Naringenin

Other names:	(-)-(2S)-Naringenin
	(-)-Naringenin
	(2S)-Naringenin
	(S)-2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-4-benzopyrone
	(S)-Naringenin
	2,3-Dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
	(naringenin)
	4',5,7-trihydroxyflavanone
	4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-, (2S)-
	4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-, (S)-
	5,7-Dihydroxy-2-(4-hydroxy-phenyl)-chroman-4-one
	Flavanone, 4',5,7-trihydroxy-
	NSC 11855
	NSC 34875
	Naringenine
	Naringetol
	Salipurol
	Salipurpol
Inchi:	InChI=1S/C15H12O5/c16-9-3-1-8(2-4-9)13-7-12(19)15-11(18)5-10(17)6-14(15)20-13/h1-
InchiKey:	FTVWIRXFELQLPI-UHFFFAOYSA-N
Formula:	C15H12O5
SMILES:	O=C1CC(c2ccc(O)cc2)Oc2cc(O)cc(O)c21
Mol. weight [g/mol]:	272.25
CAS:	480-41-1

Physical Properties

Property code	Value	Unit	Source
gf	-333.31	kJ/mol	Joback Method
hf	-626.33	kJ/mol	Joback Method
hfus	39.80	kJ/mol	Solubility of Flavonoids in Organic Solvents
hvap	102.08	kJ/mol	Joback Method
log10ws	-2.86		Crippen Method
logp	2.510		Crippen Method
mcvol	188.880	ml/mol	McGowan Method
pc	5228.24	kPa	Joback Method
tb	948.58	K	Joback Method
tc	1231.06	K	Joback Method

tf	768.54	K	Joback Method
vc	0.534	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	604.32	J/mol×K	948.58	Joback Method
cpg	619.14	J/mol×K	995.66	Joback Method
cpg	634.58	J/mol×K	1042.74	Joback Method
cpg	650.99	J/mol×K	1089.82	Joback Method
cpg	668.71	J/mol×K	1136.90	Joback Method
cpg	688.06	J/mol×K	1183.98	Joback Method
cpg	709.40	J/mol×K	1231.06	Joback Method

Sources

Volumetric Properties, Viscosity, and Refractive Indices of Different Naringenin Solutions at Several Temperatures:	https://www.doi.org/10.1021/acs.jced.7b00299
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Solubilities in Supercritical Carbon Dioxide of (2E,6E)-3,7,11-Trimethyldodeca-2,6,10-trien-1-ol (Farnesol) and (2S)-5,7-Dihydroxy-2-(4-hydroxyphenyl)chroman-4-one (Naringenin):	https://www.doi.org/10.1021/je900957v
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C480411&Units=SI
Solubilities of Naringin and Naringenin in Different Solvents and Dissociation Constants of Naringenin:	https://www.doi.org/10.1021/je501004g
Solubility of Flavonoids in Organic Solvents:	https://www.doi.org/10.1021/je7001094
Solubility of Naringenin in Ethanol and Water Mixtures:	https://www.doi.org/10.1021/je4000718

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume