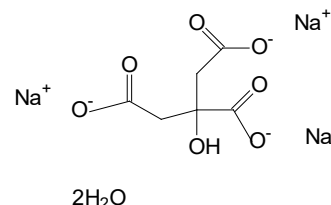


71402 Sodium citrate tribasic dehydrate (Citric acid trisodium salt dehydrate, Trisodium citrate dihydrate)

CAS number: 6132-04-3

Product Description:

Appearance: Clear colorless to very faint yellow liquid
Molecular formula: $C_6H_5Na_3O_7 \cdot 2 H_2O$
Formula weight: 294.10 g/mol
Solubility: 0.1 M in H_2O , 20°C, complete, colorless
pH: 7.5-9.0 (0.1 M in H_2O , 25°C)
pK_a: 3.138, 4.76, 6.40¹
Melting point: 150°C (anhydrous)²
Density: 1.857²



71402 BioUltra for molecular biology

The products designated as "BioUltra" grade and are suitable for different applications like purification, precipitation, crystallisation and other applications which require tight control of elemental content. Trace elemental analyses have been performed. The molecular biology quality is also tested for absence of nucleases.

The Certificate of Analysis provides lot-specific results.

Applications:

Citric acid is a key metabolic intermediate. Citrate is the starting point of the tricarboxylic acid cycle. Its concentration also coordinates several other metabolic pathways. Citric acid can form complexes with various cations, particularly with iron and calcium. In animals, citric acid improves the utilization of nutritional calcium. Citric acid is produced commercially by fermentation of carbohydrates derived from corn starch and from beet molasses.³ Sodium citrate has been used as an anticoagulant for the collection of blood.⁴ It is slightly dejectory.² Used in the photography as a supplement in galvanic solutions, as buffer in diverse application (see also the crystallisation kit) and for marking tensides.²

Preparation Instructions:

One gram of sodium citrate dissolves in 1.3 ml of water at 25 °C and in 0.6 ml of boiling water.⁵ Bad soluble in alcohol.² The pH of a 0.1 N solution is approximately 8.⁵

Storage/Stability:

The use of citrate buffers (pH 3-5) in numerous applications indicates excellent stability at room temperature. Dilute solutions of citric acid (non-sterile) may ferment if left at room temperature. Non-sterile solutions should be stable for months stored at 2-8 °C.



References:

1. The Merck Index, 12th ed., Entry# 2387.
2. Römpp Chemie Lexikon, Thieme Verlag (1995)
3. Concise Encyclopedia Biochemistry, 2nd ed., Scott, T., and Eagleson, M., Walter de Gruyter (New York, NY: 1988) p. 117.
4. Ramsey, D.M., Anticoagulant J. Clin. Pathol., 30, 766 (1977).
5. The Merck Index, 12th ed., Entry# 8746.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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