Arabinose(D)

Inchi: InChI=1S/C5H10O5/c6-1-3(8)5(10)4(9)2-7/h1,3-5,7-10H,2H2/t3-,4-,5+/m0/s1
InchiKey: PYMYPHUHKUWMLA-VAYJURFESA-N
Formula: C5H10O5
SMILES: O=CC(O)C(O)C(O)CO
Mol. weight [g/mol]: 150.13
CAS: 28697-53-2

Physical Properties

Property code	Value	Unit	Source
gf	-662.90	kJ/mol	Joback Method
hf	-856.87	kJ/mol	Joback Method
hfus	16.78	kJ/mol	Joback Method
hvap	99.00	kJ/mol	Joback Method
log10ws	1.41		Crippen Method
logp	-2.740		Crippen Method
mcvol	106.360	ml/mol	McGowan Method
pc	6588.38	kPa	Joback Method
tb	729.86	K	Joback Method
tc	900.63	K	Joback Method
tf	386.39	K	Joback Method
vc	0.391	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	331.77	J/mol×K	900.63	Joback Method
cpg	327.65	J/mol×K	872.17	Joback Method
cpg	323.29	J/mol×K	843.71	Joback Method
cpg	318.67	J/mol×K	815.24	Joback Method
cpg	313.78	J/mol×K	786.78	Joback Method
cpg	308.60	J/mol×K	758.32	Joback Method
cpg	303.13	J/mol×K	729.86	Joback Method
cps	184.00	J/mol×K	303.00	NIST Webbook
dvisc	0.0000024	Pa×s	672.62	Joback Method

dvisc	0.0000073	Pa×s	615.37	Joback Method
dvisc	0.0000276	Pa×s	558.12	Joback Method
dvisc	0.0001411	Pa×s	500.88	Joback Method
dvisc	0.0010983	Pa×s	443.64	Joback Method
dvisc	0.0157042	Pa×s	386.39	Joback Method
dvisc	0.0000010	Pa×s	729.86	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C28697532&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
cps:	Solid phase heat capacity
dvisc:	Dynamic viscosity
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

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