

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, e.g. for List 40 Prop. INN not later than 31 January 1979.

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.

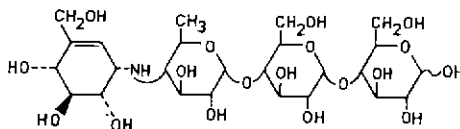
Proposed International Nonproprietary Names (Prop. INN): List 40²

Proposed International Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

acarbosum
acarbose

0-4,6-dideoxy-4-[[[(1S,4R,5S,6S)-4,5,6-trihydroxy-3-(hydroxymethyl)-2-cyclohexen-1-yl]amino]- α -D-glucopyranosyl-(1 \rightarrow 4)-O- α -D-glucopyranosyl-(1 \rightarrow 4)-D-glucopyranose.
C₂₅H₄₃NO₁₈ 56180-94-0



Comprehensive information on the INN programme can be found in: WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances*, Twentieth Report of the WHO Expert Committee), ISBN 92 4 120581 4 (price: Sw. fr. 6.—); an account of this publication will be found on page 23 of this Supplement (Annex 2). All names from Lists 1-37 of Proposed International Nonproprietary Names, together with a molecular formula index, will be found in: *International Nonproprietary Names for Pharmaceutical Substances. Cumulative list No. 5, 1977*, World Health Organization, Geneva, 1977 (ISBN 92 4 056011 4) (price: Sw. fr. 48.—). This publication consists, in the main, of a computer printout which groups together all the proposed and recommended international nonproprietary names (INN)—in Latin, English, French, Russian, and Spanish—published up to March 1977. The printout also indicates in which of the 37 individual lists of proposed names and 16 lists of recommended names, each INN was originally published, and gives references to national nonproprietary names, pharmacopoeia monographs, and other sources. In addition, the list contains molecular formulae and Chemical Abstracts Service registry numbers. For easy reference, national nonproprietary names that differ from INN, molecular formulae, and Chemical Abstracts Service registry numbers are indexed in a series of annexes. A final annex describes the procedure for selecting recommended INN and outlines the general principles to be followed in devising these names. All the textual material published in this volume appears in both English and French.

These publications may be obtained, direct or through booksellers, from the sales agents listed on the back cover of the *WHO Chronicle*. Orders from countries where sales agents have not yet been appointed may be addressed to: World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland.

¹ See Annex 1, p. 22.

² Other lists of proposed international nonproprietary names can be found in *Chron. Wild Hlth Org.*, 1953, 7, 299; 1954, 8, 216, 313; 1956, 10, 28; 1957, 11, 231; 1958, 12, 102; *WHO Chronicle*, 1959, 13, 105, 152; 1960, 14, 168, 244; 1961, 15, 314; 1962, 16, 385; 1963, 17, 389; 1964, 18, 433; 1965, 19, 446; 1966, 20, 216; 1967, 21, 70, 478; 1968, 22, 112, 407; 1969, 23,

183, 418; 1970, 24, 119, 413; 1971, 25, 123, 415; 1972, 26, 121, 414; 1973, 27, 120, 330; 1974, 28, 133; supplements to *WHO Chronicle*, 1974, Vol. 28, No. 9; 1975, Vol. 29, No. 3, No. 9; 1976, Vol. 30, No. 3, No. 9; 1977, Vol. 31, No. 3, No. 9; 1978, Vol. 32, No. 3.

Lists of recommended international nonproprietary names were published in *Chron. Wild Hlth Org.*, 1955, 9, 185; *WHO Chronicle*,

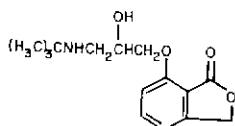
1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421; 1967, 21, 538; 1968, 22, 463; 1969, 23, 490; 1970, 24, 526; 1971, 25, 476; 1972, 26, 476; 1973, 27, 453; supplements to *WHO Chronicle*, 1974, Vol. 28, No. 10; 1975, Vol. 29, No. 10; 1976, Vol. 30, No. 10; 1977, Vol. 31, No. 10.

Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

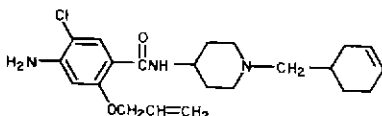
afuroloium
afuroloil

7-[3-(*tert*-butylamino)-2-hydroxypropoxy]phthalide
C₁₅H₂₁NO₄ 65776-67-2



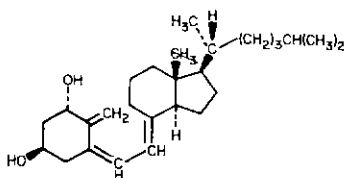
alepidium
alepride

2-(allyloxy)-4-amino-5-chloro-*N*-[1-(3-cyclohexen-1-ylmethyl)-4-piperidyl]benzamide
C₂₂H₃₀ClN₃O₂ 66564-15-6



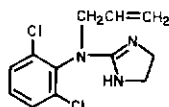
alfacalcidolum
alfacalcidol

(5*Z*,7*E*)-9,10-secocolesta-5,7,10(19)-triene-1 α ,3 β -diol
C₂₇H₄₄O₂ 41294-56-8



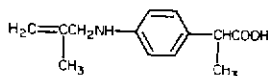
alinidinum
alinidine

2-(*N*-allyl-2,6-dichloroanilino)-2-imidazoline
C₁₂H₁₃Cl₂N₃ 33178-86-8



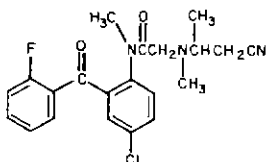
alminoprofenum
alminoprofen

p-[(2-methylallyl)amino]hydratropic acid
C₁₃H₁₇NO₂ 39718-89-3



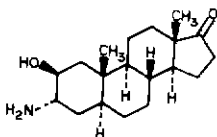
alozafonum
alozafone

4'-chloro-2-[(2-cyano-1-methylethyl)methylamino]-2'-(*o*-fluorobenzoyl)-*N*-methylacetanilide
C₂₁H₂₁ClFN₃O₂ 65899-72-1



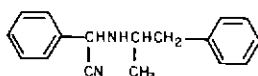
amafolonum
amafolone

3 α -amino-2 β -hydroxy-5 α -androstan-17-one
C₁₉H₃₁NO₂ 50588-47-1



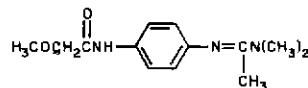
amfetaminilum
amfetaminil

[(α -methylphenethyl)amino]phenylacetonitrile
C₁₇H₁₈N₂ 17590-01-1



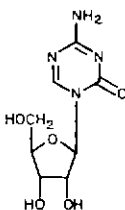
amidantelum
amidantel

4'-[[1-(dimethylamino)ethylidene]amino]-2-methoxyacetanilide
C₁₃H₁₉N₃O₂ 49745-00-8



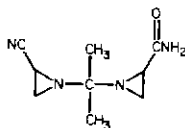
azacitidinum
azacitidine

4-amino-1- β -D-ribofuranosyl-s-triazin-2(1H)-one
C₈H₁₂N₄O₅ 320-67-2



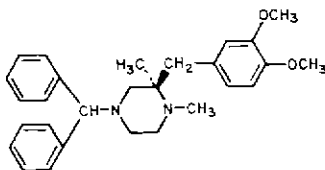
azimexonum
azimexon

1-[1-(2-cyano-1-aziridinyl)-1-methylethyl]-2-aziridinecarboxamide
C₉H₁₄N₄O 64118-86-1



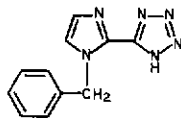
benderizinum
benderizine

(R)-4-(diphenylmethyl)-1,2-dimethyl-2-veratrylpiperazine
C₂₈H₃₄N₂O₂ 59752-23-7



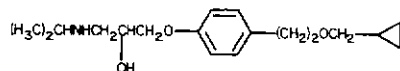
bentemazolum
bentemazole

5-(1-benzylimidazol-2-yl)-1*H*-tetrazole
C₁₁H₁₀N₆ 63927-95-7



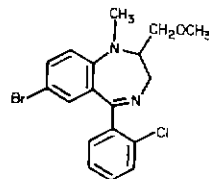
betoxololum
betoxolol

1-[*p*-[2-(cyclopropylmethoxy)ethyl]phenoxy]-3-(isopropylamino)-2-propanol
C₁₈H₂₉NO₃ 63659-18-7



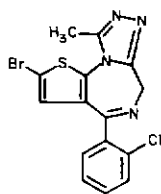
brometazepamum
brometazepam

7-bromo-5-(*o*-chlorophenyl)-2,3-dihydro-2-(methoxymethyl)-1-methyl-1*H*-1,4-benzodiazepine
C₁₈H₁₈BrClN₂O 65517-27-3



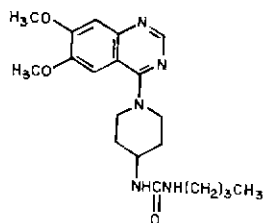
brotizolamum
brotizolam

2-bromo-4-(*o*-chlorophenyl)-9-methyl-6*H*-thieno[3,2-*f*]-s-triazolo[4,3-*a*]-[1,4]diazepine
C₁₅H₁₀BrClN₄S 57801-81-7



buquineranum
buquineran

1-butyl-3-[1-(6,7-dimethoxy-4-quinazolinyl)-4-piperidyl]urea
C₂₀H₂₉N₅O₃ 59184-78-0

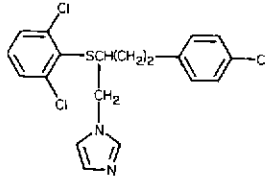


*Proposed International
Nonproprietary Name (Latin, English)*

*Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number*

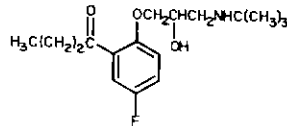
butoconazolium
butoconazole

(±)-1-[4-(*p*-chlorophenyl)-2-[(2,6-dichlorophenyl)thio]butyl]imidazole
C₁₉H₁₇Cl₃N₂S 64872-76-0



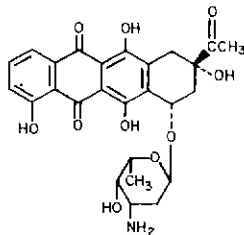
pfilololum
ofitolol

(±)-2'-[3-(*tert*-butylamino)-2-hydroxypropoxy]-5'-fluorobutyrophenone
C₁₇H₂₆FNO₃ 64552-17-6



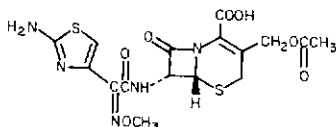
carubicinum
carubicin

(1*S*,3*S*)-3-acetyl-1,2,3,4,6,11-hexahydro-3,5,10,12-tetrahydroxy-6,11-dioxo-1-naphthacenyloxy-3-amino-2,3,6-trideoxy- α -L-*xylo*-hexopyranoside
C₂₆H₂₇NO₁₀ 50935-04-1



cefotaximum
cefotaxime

(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-(hydroxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
 α -(*O*-methoxime), acetate (ester)
C₁₆H₁₇N₅O₇S₂ 60846-21-1

