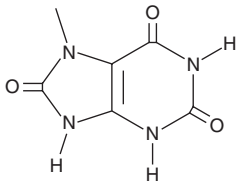
PRODUCT INFORMATION

7-Methyluric Acid

Item No. 21067

CAS Registry No.: 612-37-3
Formal Name: 7,9-dihydro-7-methyl-1H-purine-2,6,8(3H)-trione
Synonym: N^7-Methyluric Acid
MF: $C_6H_6N_4O_3$
FW: 182.1
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 287 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

7-Methyluric acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-methyluric acid in the solvent of choice. 7-Methyluric acid is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 7-methyluric acid in these solvents is approximately 20 and 5 mg/ml, respectively.

7-Methyluric acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 7-methyluric acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 7-Methyluric acid has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

7-Methyluric acid is a methylated purine and uric acid (Item No. 16219) derivative. It is a metabolite of caffeine (Item No. 14118) that can be detected in urine.[1,2] 7-Methyluric acid can also be detected in uric acid stones.[3]

References

1. Blanchard, J., Sawers, S.J.A., Jonkman, J.H.G., *et al.* Comparison of the urinary metabolite profile of caffeine in young and elderly males. *Br. J. Pharmacol.* **19(2)**, 225-232 (1985).
2. Ryback, M.E., Sternberg, M.R., Pao, C.I., *et al.* Urine excretion of caffeine and select caffeine metabolites is common in the U.S. population and associated with caffeine intake. *J. Nutr.* **145(4)**, 766-774 (2015).
3. Safranow, K. and Machoy, Z. Methylated purines in urinary stones. *Clin. Chem.* **51(8)**, 1493-1498 (2005).

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