

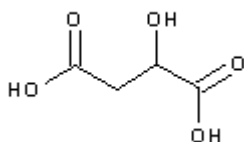


PRODUCT CODE: 142051

DL-Malic Acid (USP-NF) pure, pharma grade

$C_4H_6O_5$

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M.= 134,09

CAS [617-48-1]

EINECS 210-514-9

TARIC 2918 19 98 90

SYNONYMS: DL-Hydroxybutanedioic Acid, DL-Hydroxysuccinic Acid

PHYSICAL DATA: Small crystals, White, Soluble in water 1.440 g/l at 20 °C Thermal decom. 150 °C • D 20/4 1,60 •
M.P.: 130 °C • pH(10 g/l sol.)2,3 •

BIBLIOGRAPHY: Merck Index **12**, 5.747 13, 5.730 Safety **2** , **2187 D** • Beilstein **3** , **435 IV** , **1124** • BRN 1723539
• BP.2018 • USP -NF **36** • Ph. Eur. **8.0** (2014) 1966 • F.C.C **10 11** • BOE **243**(8-10-2009) • Regulation (EU) n°
231/2012 •

HAZARDOUS: RTECS: ON 7175000 •



H: H319 •

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

SPECIFICATIONS:

Assay (Acidim.)

99,0-100,5%

Identity :	
Identity according to Pharmacopoeias:	passes test
Melting range	128-131°C

Maximum limit of impurities

Insoluble matter in H ₂ O	0,1 %
Residue on ignition (as SO ₄)	0,1 %
Chloride (Cl)	0,01%
Sulfate (SO ₄)	0,02%
Residual solvents (Ph.Eur/USP)	passes test
Maleic Acid	0,05%
Fumaric Acid	1,0%
Heavy metals (as Pb)	0,002%

Residual metals ICP: (according to EMEA/CHMP/SWP/4446/2000)

Class 1A (Pt, Pd)	10 ppm
Class 1B (Ir, Rh, Ru, Os)	10 ppm
Class 1C (Mo, Ni, Cr, V)	25 ppm
Class 2 (Cu, Mn)	250 ppm
Class 3 (Fe, Zn)	1.300 ppm

As	0,0001 %
Cd	0,00005 %
Hg	0,00015 %
Pb	0,00005 %