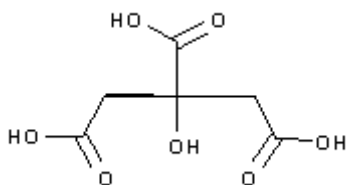
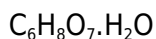


**PRODUCT CODE: 141018****Citric Acid 1-hydrate (USP, BP, Ph. Eur., JP) pure, pharma grade**

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M. = 210,14

CAS [5949-29-1]

EINECS 201-069-1

TARIC 2918 14 00 00

**SYNONYMS:** 2-Hydroxy-1,2,3-Propanetricarboxylic Acid**PHYSICAL DATA:** Small crystals, in water at 20°C D 1,542 • M.P.: 135 °C • pH(50g/l)1,8 •**BIBLIOGRAPHY:** Merck Index **13**, 2.350 Safety **2**, **892 D** • Römpp **8**, **879** • Beilstein **3**, **556 IV**, **1272** • BRN 4018641 • ACS **XI** • ISO 6353/2-1983 R - 8, 10 • BP.**2018** • USP **41** • Ph. Eur. **8.0** (2014) **9.0** (2017) • F.C.C **11** • BOE **243**(8-10-2009) • Regulation (EU) n° 231/2012 •**HAZARDOUS:** RTECS: GE 7810000 • LD50 ipr rat 375 mg/kg

H: H319 •

P: P264 • P280 • P305+P351+P338 • P337+P313 •

**SPECIFICATIONS:**Assay (Acidim.) calc. a.a.s.  
Identity :

99,5-100,5%

Identity according to Pharmacopoeias: passes test

**Maximum limit of impurities**

Appearance of solution	passes test
Insoluble matter in H <sub>2</sub> O	0,01 %
Darkened substances by H <sub>2</sub> SO <sub>4</sub>	passes test
Residue on ignition (as SO <sub>4</sub> )	0,05 %
Chloride (Cl)	0,005%
Sulfate (SO <sub>4</sub> )	0,01%
Colour of solution	passes test
Residual solvents (Ph.Eur/USP)	passes test
Oxalate (C <sub>2</sub> O <sub>4</sub> )	0,035%
Water (H <sub>2</sub> O)	7,5-8,8 %
Heavy metals (as Pb)	0,001%

Ba	passes test
Ca	0,02 %
Mg	0,005 %

Elemental impurities (ICH Q3D):

Class 1

Cd	0,5 ppm
Pb	0,5 ppm
As	1 ppm
Hg	1,5 ppm

Class 2A

Co	5 ppm
V	10 ppm
Ni	20 ppm

Class 2B

Tl	5 ppm
Au	10 ppm
Pd	10 ppm
Ir	10 ppm
Os	10 ppm
Rh	10 ppm
Ru	10 ppm
Se	15 ppm
Ag	15 ppm
Pt	10 ppm

Class 3

Li	55 ppm
Sb	120 ppm
Ba	140 ppm
Mo	25 ppm
Cu	250 ppm
Sn	600 ppm
Cr	25 ppm