Cytidine

Other names:	1«beta»-D-Ribofuranosylcytosine 1«beta»-Ribofuranosylcytosine 1Â«betaÂ»-D-Ribofuranosylcytosine 1Â«betaÂ»-Ribofuranosylcytosine 2(1H)-Pyrimidinone, 4-amino-1-«beta»-D-ribofuranosyl- 2(1H)-Pyrimidinone, 4-amino-1-Â«betaÂ»-D-ribofuranosyl- 4-Amino-1«beta»-D-ribofuranosyl-2(1H)-pyrimidinone 4-Amino-1Â«betaÂ»-D-ribofuranosyl-2(1H)-pyrimidinone Cyd Cytosine riboside Cytosine, 1-«beta»-D-ribofuranosyl- Cytosine, 1-Â«betaÂ»-D-ribofuranosyl- NSC 20258 «beta»-D-Ribofuranoside, cytosine-1 Â«betaÂ»-D-Ribofuranoside, cytosine-1
Inchi:	InChI=1S/C9H13N3O5/c10-5-1-2-12(9(16)11-5)8-7(15)6(14)4(3-13)17-8/h1-2,4,6-8,13-15
InchiKey:	UHDGCWIWMRVCDJ-XVFCMESISA-N
Formula:	C9H13N3O5
SMILES:	Nc1ccn(C2OC(CO)C(O)C2O)c(=O)n1
Mol. weight [g/mol]:	243.22
CAS:	65-46-3

Physical Properties

Property code	Value	Unit	Source
affp	982.50	kJ/mol	NIST Webbook
basg	950.00	kJ/mol	NIST Webbook
log10ws	0.62		Crippen Method
logp	-2.563		Crippen Method
mcvol	162.340	ml/mol	McGowan Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

rhos	1530.00	kg/m3	298.15	Saturation molalities and standard molar enthalpies of solution of cytidine(cr), hypoxanthine(cr), thymidine(cr), thymine(cr), uridine(cr), and xanthine(cr) in H2O(l)

Sources

The partial molar volumes at T = (288.15 to 313.15) K, and the partial molar heat capacities and expansions at T = 298.15 K of cytidine, uridine, and adenosine in aqueous solution:	https://www.doi.org/10.1016/j.jct.2008.01.020
Volumetric interaction coefficients for some nucleosides in aqueous solution at 298.15 K:	https://www.doi.org/10.1016/j.jct.2012.12.014
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Volumetric properties of the nucleosides adenosine, cytidine, and uridine in aqueous solution at T = (288.15 to 318.15) K and p = (0.101 to 0.12) MPa:	https://www.doi.org/10.1016/j.jct.2012.12.028
Solvation behavior of some nucleic acid bases and nucleosides in aqueous and nucleoside in water and in aqueous guanidine hydrochloride solutions: Viscometric, calorimetric and spectroscopic approach:	https://www.doi.org/10.1016/j.jct.2015.11.029
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Partial Molar Isentropic and Isothermal Compressions of the Nucleosides Adenosine, Cytidine, and Uridine in Aqueous Solution at 298.15 K:	https://www.doi.org/10.1021/je101264r
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C65463&Units=SI
Volumetric studies on nucleic acid bases and nucleosides in aqueous guanidine hydrochloride solutions at T = (288.15 to 318.15) K and at atmospheric pressure:	https://www.doi.org/10.1016/j.jct.2014.10.015
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Saturation molalities and standard molar enthalpies of solution of cytidine(cr), hypoxanthine(cr), thymidine(cr), thymine(cr), uridine(cr), and xanthine(cr) in H2O(l):	https://www.doi.org/10.1016/j.jct.2004.04.005

Legend

affp:	Proton affinity
basg:	Gas basicity
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
rhos:	Solid Density