



>>Entry Name: (4-Nitrophenyl)hydrazine, 9Cl

CAS Registry Number: 100-16-3

Molecular Formula: C₆H₇N₃O₂

Molecular Weight: 153.14

Accurate Mass: 153.053827

Percentage Composition: C 47.06%; H 4.61%; N 27.44%; O 20.90%

Use/Importance: Reagent for the detn. of carbonyl compds. Used as 0.3% soln. in EtOH as acid-base indicator (pH range: 2.5-3.0; colour change: colourless → yellow)

Physical Description: Orange-red leaflets or needles (EtOH)

Melting Point: Mp 157°

Solubility: Sol. Et₂O, CHCl₃; mod. sol. EtOH

pKa Value: pK_{a1} 2.7

Hazard & Toxicity: Irritant

Aldrich: 11468-5

Fluka: 73700

Sigma: N8880

>>Derivative: Hydrochloride

CAS Registry Number: 636-99-7

Extra CAS Registry Numbers(s): 56413-74-2

Melting Point: Mp 196-197°. Mp 212°

>>Derivative: Picrate

Physical Description: Red needles (H₂O)

Melting Point: Mp 119-120°

>>Derivative: N²-Ac

Synonym(s): Acetic acid 2-(4-nitrophenyl)hydrazide, 9Cl. 1-Acetyl-2-(4-nitrophenyl)hydrazine

CAS Registry Number: 2719-13-3

Molecular Formula: C₈H₉N₃O₃

Molecular Weight: 195.177

Accurate Mass: 195.064392

Percentage Composition: C 49.23%; H 4.65%; N 21.53%; O 24.59%

Use/Importance: Acid-base indicator (pH range 10.0-11.6: colour change orange → red)

Rare Chemicals Library: S38892-0

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **2**, 703B, (*nmr*)

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 1343D, (*ir*)

Bamberger, E. *et al.*, *Ber.*, 1896, **29**, 1834, (*synth*)

Kindlmann, L., *CA*, 1939, **33**, 4211, (*synth*)

Skripkina, V.T. *et al.*, *CA*, 1966, **65**, 7081, (*synth*)

Rappoport, Z. *et al.*, *J.C.S.(B)*, 1968, 277, (*uv*)

Benoit, F. *et al.*, *Can. J. Chem.*, 1969, **47**, 3611, (*ms*)

Exner, O. *et al.*, *Coll. Czech. Chem. Comm.*, 1972, **73**, 2156, (*ir*)

Bishop, E., *Indicators*, Pergamon, Oxford, 1972, (*use*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, NIR000

Luxon, S.G., *Hazards in the Chemical Laboratory*, 5th edn., Royal Society of Chemistry, 1992, 919