Chloramphenicol

Other names:

(-)-Chloramphenicol
2,2-Dichloro-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]acetamide
Acetamide, 2,2-dichloro-N-(«beta»-hydroxy-«alpha»-(hydroxymethyl)-p-nitrophenethyl)-, D-(-)-threo-
Acetamide, 2,2-dichloro-N-(Â«betaÂ»-hydroxy-Â«alphaÂ»-(hydroxymethyl)-p-nitrophenethyl)-, D-(-)-threo-
Acetamide, 2,2-dichloro-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]-
Acetamide, 2,2-dichloro-N-[2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]-, [R-(R*,R*)]-
Acetamide, 2,2-dichloro-N-[«beta»-hydroxy-«alpha»-(hydroxymethyl)-p-nitrophenethyl]-, D-threo-(-)-
Acetamide, 2,2-dichloro-N-[Â«betaÂ»-hydroxy-Â«alphaÂ»-(hydroxymethyl)-p-nitrophenethyl]-, D-threo-(-)-
Ak-chlor
Alficetyn
Ambofen
Amphenicol
Amphicol
Amseclor
Anacetin
Aquamycetin
Austracil
Austracol
Biocetin
Biophenicol
CAF
CAM
CAP
CPh
Catilan
Chemicetin
Chemicetina
Chlomin
Chlomycol
Chlora-Tabs
Chloramex
Chloramfenikol
Chloramficin
Chloramfilin
Chloramsaar
Chlorasol
Chloricol
Chlornitromycin
Chloro-25 vetag
Chloroamphenicol

Chlorocaps
Chlorocid
Chlorocid S
Chlorocide
Chlorocidin C
Chlorocidin C tetran
Chlorocin
Chlorocol
Chloroject L
Chloromax
Chloromycetin
Chloromycetny
Chloronitrin
Chloroptic
Chlorovules
Cidocetine
Ciplamycetin
Cloramfen
Cloramficin
Cloramicol
Cloramidina
Cloroamfenicolo
Clorocyn
Cloromisan
Clorosintex
Comycetin
Cylphenicol
D-(-)-Chloramphenicol
D-(-)-threo-1-(4-Nitrophenyl)-2-dichloroacetamido-1,3-propanediol
D-(-)-threo-1-(p-Nitrophenyl)-2-(dichloroacetylamino)-1,3-propanediol
D-(-)-threo-1-p-Nitrophenyl-2-dichloracetamido-1,3-propanediol
D-(-)-threo-2,2-Dichloro-N-(«beta»-hydroxy-«alpha»-(hydroxymethyl))-p-nitrophenethylac
D-(-)-threo-2,2-Dichloro-N-(«beta»-hydroxy-«alpha»-(hydroxymethyl)-p-nitrophenyl-ethyl)
D-(-)-threo-2,2-Dichloro-N-(Â«betaÂ»-hydroxy-Â«alphaÂ»-(hydroxymethyl))-p-nitrophene
D-(-)-threo-2,2-Dichloro-N-(Â«betaÂ»-hydroxy-Â«alphaÂ»-(hydroxymethyl)-p-nitrophenyl-
D-(-)-threo-2,2-dichloro-N-[2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]ethanamid
D-(-)-threo-2-Dichloroacetamido-1-p-nitrophenyl-1,3-propanediol
D-(-)-threo-Chloramphenicol
D-(-)-threo-N-Dichloroacetyl-1-p-nitrophenyl-2-amino-1,3-propanediol
D-Chloramphenicol
D-threo-(1R,2R)-1-p-Nitrophenyl-2-dichloroacetamido-1,3-propanediol
D-threo-2,2-dichloro-N-[.beta.-hydroxy-.alpha.-(hydroxymethyl)-p-nitrophenethyl]acetamid
D-threo-Chloramphenicol

