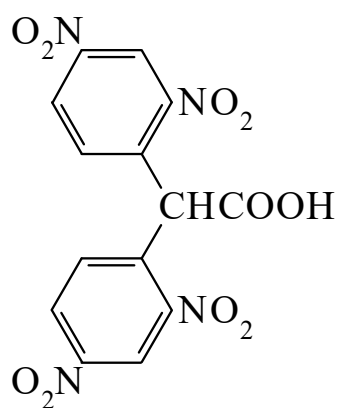




>>Entry Name: Bis(2,4-dinitrophenyl)acetic acid

Synonym(s): α -(2,4-Dinitrophenyl)-2,4-dinitrobenzeneacetic acid, 9CI



Molecular Formula: C₁₄H₈N₄O₁₀

Molecular Weight: 392.238

Accurate Mass: 392.024046

Percentage Composition: C 42.87%; H 2.06%; N 14.28%; O 40.79%

>>Derivative: Me ester

Molecular Formula: C₁₅H₁₀N₄O₁₀

Molecular Weight: 406.265

Accurate Mass: 406.039696

Percentage Composition: C 44.35%; H 2.48%; N 13.79%; O 39.38%

Physical Description: Cryst. (C₆H₆/MeOH)

Melting Point: Mp 162-163°

>>Derivative: Et ester

Synonym(s): Ethyl bis(2,4-dinitrophenyl) acetate

CAS Registry Number: 5833-18-1

Molecular Formula: C₁₆H₁₂N₄O₁₀

Molecular Weight: 420.292

Accurate Mass: 420.055346

Percentage Composition: C 45.72%; H 2.88%; N 13.33%; O 38.07%

Use/Importance: Acid-base indicator (pH range: 7.5-9.1; colour change: colourless → deep blue). Used as satd. soln. in Me₂CO/EtOH (1:1)

Physical Description: Pale yellow cryst. (C₆H₆ or EtOH)

Melting Point: Mp 155-156°

Solubility: Sol. MeOH, EtOH, Me₂CO

References:

Werner, A., *Ber.*, 1906, **39**, 1278, (*synth*)

Fehnel, E.A. *et al.*, *Ind. Eng. Chem., Anal. Ed.*, 1944, **16**, 53

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Bishop, E., *Indicators*, Oxford, Pergamon, 1972