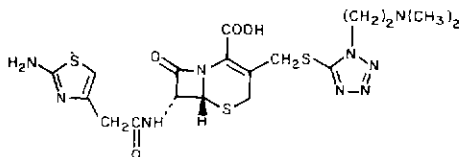


*Proposed International
Nonproprietary Name (Latin, English)*

*Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number*

cefotiamum
cefotiam

(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)acetamido]-3-[[[1-[2-(dimethylamino)-ethyl]-1*H*-tetrazol-5-yl]thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
C₁₈H₂₃N₅O₄S₃ 61622-34-2

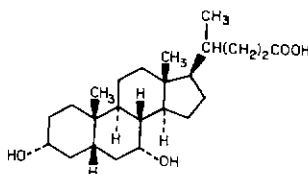


celucloralum
celucloral

cellulose 2-hydroxyethyl ether reaction product with chloral

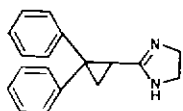
chenodiolum
chenodiol

3*α*,7*α*-dihydroxy-5*β*-cholan-24-oic acid
C₂₄H₄₀O₄ 474-25-9



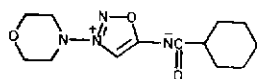
cibenzolinum
cibenzoline

2-(2,2-diphenylcyclopropyl)-2-imidazoline
C₁₈H₁₈N₂ 53267-01-9



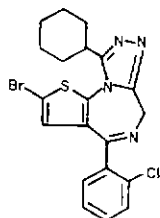
ciclosidominum
ciclosidomine

N-(cyclohexylcarbonyl)-3-morpholinosydnone imine
C₁₃H₂₀N₄O₃ 66564-16-7



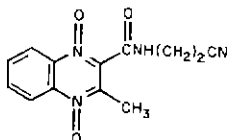
ciclotizolamum
ciclotizolam

2-bromo-4-(*o*-chlorophenyl)-9-cyclohexyl-6*H*-thieno[3,2-*f*]-*s*-triazolo-
[4,3-*a*][1,4]diazepine
C₂₀H₁₆BrClN₄S 58765-21-2



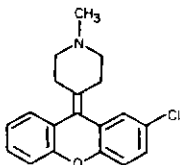
cinoquidoxum
cinoquidox

N-(2-cyanoethyl)-3-methyl-2-quinoxalinecarboxamide 1,4-dioxide
C₁₃H₁₂N₄O₃ 64557-97-7



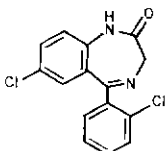
clopipazanam
clopipazan

4-(2-chloroxanthen-9-ylidene)-1-methylpiperidine
C₁₉H₁₈ClNO 60085-78-1



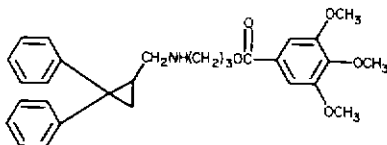
delorazepamum
delorazepam

7-chloro-5-(*o*-chlorophenyl)-1,3-dihydro-2*H*-1,4-benzodiazepin-2-one
C₁₅H₁₀Cl₂N₂O 2894-67-9



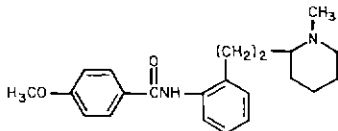
ecipramidilum
ecipramidil

3-[[[(2,2-diphenylcyclopropyl)methyl]amino]propyl 3,4,5-trimethoxybenzoate
C₂₉H₃₃NO₅ 64552-16-5



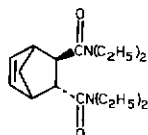
encainidum
encainide

(±)-2'-[2-(1-methyl-2-piperidyl)ethyl]-*p*-anisilide
C₂₂H₂₈N₂O₂ 37612-13-8



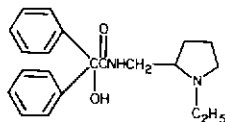
endomidum
endomide

(1*R*,2*S*,3*S*,4*S*)-*N,N,N',N'*-tetraethyl-5-norbornene-2,3-dicarboxamide
C₁₇H₂₈N₂O₂ 4582-18-7



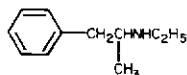
epicainidum
epicainide

N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide
C₂₁H₂₆N₂O₂ 66304-03-8



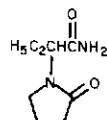
etilamfetaminum
etilamfetamine

N-ethyl- α -methylphenethylamine
C₁₁H₁₇N 457-87-4



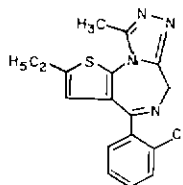
etiracetamum
etiracetam

(\pm)- α -ethyl-2-oxo-1-pyrrolidineacetamide
C₈H₁₄N₂O₂ 33996-58-6



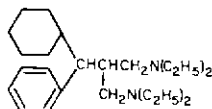
etizolamum
etizolam

4-(*o*-chlorophenyl)-2-ethyl-9-methyl-6*H*-thieno[3,2-*f*]-*s*-triazolo[4,3-*a*]-
[1,4]diazepine
C₁₇H₁₅ClN₄S 40054-69-1



feclemium
feclemine

2-(α -cyclohexylbenzyl)-*N,N,N',N'*-tetraethyl-1,3-propanediamine
C₂₄H₄₂N₂ 3590-16-7

