

2-Deoxy-D-glucose

Other names:	2 DG 2-Deoxy-D-arabino-hexopyranose 2-Deoxy-D-arabino-hexose 2-Deoxy-D-mannose 2-Deoxyglucose 2-Desoxy-D-glucose Ba 2758 D-2-Deoxyglucose D-Glucose, 2-deoxy- D-arabino-Hexopyranose, 2-deoxy- D-arabino-Hexose, 2-deoxy- Deoxyglucose Glucose, 2-deoxy- NSC 15193
Inchi:	InChI=1S/C6H12O5/c7-2-4-6(10)3(8)1-5(9)11-4/h3-10H,1-2H2
InchiKey:	PMMURAAUARKVCB-UHFFFAOYSA-N
Formula:	C6H12O5
SMILES:	OCC1OC(O)CC(O)C1O
Mol. weight [g/mol]:	164.16
CAS:	154-17-6

Physical Properties

Property code	Value	Unit	Source
gf	-632.44	kJ/mol	Joback Method
hf	-914.79	kJ/mol	Joback Method
hfus	30.67	kJ/mol	Joback Method
hvap	99.68	kJ/mol	Joback Method
log10ws	0.69		Crippen Method
logp	-2.192		Crippen Method
mvol	113.890	ml/mol	McGowan Method
pc	5661.74	kPa	Joback Method
tb	737.89	K	Joback Method
tc	914.27	K	Joback Method
tf	421.89	K	Joback Method
vc	0.399	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	370.40	J/molxK	737.89	Joback Method
cpg	413.53	J/molxK	914.27	Joback Method
cpg	407.58	J/molxK	884.87	Joback Method
cpg	401.13	J/molxK	855.47	Joback Method
cpg	394.19	J/molxK	826.08	Joback Method
cpg	386.76	J/molxK	796.68	Joback Method
cpg	378.83	J/molxK	767.29	Joback Method
cps	213.60	J/molxK	323.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	214.70	J/molxK	328.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	218.40	J/molxK	333.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	224.90	J/molxK	338.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	226.40	J/molxK	343.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	233.00	J/molxK	348.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides

cps	235.40	J/mol×K	353.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	189.60	J/mol×K	288.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	195.80	J/mol×K	293.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	200.20	J/mol×K	298.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	201.00	J/mol×K	303.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	204.50	J/mol×K	308.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	206.90	J/mol×K	313.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	209.00	J/mol×K	318.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides
cps	244.00	J/mol×K	358.15	Temperature dependence of the heat capacities in the solid state of 18 mono-, di-, and poly-saccharides

dvisc	0.0000017	Paxs	737.89	Joback Method
dvisc	0.0000036	Paxs	685.22	Joback Method
dvisc	0.0000088	Paxs	632.56	Joback Method
dvisc	0.0000254	Paxs	579.89	Joback Method
dvisc	0.0000904	Paxs	527.22	Joback Method
dvisc	0.0004256	Paxs	474.56	Joback Method
dvisc	0.0029512	Paxs	421.89	Joback Method

Sources

Modulation in physico-chemical characteristics of some polyhydroxy compounds depends on the temperature dependence of the heat capacities in the solid state of 18 carbohydrates and poly-saccharides: Joback Method

<https://www.doi.org/10.1016/j.fluid.2015.05.043>

Influence of Phosphate-Based Salts on Enthalpy of Dilution and Isentropic Compressibility Properties of Saccharides and Their Derivatives in Aqueous Solutions

<https://www.doi.org/10.1016/j.jct.2008.08.007>

Molecular Interactions of Saccharides and Their Derivatives with Thiamine Hydrochloride HCl Vitamins in Aqueous Solutions: Calorimetric, Viscometric, and NMR Spectroscopic Studies

https://en.wikipedia.org/wiki/Joback_method

<https://www.doi.org/10.1021/acs.jced.8b00681>

Investigations to explore interactions in (polyhydroxy solute + L-ascorbic acid + MgCl₂) solutions at different temperatures: Calorimetric and viscometric approach

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C154176&Units=SI>

<https://www.doi.org/10.1021/acs.jced.7b00937>

Phosphate-Based Inorganic Salts:

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

https://www.chemeo.com/doc/models/crippen_log10ws

<https://www.doi.org/10.1016/j.jct.2016.07.020>

<http://link.springer.com/article/10.1007/BF02311772>

<https://www.doi.org/10.1021/acs.jced.5b00845>

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
mccol:	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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