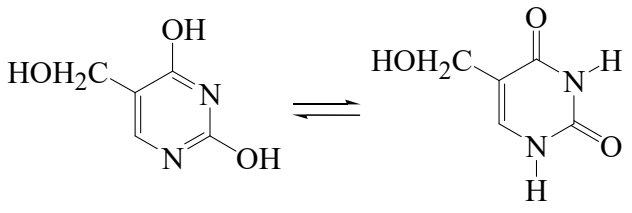
>>**Entry Name: 2,4-Dihydroxy-5-(hydroxymethyl)pyrimidine**
Synonym(s): 5-(Hydroxymethyl)-2,4(1*H*,3*H*)pyrimidinedione, 9CI. 5-(Hydroxymethyl)uracil, 8CI



CAS Registry Number: 4433-40-3

Molecular Formula: $C_5H_6N_2O_3$
Molecular Weight: 142.114
Accurate Mass: 142.037843
Percentage Composition: C 42.26%; H 4.26%; N 19.71%; O 33.77%
General Statement: Dioxo-form prob. predominates. Two monooxo tautomers also possible
Use/Importance: One of the major oxidation products of thymine, formed *in vivo* in animal and human DNA. Proposed biomaker for oxidative DNA damage and repair
Physical Description: Cryst. (Me_2CO/H_2O)
Melting Point: Mp 260-300°
Other Data: Mp >=300°
Hazard & Toxicity: Mutagenic in *Salmonella typhimurium*

References:

Cline, R.E. *et al.*, *J.A.C.S.*, 1959, **81**, 2521-2527, *(synth)*
Ellis, P.D. *et al.*, *J.A.C.S.*, 1973, **95**, 4398-4403, *(cmr)*
Bartels-Keith, J.R. *et al.*, *J.O.C.*, 1985, **50**, 980-987
Shirname-More, L. *et al.*, *Mutat. Res.*, 1987, **178**, 177-186, *(biochem)*
Bianchini, F. *et al.*, *Biomarkers*, 1996, **1**, 178-184, *(biochem, hplc)*