D-threo-N-(1,1'-Dihydroxy-1-p-nitrophenylisopropyl)dichloroacetamide
Desphen
Detreomycin
Detreomycine
Dextromycetin
Doctamicina
Econochlor
Embacetin
Emetren
Enicol
Enteromycetin
Erbaplast
Ertilen
Farmicetina
Fenicol
Globenicol
Glorous
Gloveticol
Halcetin
Halomycetin
Hortfenicol
I 337A
Intramycetin
Isicetin
Ismicetina
Isophenicol
Isopto fenicol
Juvamycetin
Kamaver
Kemicetina
Kemicetine
Klorita
Klorocid S
Leukomyan
Leukomycin
Levocin
Levomicetina
Levomitsetin
Levomycetin
Levoplast
Levosin
Levovetin
Loromisin

Mastiphen
Mediamycetine
Medichol
Micloretin
Micochlorine
Micoclorina
Microcetina
Mychel
Mychel-Vet
Mycinol
Myclocin
Mycochlorin
NCI-C55709
NSC 3069
Normimycin V
Novochlorocap
Novomycetin
Novophenicol
Ocuphenicol
Oftalent
Oleomycetin
Opclor
Ophthochlor
Otachron
Otophen
Pantovernil
Paraxin
Pentamycetin
Quemicetina
Rivomycin
Romphenil
Ronphenil
Septicol
Sificetina
Sintomicetin
Sintomicetina
Sintomicetine R
Sno-Phenicol
Soluthor
Stanomycetin
Synthomycetin
Synthomycetine
Tega-Cetin

	Tevcocin
	Tifomycin
	Tifomycine
	Tiromycetin
	Treomicetina
	Tyfomycine
	U-6062
	Unimycetin
	Veticol
	Viceton
	[R-(R*,R*)]-2,2-dichloro-N-[2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]ethanamid
Inchi:	InChI=1S/C11H12Cl2N2O5/c12-10(13)11(18)14-8(5-16)9(17)6-1-3-7(4-2-6)15(19)20/h1-4
InchiKey:	WIIZWVCIJKGZOK-IUCAKERBSA-N
Formula:	C11H12Cl2N2O5
SMILES:	O=C(NC(CO)C(O)c1ccc([N+](=O)[O-])cc1)C(Cl)Cl
Mol. weight [g/mol]:	323.13
CAS:	56-75-7

Physical Properties

Property code	Value	Unit	Source
gf	-164.28	kJ/mol	Joback Method
hf	-466.96	kJ/mol	Joback Method
hfus	41.96	kJ/mol	Joback Method
hvap	113.75	kJ/mol	Joback Method
log10ws	-2.11		Estimated Solubility Method
log10ws	-2.11		Aqueous and cosolvent solubility data for drug-like organic compounds
log10ws	-1.98		Aqueous Solubility Prediction Method
logp	0.909		Crippen Method
mcvol	207.280	ml/mol	McGowan Method
pc	3318.18	kPa	Joback Method
rinpol	2310.00		NIST Webbook
rinpol	2310.00		NIST Webbook
tb	996.52	K	Joback Method
tc	1227.94	K	Joback Method
tf	423.00 ± 1.00	K	NIST Webbook
tf	423.65	K	Aqueous Solubility Prediction Method

vc	0.784	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	592.29	J/mol×K	996.52	Joback Method
cpg	598.73	J/mol×K	1035.09	Joback Method
cpg	604.55	J/mol×K	1073.66	Joback Method
cpg	609.81	J/mol×K	1112.23	Joback Method
cpg	614.58	J/mol×K	1150.80	Joback Method
cpg	618.93	J/mol×K	1189.37	Joback Method
cpg	622.90	J/mol×K	1227.94	Joback Method

Sources

Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Volumetric, ultrasonic and UV absorption studies on interactions of antibiotic drug chloramphenicol with glycine and its dipeptide in aqueous solutions at T = (288.15-318.15) K:	https://www.doi.org/10.1016/j.jct.2016.03.040
Estimated Solubility Method:	http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt
Aqueous and cosolvent solubility data for drug-like organic compounds:	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2751500/
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C56757&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Densities and Speeds of Sound of Antibiotic Drug Chloramphenicol with l-Leucine and Glycyl-l-leucine in Aqueous Medium at T = (288.15 318.15) K: A Volumetric, Ultrasonic, and UV Absorption Study:	https://www.doi.org/10.1021/acs.jced.6b00168

Legend

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume

pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume