

(4aR,7S,7aS)-4,7-Dimethyl-5,6,7,7a-tetrahydrocyclopenta[c]pyran-1-one

Other names:	Reo=Component at scan 1427 (17.595 min) [Model = +81u] in C:\GCMS_RABE\AGILENT_7000\DATA\2011-03-25 AA-WCS-GA-Cyclopenta[c]pyran-1(4aH)-one, 5,6,7,7a-tetrahydro-4,7-dimethyl-, (4aR,7S,7aS)-MZDATA\GCAT\NP-AA 5%.MZDATA.XML Cyclopenta[c]pyran-1(4aH)-one, 5,6,7,7a-tetrahydro-4,7-dimethyl-, [4aR-(4a«alpha»,7«beta»,7a«alpha»)]-Cyclopenta[c]pyran-1(4a«beta»H)-one, 5,6,7,7a«beta»-tetrahydro-4,7«alpha»-dimethyl-, (+)-(+)-cis,cis-Nepetalactone (4aR,7S,7aS)-Nepetalactone 4a«beta»,7«alpha»,7a«alpha»-Nepetalactone Nepetalactone, cis,cis- cis,cis-Nepetalactone Nepetalactone (4a«alpha», 7«beta», 7a«alpha»)
Inchi:	InChI=1S/C10H14O2/c1-6-3-4-8-7(2)5-12-10(11)9(6)8/h5-6,8-9H,3-4H2,1-2H3
InchiKey:	ZDKZHVNKFOXMND-UHFFFAOYSA-N
Formula:	C10H14O2
SMILES:	CC1=COC(=O)C2C(C)CCC12
Mol. weight [g/mol]:	166.22
CAS:	21651-53-6

Physical Properties

Property code	Value	Unit	Source
gf	-77.57	kJ/mol	Joback Method
hf	-366.34	kJ/mol	Joback Method
hfus	21.02	kJ/mol	Joback Method
hvap	47.60	kJ/mol	Joback Method
log10ws	-2.28		Crippen Method
logp	2.109		Crippen Method
mcvol	133.180	ml/mol	McGowan Method
pc	2989.32	kPa	Joback Method
rinpol	1289.00		NIST Webbook
tb	548.73	K	Joback Method
tc	780.29	K	Joback Method
tf	331.61	K	Joback Method
vc	0.498	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	339.65	J/mol×K	548.73	Joback Method
cpg	357.85	J/mol×K	587.32	Joback Method
cpg	375.01	J/mol×K	625.92	Joback Method
cpg	391.16	J/mol×K	664.51	Joback Method
cpg	406.31	J/mol×K	703.10	Joback Method
cpg	420.46	J/mol×K	741.70	Joback Method
cpg	433.65	J/mol×K	780.29	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C21651536&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	http://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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

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