6$
onapristonum onapristone	11β-[p-(dimethylamino)phenyl]-17α-hydroxy-17-(3-hydroxypropyl)-13α-estra-4,9-dien-3-one $C_{29}H_{38}NO_3$
ornithinum ornithine	L-ornithine $C_5H_{12}N_2O_2$
otirelinum otirelin	N-[(1,2,3,6-tetrahydro-2,6-dioxo-4-pyrimidinyl)carbonyl]-L-histidyl-L-prolinamide $C_{16}H_{19}N_7O_5$
palatriginum palatrigine	5-amino-6-(2,3-dichlorophenyl)-2,3-dihydro-3-imino-2-isopropyl-as-triazine $C_{12}H_{13}Cl_2N_5$
panomifenum panomifene	(E)-2-[[2-[p-(3,3,3-trifluoro-1,2-diphenylpropenyl)phenoxy]ethyl]amino]ethanol $C_{25}H_{24}F_3NO_2$
pemedolacum pemedolac	(±)-4-benzyl-1-ethyl-1,3,4,9-tetrahydropyrano[3,4-b]indole-1-acetic acid $C_{22}H_{29}NO_3$
perbutyllinum perbutylline	7-[4-[4-(p-fluorobenzoyl)piperidino]butyl]theophylline $C_{23}H_{28}FN_5O_3$
phenylalaninum phenylalanine	L-phenylalanine $C_9H_{11}NO_2$

pirazmonamum pirazmonam	2-[[[(2-amino-4-thiazolyl)[[1-[[[3-(1,4-dihydro-5-hydroxy-4-oxopicolinamido)-2-oxo-1-imidazolidinyl]sulfonyl]carbamoyl]-2-oxo-3-azetidiny]carbamoyl]-methylene]amino]oxy]-2-methylpropionic acid $C_{22}H_{24}N_{10}O_{12}S_2$
ponalrestatum ponalrestat	3-(4-bromo-2-fluorobenzyl)-3,4-dihydro-4-oxo-1-phthalazineacetic acid $C_{17}H_{12}BrFN_2O_3$
pramipexolum pramipexole	(S)-2-amino-4,5,6,7-tetrahydro-6-(propylamino)benzothiazole $C_{10}H_{17}N_3S$
prolinum proline	L-proline $C_5H_9NO_2$
quinaprilum quinapril	(S)-2-[(S)-N-[(S)-1-carboxy-3-phenylpropyl]alanyl]-1,2,3,4-tetrahydro-3-isoquinolinecarboxylic acid, 1-ethyl ester $C_{25}H_{30}N_2O_5$
rilozaronum rilozarone	1-bromo-2-phenyl-3-indoliziny 3-chloro-4-[3-(dibutylamino)propoxy]phenyl ketone $C_{32}H_{36}BrClN_2O_2$
romifidinum romifidine	2-(2-bromo-6-fluoroanilino)-2-imidazoline $C_9H_9BrFN_3$
salmisteinum salmisteine	N-acetyl-L-cysteine salicylate (ester), acetate (ester) $C_{14}H_{15}NO_6S$
saruplasum saruplase	prourokinase (enzyme activating) (human clone pUK 4/pUK 18 protein moiety reduced) $C_{2031}H_{3145}N_{585}O_{601}S_{31}$
selprazinium selprazine	6-[3-[4-(p-ethoxyphenyl)-1-piperazinyl]propoxy]-3,4-dihydrocarbostyri $C_{24}H_{31}N_3O_3$
sematilidum sematilide	N-[2-(diethylamino)ethyl]-p-methanesulfonamidobenzamide $C_{14}H_{23}N_3O_3S$
serinum serine	L-serine $C_3H_7NO_3$
setastinum istine	1-[2-[(p-chloro-α-methyl-α-phenylbenzyl)oxy]ethyl]hexahydro-1H-azepine $C_{22}H_{24}ClNO$
