



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

ENTRY UNDER REVIEW

Synonym(s): 2-Oxoglutaric acid. α -Ketoglutaric acid

CAS Registry Number: 328-50-7

Related CAS Registry Numbers(s): 305-72-6 997-43-3

HOOCCH₂CH₂COCOOH

Molecular Formula: C₅H₆O₅

Molecular Weight: 146.099

Accurate Mass: 146.021525

Percentage Composition: C 41.11%; H 4.14%; O 54.76%

Biological Source: Widespread in microorganisms, also isol. from higher plants

Use/Importance: Intermediate in amino acid synth., converted to L-glutamic acid by *Aeromonas* spp. Reagent for cleavage of 2,4-dinitrophenylhydrazones of volatile carbonyl compds. by exchange reaction

Physical Description: Cryst. (Me₂CO/C₆H₆)

Melting Point: Mp 115°

Aldrich: K160-0

Fluka: 75890

Sigma: K1128

>>Derivative: Imidazole salt

Synonym(s): Imidazole ketoglutarate. Retencl

CAS Registry Number: 67708-20-7

Use/Importance: Used in the treatment of bone demineralisation and other calcium metabolism disorders

>>Derivative: Oxime

CAS Registry Number: 2211-15-6

Molecular Formula: C₅H₇NO₅

Molecular Weight: 161.114

Accurate Mass: 161.032424

Percentage Composition: C 37.27%; H 4.38%; N 8.69%; O 49.65%

Physical Description: Prisms (H₂O)

Melting Point: Mp 152 dec.°

>>Derivative: Semicarbazone

CAS Registry Number: 2704-31-6

Physical Description: Cryst. (H₂O)

Melting Point: Mp 220°

>>Derivative: 2,4-Dinitrophenylhydrazone

CAS Registry Number: 1237-47-4

Melting Point: Mp 213 dec.°

>>Derivative: Di-Me ester

CAS Registry Number: 13192-04-6

Molecular Formula: C₇H₁₀O₅

Molecular Weight: 174.153

Accurate Mass: 174.052825

Percentage Composition: C 48.28%; H 5.79%; O 45.93%

Melting Point: Mp 129-131° (as 2,4-dinitrophenylhydrazone)

Boiling Point: Bp_{0.4} 90-95°