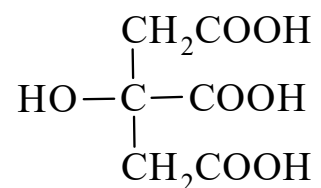




>>Entry Name: Citric acid

ENTRY UNDER REVIEW

Synonym(s): 2-Hydroxy-1,2,3-propanetricarboxylic acid, 9CI. 2-Hydroxytricarballic acid. FEMA 2306



CAS Registry Number: 77-92-9

Related CAS Registry Numbers(s): 126-44-3 866-83-1 3012-65-5 3458-72-8 4450-94-6 5949-29-1 6100-05-6 6132-04-3 7693-13-2 10402-15-0 80238-46-6 80300-24-9 101996-63-8

Molecular Formula: C₆H₈O₇

Molecular Weight: 192.125

Accurate Mass: 192.027005

Percentage Composition: C 37.51%; H 4.20%; O 58.29%

Biological Source: Occurs in the free state in lemons, currants, beetroot etc. and the seeds and juices of many flowers and plants

Use/Importance: Constit. of fruit drinks, pharmaceutical syrups, for adjusting pH of foods etc. Component of anticoagulant citrate solns. Used as masking agent for many polyvalent metals and as a component of buffers. Key intermed. in the Krebs citric acid cycle, the route by which fundamental biochemicals are biosynthesised. Cross-linking agent for cellulosic fibres. Flavouring ingredient

Physical Description: Cryst. + 1H₂O (H₂O), losing H₂O at 70-75°

Melting Point: Mp 135° (monohydrate). Mp 153° (anhydrous)

Solubility: V. sol. H₂O, EtOH; mod. sol. Et₂O

pKa Value: pK_{a1} 3.13; pK_{a2} 4.78; pK_{a3} 6.43 (25°)

Hazard & Toxicity: Eye and skin irritant. LD₅₀ (rat, orl) 6730 mg/kg

Aldrich: W23061-8

Fluka: 27488

Sigma: C1784

Supelco: R47-4175

>>Derivative: Li salt

see Lithium citrate, [HRG00-P](#)

>>Derivative: Mono-Na salt

Synonym(s): Sodium dihydrogen citrate. Bicitra

CAS Registry Number: 18996-35-5

Extra CAS Registry Numbers(s): 994-36-5

Physical Description: Hygroscopic solid

Melting Point: Mp 212°

Hazard & Toxicity: LD₅₀ (rat, ipr) 1348 mg/kg

Aldrich: 23426-5

Fluka: 71497

>>Derivative: Di-Na salt

Synonym(s): Disodium hydrogen citrate. Alkacitron

CAS Registry Number: 144-33-2

Extra CAS Registry Numbers(s): 994-36-5 6132-05-4

Use/Importance: Anticoagulant used in storage of blood

Physical Description: Solid + 1½H₂O

Melting Point: Mp 149 dec.°