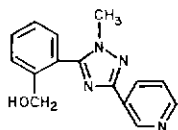


*Proposed International
Nonproprietary Name (Latin, English)*

*Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number*

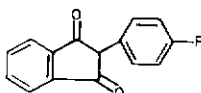
fepitriazolium
fepitrizol

o-[1-methyl-3-(3-pyridyl)-1*H*-1,2,4-triazol-5-yl]benzyl alcohol
C₁₅H₁₄N₄O 53415-46-6



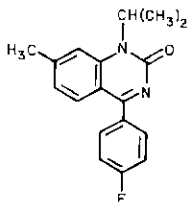
fluidionum
fluidione

2-(*p*-fluorophenyl)-1,3-indandione
C₁₅H₉FO₂ 957-56-2



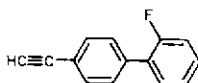
fluproquazonum
fluproquazone

4-(*p*-fluorophenyl)-1-isopropyl-7-methyl-2(1*H*)-quinazolinone
C₁₉H₁₇FN₂O 40507-23-1



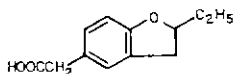
fluretofenum
fluretofen

4'-ethynyl-2-fluorobiphenyl
C₁₄H₉F 56917-29-4



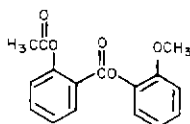
furofenacum
furofenac

2-ethyl-2,3-dihydro-5-benzofuranacetic acid
C₁₂H₁₄O₃ 56983-13-2



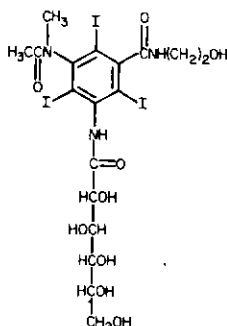
guacetisalum
guacetisal

o-methoxyphenyl salicylate acetate
C₁₆H₁₄O₅ 55482-89-8



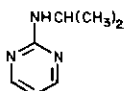
ioglunidium
iogluclide

3'-[(2-hydroxyethyl)carbamoyl]-2',4',6'-triiodo-5'-(*N*-methylacetamido)-D-
gluconanilide
C₁₈H₂₄I₃N₃O₉ 56562-79-9



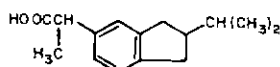
isaxoninum
isaxonine

2-(isopropylamino)pyrimidine
C₇H₁₁N₃ 4214-72-6



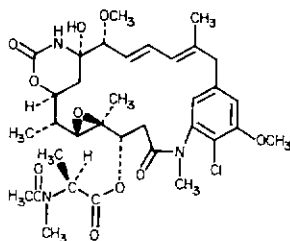
isoprofenum
isoprofen

2-isopropyl- α -methyl-5-indanacetic acid
C₁₅H₂₀O₂ 57144-56-6



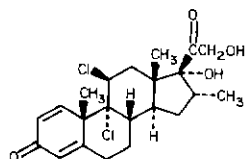
maitansinum
maitansine

N-acetyl-*N*-methyl-L-alanine[1*S*-(1*R**, 2*S**, 3*R**, 5*R**, 6*R**, 16*E*, 18*E*, 20*S**, 21*R**)]-11-chloro-21-hydroxy-12,20-dimethoxy-2,5,9,16-tetramethyl-8,23-dioxo-4,24-dioxo-9,22-diazatetracyclo[19.3.1.1^{10,14}.0^{3,5}]hexacos-10,12,14(26),16,18-pentaen-6-yl ester
C₃₄H₄₆ClN₂O₁₀ 35846-53-8



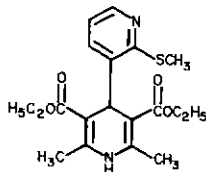
meclorisinum
meclorisone

9,11 β -dichloro-17,21-dihydroxy-16 α -methylpregna-1,4-diene-3,20-dione
C₂₂H₂₈Cl₂O₄ 4732-48-3



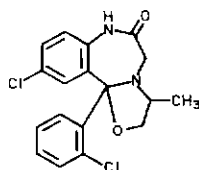
mesudipinum
mesudipine

diethyl 1',4'-dihydro-2',6'-dimethyl-2-(methylthio)[3,4'-bipyridine]-3',5'-
dicarboxylate
C₁₉H₂₄N₂O₄S 62658-88-2



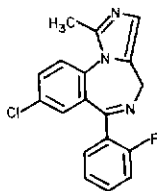
mexazolamum
mexazolam

10-chloro-11b-(*o*-chlorophenyl)-2,3,7,11b-tetrahydro-3-methyloxazolo-
[3,2-*d'*][1,4]benzodiazepin-6(5*H*)-one
C₁₈H₁₆Cl₂N₂O₂ 31868-18-5



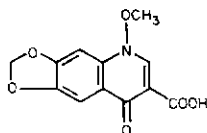
midazolamum
midazolam

8-chloro-6-(*o*-fluorophenyl)-1-methyl-4*H*-imidazo-[1,5-*a*][1,4]benzo-
diazepine
C₁₈H₁₃ClFN₃ 59467-70-8



