

PRODUCT DATA SHEET

DL-Alanine

CAS No. [302-72-7]

$C_3H_7NO_2$

M.W.: 89.09

Description: DL-Alanine occurs as a colorless to white crystalline powder having a sweet taste.

Content: DL-Alanine, when calculated on the dried basis, contains 98.5 – 102.0% of DL-Alanine ($C_3H_7NO_2$)

Identification: (1) To 5ml of DL-Alanine solution (1+1,000) add 1ml of ninhydrin solution (1+1,000) and heat for 3 minutes. A purple color develops.
(2) Dissolve 0.2g of DL-Alanine in 10ml of diluted sulfuric acid (1+20) add 0.1g of potassium permanganate, and boil. An odor of acetaldehyde is evolved.

Purity:

(1) Clarity and color of solution	:	colorless and clear (1.0g, Water 10ml)
(2) pH	:	5.5 – 7.0 (1.0g, Water 20ml)
(3) Chloride	:	Not more than 0.021% as Cl (0.5g, control solution 0.01 N hydrochloric acid (0.30ml))
(4) Heavy metals	:	Not more than 20 μ g/g as Pb (1.0g, Method 1, control solution Lead Standard Solution 2.0ml)
(5) Arsenic	:	Not more than 4.0 μ g/g (as As_2O_3) (0.5g, Method1, Apparatus B)
Loss on drying	:	Not more than 0.30% (105° , 3 hours)
Residue on ignition	:	Not more than 0.20%
Assay	:	Weigh accurately about 0.2g of DL- Add 50ml of acetic acid, and titrate with 0.1 N perchloric acid. The end point is usually confirmed by using a potentiometer. When an indicator (1ml of crystal violet-acetic acid TS) is used, titrate until the color of the solution changes from purple through blue to green. Perform a blank test in the same manner, make any necessary correction, and calculate on the dried basis. 1ml of 0.1 N perchloric acid = 8.909 mg of $C_3H_7NO_2$