sevopramidum sevopramide	(±)-α-benzamido-p-[3-(diethylamino)propoxy]-N,N-dipropylhydro-cinnamamide $C_{29}H_{43}N_3O_3$
simvastatinum simvastatin	2,2-dimethylbutyric acid, 8-ester with (4R,6R)-6-[2-[(1S,2S,6R,8S,8aR)-1,2,6,7,8,8a-hexahydro-8-hydroxy-2,6-dimethyl-1-naphthyl]ethyl]tetrahydro-4-hydroxy-2H-pyran-2-one $C_{25}H_{38}O_5$
somidobovum somidobove	1-[N <sup>2</sup> -[N-[N-[N-[N-[1-(L-methionyl)-L-phenylalanyl]-L-prolyl]-L-leucyl]-L-aspartyl]-L-aspartyl]-L-aspartyl]-L-aspartyl]-L-lysine]growth hormone (ox) $C_{1020}H_{1598}N_{274}O_{302}S_9$

sornidipinum sornidipine	(+)-1,4-dihydro-2,6-dimethyl-4-( <i>o</i> -nitrophenyl)-3,5-pyridinedicarboxylic acid, methyl ester, 5-ester with 1,4, 3,6-dianhydro- <i>D</i> -glucitol $C_{22}H_{24}N_2O_9$
sudismasum sudismase	<i>N</i> -acetylsuperoxide dismutase (human clone pS 61-10 copper-zinc subunit protein moiety reduced) $C_{681}H_{1087}N_{203}O_{225}S_4$
taprostenum taprostene	$\alpha$ -[(2 <i>Z</i> ,3 <i>aR</i> ,4 <i>R</i> ,5 <i>R</i> ,6 <i>aS</i> )-4-[(1 <i>E</i> ,3 <i>S</i> )-3-cyclohexyl-3-hydroxypropenyl]hexahydro-5-hydroxy-2 <i>H</i> -cyclopenta[ <i>b</i> ]furan-2-ylidene]- <i>m</i> -toluic acid $C_{24}H_{30}O_5$
taurinum taurine	taurine $C_2H_7NO_3S$
tepoxalinum tepoxalin	5-( <i>p</i> -chlorophenyl)-1-( <i>p</i> -methoxyphenyl)- <i>N</i> -methylpyrazole-3-propionohydroxamic acid $C_{20}H_{20}ClN_3O_3$
texacromilum texacromil	( $\pm$ )-5-[2-hydroxy-3-(methylthio)propoxy]-4-oxo-4 <i>H</i> -1-benzopyran-2-carboxylic acid $C_{14}H_{14}O_6S$
threoninum threonine	L-threonine $C_4H_9NO_3$
tibenelastum tibenelast	5,6-diethoxybenzo[ <i>b</i> ]thiophene-2-carboxylic acid $C_{13}H_{14}O_4S$
traboxopinum traboxopine	( $\pm$ )-2-chloro-12-[3-(dimethylamino)-2-methylpropyl]-12 <i>H</i> -dibenzo[ <i>d,g</i> ][1,3,6]-dioxazine $C_{19}H_{23}ClN_2O_2$
tryptophanum tryptophan	L-tryptophan $C_{11}H_{12}N_2O_2$
tyrosinum tyrosine	L-tyrosine $C_9H_{11}NO_3$
ufiprazolum ufiprazole	5-methoxy-2-[[[4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]benzimidazole $C_{17}H_{19}N_3O_3S$
valinum valine	L-valine $C_5H_{11}NO_2$
zabiciprilum zabicipril	(3 <i>S</i> )-2-[(2 <i>S</i> )- <i>N</i> -[(1 <i>S</i> )-1-carboxy-3-phenylpropyl]alanyl]-2-azabicyclo[2.2.2]-octane-3-carboxylic acid, 1-ethyl ester $C_{23}H_{32}N_2O_5$