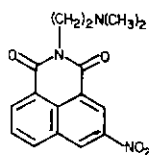
miloxacinum
miloxacin

5,8-dihydro-5-methoxy-8-oxo-1,3-dioxolo[4,5-*g*]quinoline-7-carboxylic
acid
C₁₂H₉NO₆ 37065-29-5



mitonafidum
mitonafide

N-[2-(dimethylamino)ethyl]-3-nitronaphthalimide
C₁₆H₁₅N₃O₄ 54824-17-8

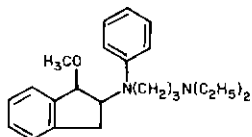


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

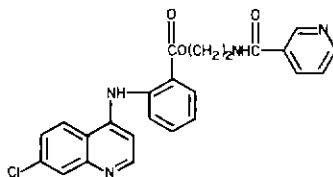
moxapridinum
moxapridine

N,N-diethyl-*N'*-(1-methoxy-2-indanyl)-*N'*-phenyl-1,3-propanediamine
C₂₃H₃₂N₂O 53076-26-9



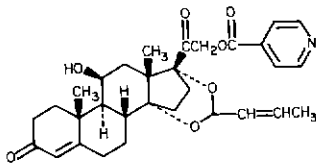
nicafeninum
nicafenine

N-(7-chloro-4-quinolyl)anthranilic acid ester with *N*-(2-hydroxyethyl)-
nicotinamide
C₂₄H₁₉ClN₄O₃ 64039-88-9



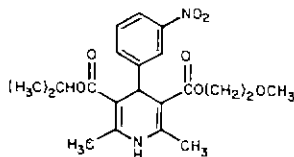
nicocortonidum
nicocortonide

11 β ,14,17,21-tetrahydroxypregn-4-ene-3,20-dione cyclic 14,17-acetal with
crotonaldehyde, 21-isonicotinate
C₃₁H₃₇NO₇ 65415-41-0



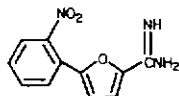
nimodipinum
nimodipine

isopropyl 2-methoxyethyl 1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-
pyridinedicarboxylate
C₂₁H₂₆N₂O₇ 66085-59-4



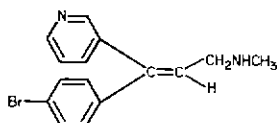
nitrafudamum
nitrafudam

5-(*o*-nitrophenyl)-2-furamidine
C₁₁H₉N₃O₃ 64743-09-5



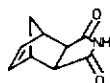
nomelidinum
nomelidine

(Z)-3-[1-(p-bromophenyl)-3-(methylamino)propenyl]pyridine
C₁₅H₁₅BrN₂ 60324-59-6



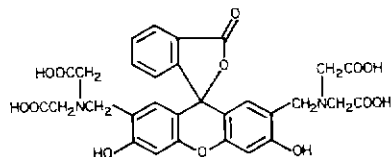
noreximidum
noreximide

cis-exo-5-norbornene-2,3-dicarboximide
C₉H₉NO₂ 6319-06-8



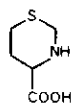
oftasceinum
oftasceine

2',7'-bis[[bis(carboxymethyl)amino]methyl]fluorescein
C₃₀H₂₆N₂O₁₃ 1461-15-0



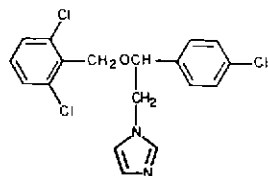
omonasteinum
omonasteine

tetrahydro-2H-1,3-thiazine-4-carboxylic acid
C₅H₉NO₂S 60175-95-3



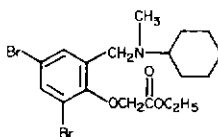
orconazolum
onazole

(±)-1-[p-chloro-β-[(2,6-dichlorobenzyl)oxy]phenethyl]imidazole
C₁₈H₁₅Cl₃N₂O 22833-02-9



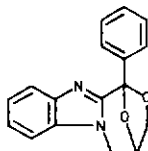
oxabrexinum
oxabrexine

ethyl [[4,6-dibromo-α-(cyclohexylmethylamino)-o-tolyl]oxy]acetate
C₁₈H₂₅Br₂NO₃ 65415-42-1



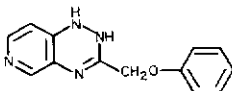
oxapadolum
oxapadol

4,5-dihydro-1-phenyl-1,4-epoxy-1*H*,3*H*-[1,4]oxazepino[4,3-*a*]benzimidazole
C₁₇H₁₄N₂O₂ 56969-22-3



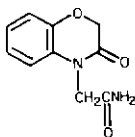
oxifunginum
oxifungin

1,2-dihydro-3-(phenoxymethyl)pyrido[3,4-*e*]-*as*-triazine
C₁₃H₁₂N₄O 64057-48-3



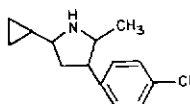
paraxazonum
paraxazone

2,3-dihydro-3-oxo-4*H*-1,4-benzoxazine-4-acetamide
C₁₀H₁₀N₂O₃ 26513-79-1



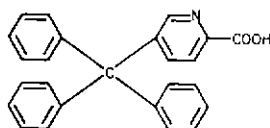
picilorexum
picilorex

3-(*p*-chlorophenyl)-5-cyclopropyl-2-methylpyrrolidine
C₁₄H₁₈ClN 62510-56-9



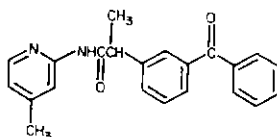
picotrinum
picotrin

5-tritylpicolinic acid
C₂₅H₁₉NO₂ 64063-57-6



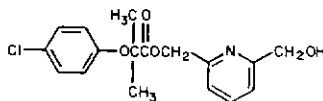
piketoprofenum
piketopfen

m-benzoyl-*N*-(4-methyl-2-pyridyl)hydratropamide
C₂₂H₂₀N₂O₂ 60576-13-8



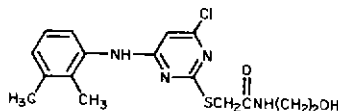
pirifibratum
pirifibrate

[6-(hydroxymethyl)-2-pyridyl]methyl 2-(*p*-chlorophenoxy)-2-methyl-
propionate
C₁₇H₁₈ClNO₄ 55285-45-5



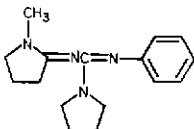
pirinixilum
pirinixil

2-[[4-chloro-6-(2,3-xylidino)-2-pyrimidinyl]thio]-*N*-(2-hydroxyethyl)-
acetamide
C₁₆H₁₉ClN₄O₂S 65089-17-0



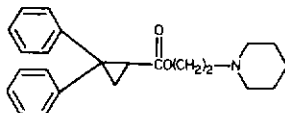
pirogilridum
pirogilride

N-(1-methyl-2-pyrrolidinylidene)-*N'*-phenyl-1-pyrrolidinecarboxamide
C₁₆H₂₂N₄ 62625-18-7



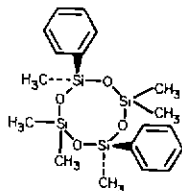
pituxatum
pituxate

2-piperidinoethyl 2,2-diphenylcyclopropanecarboxylate
C₂₃H₂₇NO₂ 39123-11-0



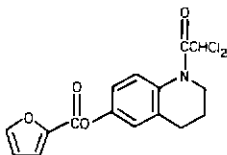
quadrosilanum
quadrosilan

cis-2,2,4,6,6,8-hexamethyl-4,8-diphenylcyclotetrasiloxane
C₁₈H₂₈O₄Si₄ 33204-76-1



quinfamidum
quinfamide

2-furoic acid ester with 1-(dichloroacetyl)-1,2,3,4-tetrahydro-6-quinolinol
C₁₆H₁₃Cl₂NO₄ 62265-68-3

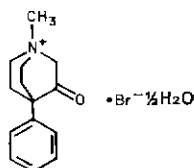


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

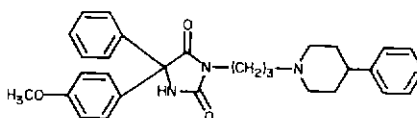
quinuclii bromidum
quinuclium bromide

1-methyl-3-oxo-4-phenylquinuclidinium bromide hemihydrate
 $C_{14}H_{18}BrNO \cdot \frac{1}{2}H_2O$ 64755-06-2



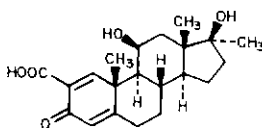
ropitoinum
ropitoin

5-(*p*-methoxyphenyl)-5-phenyl-3-[3-(4-phenylpiperidino)propyl]hydantoin
 $C_{30}H_{33}N_3O_3$ 56079-81-3



roxibolonum
roxibolone

11 β ,17 β -dihydroxy-17-methyl-3-oxoandrosta-1,4-diene-2-carboxylic acid
 $C_{21}H_{28}O_5$ 60023-92-9

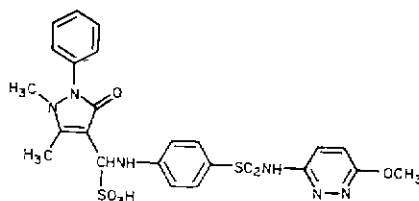


sfericasum
sfericase

Alkaline *Bacillus sphaericus* proteinase
63551-77-9

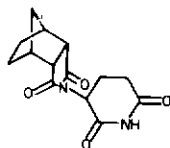
sulfamazonum
sulfamazone

α -[*p*-[(6-methoxy-3-pyridazinyl)sulfamoyl]anilino]-2,3-dimethyl-5-oxo-1-phenyl-3-pyrazoline-4-methanesulfonic acid
 $C_{23}H_{24}N_6O_7S_2$ 65761-24-2



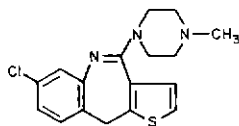
taglutimidum
taglutimide

cis-endo-N-(2,6-dioxo-3-piperidyl)-2,3-norbornanedicarboximide
C₁₄H₁₆N₂O₄ 14166-26-8



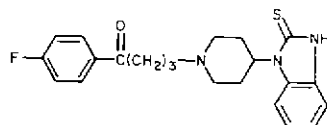
tilozepinum
tilozepine

7-chloro-4-(4-methyl-1-piperazinyl)-10*H*-thieno[3,2-*c*][1]benzazepine
C₁₇H₁₈ClN₃S 42239-60-1



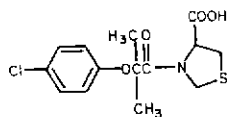
timiperonum
timiperone

4-fluoro-4-[4-(2-thioxo-1-benzimidazolyl)piperidino]butyrophenone
C₂₂H₂₄FN₃OS 57648-21-2



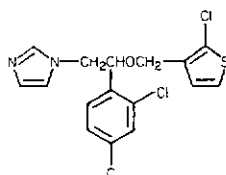
timofibratum
timofibrate

3-[2-(*p*-chlorophenoxy)-2-methylpropionyl]-4-thiazolidinecarboxylic acid
C₁₄H₁₆ClNO₄S 64179-54-0



tioconazolum
tioconazole

1-[2,4-dichloro-β-[(2-chloro-3-thenyl)oxy]phenethyl]imidazole
C₁₆H₁₃Cl₃N₂OS 65899-73-2

