3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Uric acid sodium salt

Product Number **U 2875**
Store at Room Temperature

Product Description

Molecular Formula: $C_5H_3N_4O_3Na$
Molecular Weight: 190.1
CAS Number: 1198-77-2
λ_{max}: 293 nm[1]
Extinction Coefficient: E^{mM} = 12.2 (pH 7.0)[1]
Synonym: sodium urate

Sodium urate is the sodium salt of uric acid. *In vivo*, sodium urate crystals have been found deposited in joints and in the kidney.[2,3] Sodium urate has been shown to precipitate calcium oxalate from urine.[4] The ability of sodium urate to bind iron(III) and its potential role in inflammation has been studied.[5]

Sodium urate has been used to reverse the inhibitory effects of reactive oxygen and nitrogen metabolites on gelatinase A activity.[6] An investigation of IgG molecules isolated from rabbit serum after injection with sodium urate crystals has discussed the formation of antibody populations which bear in their binding sites an imprint of the crystal surface structure.[7]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in 1 M NaOH (25 mg/ml), yielding a clear to very slightly hazy, faint yellow solution.

References

1. Kalckar, H., Differential spectrophotometry of purine compounds by means of specific enzymes. J. Biol. Chem., **167**, 429 (1947).
2. Biochemistry, 3rd ed., Stryer, L., W. H. Freeman (New York, NY: 1988), pp. 618-620.
3. Textbook of Biochemistry with Clinical Correlations, Devlin, T. M., ed., Wiley-Liss (New York, NY: 1992), pp. 544-546.
4. Grover, P. K., et al., Dissolved urate salts out calcium oxalate in undiluted human urine *in vitro*. Implications for calcium oxalate stone genesis. Chem. Biol., **10(3)**, 271-278 (2003).
5. Ghio, A. J., et al., Complexation of iron cation by sodium urate crystals and gouty inflammation. Arch. Biochem. Biophys., **313(2)**, 215-221 (1994).
6. Owens, M. W., et al., Effects of reactive metabolites of oxygen and nitrogen on gelatinase A activity. Am. J. Physiol., **273(2 Pt 1)**, L445-450 (1997).
7. Kam, M., et al., Specificity in the recognition of crystals by antibodies. J. Mol. Recognit., **7(4)**, 257-264 (1994).

GCY/RXR 7/03