



>>Entry Name: 2-Cyanopropanoic acid, 9CI

Synonym(s): Methylmalonic mononitrile

CAS Registry Number: 632-07-5

$\text{H}_3\text{CCH}(\text{CN})\text{COOH}$

Molecular Formula: $\text{C}_4\text{H}_5\text{NO}_2$

Molecular Weight: 99.089

Accurate Mass: 99.032029

Percentage Composition: C 48.49%; H 5.09%; N 14.14%; O 32.29%

>>Variant: ($\pm$)-form

Molecular Formula: $\text{C}_4\text{H}_5\text{NO}_2$

Molecular Weight: 99.089

Accurate Mass: 99.032029

Percentage Composition: C 48.49%; H 5.09%; N 14.14%; O 32.29%

Melting Point: Mp 35°

Boiling Point: Bp₁₁ 142.5° (Bp_{10.5} 93.4°)

pKa Value: pK_a 2.37

Other Data: Strongly hygroscopic

>>Derivative: Et ester

Synonym(s): Methylmalonic ethyl ester-nitrile

CAS Registry Number: 1572-99-2

Molecular Formula: $\text{C}_6\text{H}_9\text{NO}_2$

Molecular Weight: 127.143

Accurate Mass: 127.063329

Percentage Composition: C 56.68%; H 7.13%; N 11.02%; O 25.17%

Boiling Point: Bp 192-193°. Bp₂₀ 89-90°

>>Derivative: Amide

Synonym(s): Methylmalonic amide-nitrile

CAS Registry Number: 71565-78-1

Molecular Formula: $\text{C}_4\text{H}_6\text{N}_2\text{O}$

Molecular Weight: 98.104

Accurate Mass: 98.048013

Percentage Composition: C 48.97%; H 6.16%; N 28.55%; O 16.31%

Melting Point: Mp 105° (81°)

Boiling Point: Bp 267° dec.

References:

Beccari, L., *Chem. Zentralbl.*, 1903, **2**, 713, (*synth*)

Hessler, J.C., *J.A.C.S.*, 1913, **35**, 990, (*synth*)

Nishikawa, T., *CA*, 1935, **29**, 7947, (*synth*)

de Hoffmann, C. *et al.*, *Bull. Soc. Chim. Belg.*, 1936, **45**, 565; *CA*, **31**, 919, (*synth*)

Wideqvist, S., *CA*, 1947, **41**, 2693, (*synth*)