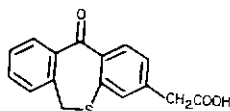


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

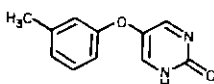
tiopinacum
tiopinac

6,11-dihydro-11-oxodibenzo[*b,e*]thiepin-3-acetic acid
C₁₆H₁₂O₃S 61220-69-7



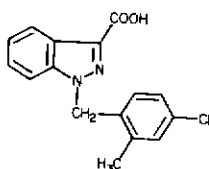
tolimidonum
tolimidone

5-(*m*-tolylloxy)-2(1*H*)-pyrimidinone
C₁₁H₁₀N₂O₂ 41964-07-2



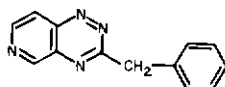
tolnidaminum
tolnidamine

1-(4-chloro-2-methylbenzyl)-1*H*-indazole-3-carboxylic acid
C₁₆H₁₃ClN₂O₂ 50454-68-7



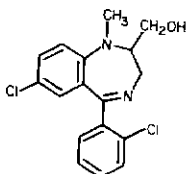
triafunginum
triafungin

3-benzylpyrido[3,4-*e*]-*as*-triazine
C₁₃H₁₀N₄ 55242-77-8



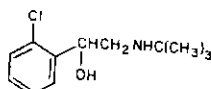
tuclazepamum
tuclazepam

7-chloro-5-(*o*-chlorophenyl)-2,3-dihydro-1-methyl-1*H*-1,4-benzodiazepine-
2-methanol
C₁₇H₁₆Cl₂N₂O 51037-88-8



tulobuterolum
tulobuterol

α -[(*tert*-butylamino)methyl]-*o*-chlorobenzyl alcohol
C₁₂H₁₈ClNO 41570-61-0

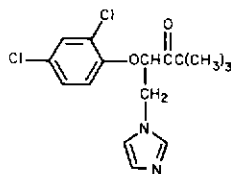


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number

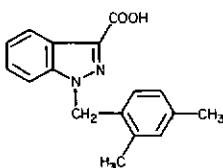
valconazolium
valconazole

(±)-2-(2,4-dichlorophenoxy)-1-imidazol-1-yl-4,4-dimethyl-3-pentanone
C₁₆H₁₈Cl₂N₂O₂ 56097-80-4



xinidaminum
xinidamine

1-(2,4-dimethylbenzyl)-1H-indazole-3-carboxylic acid
C₁₇H₁₆N₂O₂ 50264-78-3



zinostatium
zinostatin

neocarzinostatin, acidic single-chained polypeptide obtained from cultures of *Streptomyces carcinostaticus* var. F-41, or the same substance produced by any other means
9014-02-2

Names for Radicals and Groups

Some substances 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. Consequently, shorter non-

proprietary names for some radicals and groups have been devised or selected, and they are suggested for use with the proposed international nonproprietary names.

2-(dimethylamino)ethyl

deanil

decyl

decil

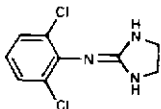
AMENDMENTS
TO PREVIOUS LISTS

International Nonproprietary Names for Pharmaceutical Substances

Cumulative List No. 3, 1971

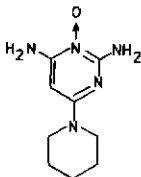
p. 37 clonidine
clonidine

Replace chemical information by the following :
2-[(2,6-dichlorophenyl)imino]imidazolidine



p. 87 minoxidilum
minoxidil

Replace chemical information by the following :
2,4-diamino-6-piperidinopyrimidine 3-oxide



p. 103 penbutololum
penbutotol

Complete chemical name by preceding it by (-)-

Supplement to Vol. 28, No. 9

Proposed International Nonproprietary Names (Prop. INN): List 32

p. 17 razoxanum
razoxane

Replace chemical name and CAS registry No. by the following :
(±)-4,4'-propylenedi-2,6-piperazinedione
21416-87-5

p. 20 tinofedrinum
tinofedrine

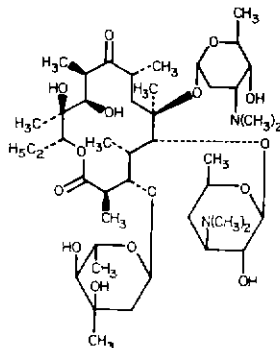
Replace chemical name and CAS registry No. by the following :
(+)-(R)-α-[(S)-1-[(3,3-di-3-thienylallyl)amino]ethyl]benzyl alcohol
66788-41-8

Supplement to Vol. 31, No. 3

Proposed International Nonproprietary Names (Prop. INN): List 37

p. 10 megalomicinum
megalomicin

Replace chemical name and graphic formula by the following :
(3R,4S,5S,6R,7R,9R,11R;12R,13S,14R)-4-[(2,6-dideoxy-3-C-methyl-α-L-)] :
ribo-hexopyranosyl]oxy]-14-ethyl-12,13-dihydroxy-3,5,7,9,11,13-hexamethyl-
7-[[[2,3,6-trideoxy-3-(dimethylamino)-α-L-ribo-hexopyranosyl]oxy]-6-
[[[3,4,6-trideoxy-3-(dimethylamino)-β-D-xyllo-hexopyranosyl]oxy]-
oxacyclotetradecane-2,10-dione



Proposed International Nonproprietary Names (Prop. INN): List 39

p. 8 *delete*

iomapidolum
iomapidol

insert

iopamidolum
iopamidol

p. 15 norgestimatum

In Cumulative List 5 replace asterisk by reference to List 17 rec. INN

Annex 1

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*.¹

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*.¹

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 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.

