

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:	UHDGCWIWMRVCDFJ-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
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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 H ₂ O(l)
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Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C65463&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

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 adenine nucleosides and standard molar enthalpies of solution of Cytidine(cr), Uracil(cr), Adenosine(cr), Guanosine(cr), Thymidine(cr), Thymine(cr), Uridine(cr), and Xanthine(cr) in aqueous solution, and xanthine(cr) in H₂O(l). The nucleosides adenosine, cytidine, and Uridine studies concern acid bases and anhydrides in aqueous basic media by spectroscopic thermal Compressions of the Nucleosides adenine, guanine, cytosine, thymine, adenine, uridine, guanosine in water and aqueous guanidine hydrochloride solutions: Viscometric, calorimetric and spectroscopic approach:

<https://www.doi.org/10.1016/j.jct.2008.01.020>

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

<https://www.doi.org/10.1016/j.jct.2004.04.005>

<https://www.doi.org/10.1016/j.jct.2012.12.014>

<https://www.doi.org/10.1016/j.jct.2012.12.028>

<https://www.doi.org/10.1016/j.jct.2014.10.015>

<https://www.doi.org/10.1021/je101264r>

<https://www.doi.org/10.1016/j.jct.2015.11.029>

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

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

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<https://www.chemeo.com/cid/27-883-2/Cytidine.pdf>

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