Morphine

Other names:

(-)-Morphine
(5«alpha»,6«alpha»)-7,8-Didehydro-4,5-epoxy-17-methylmorphinan-3,6-diol
(5Â«alphaÂ»,6Â«alphaÂ»)-7,8-Didehydro-4,5-epoxy-17-methylmorphinan-3,6-diol
9H-9,9c-Iminoethanophenanthro(4,5-bcd)furan-3,5-diol, 4a,5,7a,8-tetrahydro-12-methyl-
Avinza
DepoDur
Dulcontin
Duromorph
Kadain
M-Eslon
MS contin
Meconium
Morfina
Morphia
Morphin
Morphina
Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5.alpha.,6.alpha.)-
Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5«alpha»,6«alpha»)-
Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5Â«alphaÂ»,6Â«alphaÂ»)-
Morphinan-3,6«alpha»-diol, 7,8-didehydro-4,5«alpha»-epoxy-17-methyl-
Morphinan-3,6Â«alphaÂ»-diol, 7,8-didehydro-4,5Â«alphaÂ»-epoxy-17-methyl-
Morphinism
Morphinum
Morphium
Nepenthe
Oramorph SR
Ospalivina
Roxanol
Statex SR
l-Morphine

Inchi: InChI=1S/C17H19NO3/c1-18-7-6-17-10-3-5-13(20)16(17)21-15-12(19)4-2-9(14(15)17)8-

InchiKey: BQJCRHHNABKAKU-UHFFFAOYSA-N

Formula: C17H19NO3

SMILES: CN1CCC23c4c5ccc(O)c4OC2C(O)C=CC3C1C5

Mol. weight [g/mol]: 285.34

CAS: 57-27-2

Physical Properties

Property code	Value	Unit	Source
ie	8.30	eV	NIST Webbook
log10ws	-3.18		Aqueous Solubility Prediction Method
logp	1.198		Crippen Method
mcvol	206.480	ml/mol	McGowan Method
rinpol	2435.00		NIST Webbook
rinpol	2400.00		NIST Webbook
rinpol	2535.30		NIST Webbook
rinpol	2455.00		NIST Webbook
rinpol	2406.00		NIST Webbook
rinpol	2397.50		NIST Webbook
rinpol	2479.00		NIST Webbook
rinpol	2406.00		NIST Webbook
rinpol	2425.00		NIST Webbook
rinpol	2399.00		NIST Webbook
rinpol	2425.00		NIST Webbook
rinpol	2446.00		NIST Webbook
rinpol	2454.00		NIST Webbook
rinpol	2454.00		NIST Webbook
rinpol	2445.00		NIST Webbook
rinpol	2455.00		NIST Webbook
rinpol	2406.00		NIST Webbook
rinpol	2396.00		NIST Webbook
rinpol	2450.00		NIST Webbook
rinpol	2420.00		NIST Webbook
rinpol	2433.00		NIST Webbook
rinpol	2417.00		NIST Webbook
rinpol	2423.00		NIST Webbook
rinpol	2425.00		NIST Webbook
rinpol	2425.00		NIST Webbook
rinpol	2432.00		NIST Webbook
rinpol	2433.00		NIST Webbook
rinpol	2433.00		NIST Webbook
rinpol	2440.00		NIST Webbook
rinpol	2454.00		NIST Webbook
rinpol	2399.00		NIST Webbook
rinpol	2435.00		NIST Webbook
rinpol	2390.00		NIST Webbook
rinpol	2400.00		NIST Webbook

rinpol	2454.00	NIST Webbook
rinpol	2425.00	NIST Webbook
rinpol	2440.00	NIST Webbook
rinpol	2423.00	NIST Webbook
rinpol	2399.00	NIST Webbook
rinpol	2423.00	NIST Webbook
rinpol	2460.00	NIST Webbook
rinpol	2438.00	NIST Webbook
rinpol	2400.00	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hfust	28.87	kJ/mol	528.20	NIST Webbook

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Aqueous Solubility Prediction Method: http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C57272&Units=SI

Legend

hfust: Enthalpy of fusion at a given temperature
ie: Ionization energy
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
rinpol: Non-polar retention indices

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