* 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.

GENERAL PRINCIPLES FOR GUIDANCE IN DEVISING INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES

1. International Nonproprietary Names (INN) should be distinctive in sound and spelling. They should not be inconveniently long and should not be liable to confusion with names in common use.

2. The INN 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.

These primary principles are to be implemented by using the following secondary principles

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

4. In devising INN for acids, one-word names are preferred; their salts should be named without modifying the acid name, e.g.

"oxacillin" and "oxacillin sodium",
"ibufenac" and "ibufenac sodium".

5. INN 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.

For quaternary ammonium substances, the cation and anion should be named appropriately as separate components of a quaternary sub-

stance and not in the amine-salt style.

6. The use of an isolated letter or number should be avoided; hyphenated construction is also undesirable.

7. To facilitate the translation and pronunciation of INN, "f" should be used instead of "ph", "t" instead of "th", "e" instead of "ae" or "oe", and "i" instead of

"γ"; the use of the letters "h" and "k" should be avoided.

8. 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.

9. Group relationship in INN (see

Guiding Principle 2) should if possible be shown by using a stem from the following list. The stem should only be used for substances of the appropriate group. Where a stem is shown without any hyphens it may be used anywhere in the name.

Subsidiary group relationships should be shown by devising INN which show similarities to and are analogous with a previously named substance.

Latin	English	French
-actidum	-actide	-actide
andr	andr	andr
-arolum	-arol	-arol
-azepamum	-azepam	-azépam
bol	bol	bol
-buzonom	-buzone	-buzone
-cainum	-caine	-caine
cef-	cef-	céf-
llinum	-cillin	-cilline
cort	cort	cort
-cyclinum	-cycline	-cycline
estr	estr	estr
-fibratum	-fibrate	-fibrate
-forminum	-formin	-formine
gest	gest	gest
gli-	gli-	gli-
io-	io-	io-
-ium	-ium	-ium
-metacinum	-metacin	-métacine
-mycinum	-mycin	-mycine
-nidazolom	-nidazole	-nidazole
-ololum	-olol	-olol
-onidum	-onide	-onide
-orexum	-orex	-orex
-praminum	-pramine	-pramine
-profenum	-profen	-profène
prost	prost	prost
-relinum	-relin	-réline
sulfa-	sulfa-	sulfa-
-terolum	-terol	-térol
-tizidum	-tizide	-tizide
-verinum	-verine	-vérine

synthetic polypeptides with a corticotrophin-like action
steroids, androgens
anticoagulants of the dicoumarol group
substances of the diazepam group
steroids, anabolic
anti-inflammatory analgesics of the phenylbutazone group
local anaesthetics
antibiotics, derivatives of cephalosporanic acid
antibiotics, derivatives of 6-aminopenicillanic acid
corticosteroids, except those of the prednisolone group
antibiotics of the tetracycline group
estrogenic substances
substances of the clofibrate group
hypoglycemics of the phenformin group
steroids, progestogens
sulfonamide hypoglycemics
iodine-containing contrast media
quaternary ammonium compounds
anti-inflammatory substances of the indometacin group
antibiotics, produced by *Streptomyces* strains
antiprotozoal substances of the metronidazole group
β-adrenergic blocking agents of the propranolol group
steroids for topical use, containing an acetal group
anorexigenic agents, phenethylamine derivatives
substances of the imipramine group
anti-inflammatory substances of the ibuprofen group
prostaglandins
hypophyseal hormone release-stimulating peptides
sulfonamides, anti-infective
bronchodilators, phenethylamine derivatives
diuretics of the chlorothiazide group
spasmolytics with a papaverine-like action

Annex 2

NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES: TWENTIETH REPORT OF THE WHO EXPERT COMMITTEE

In its twentieth report¹ the WHO Expert Committee on Nonproprietary Names for Pharmaceutical Substances reviewed the general principles for devising, and the procedures for selecting, international nonproprietary names (INN) in the light of developments in pharmaceutical compounds in recent years. The most significant recent change has been the extension to the naming of synthetic chemical substances of the practice previously used for substances originating in or derived from natural products. This practice involves employing a characteristic "stem" indicative of a common property of the members of a group. The reasons for, and the implications of, the change are fully

discussed. Also reported is the intention to change the practice with regard to the nomenclature of individual members of polymeric series.

Other sections of the report concern instructions to be followed by bodies making application for international nonproprietary names, the availability of computer-printed cumulative lists of international nonproprietary names, information supplied by WHO Member States concerning their official use of national or international names for pharmaceutical products, and proposals relative to the withdrawal of international nonproprietary names allocated to substances that are no longer in use.

The official texts relating to the procedures for selecting, and general

guidance for devising, international nonproprietary names are reproduced in two annexes to the report. Other annexes give examples of international nonproprietary names that incorporate selected stems, the most frequently used initial groups of letters in international nonproprietary names, a historical review of the programme of selecting international nonproprietary names, some useful literature references, and a model of the form to be used in all applications for international nonproprietary names.

¹ WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances*, Twentieth Report of the WHO Expert Committee), ISBN 92 4 120581 4. Price: Sw. fr. 6.—.