



>>Entry Name: ***N*-Hydroxyoctanamide**, 9CI

Synonym(s): Octanohydroxamic acid. Caprylohydroxamic acid

CAS Registry Number: 7377-03-9

$\text{H}_3\text{C}(\text{CH}_2)_6\text{CONHOH}$

Molecular Formula: $\text{C}_8\text{H}_{17}\text{NO}_2$

Molecular Weight: 159.228

Accurate Mass: 159.125929

Percentage Composition: C 60.35%; H 10.76%; N 8.80%; O 20.10%

Use/Importance: Used as an EtOH soln. for photometric detn. of V(*V*) (λ_{max} 450 nm)

Physical Description: Cryst.

Melting Point: Mp 78.5-79°

>>Derivative: *N*-Ph

Synonym(s): *N*-Phenyl octanohydroxamic acid. *N*-Hydroxy-*N*-phenyloctanamide, 9CI

CAS Registry Number: 25310-14-9

Molecular Formula: $\text{C}_{14}\text{H}_{21}\text{NO}_2$

Molecular Weight: 235.325

Accurate Mass: 235.157229

Percentage Composition: C 71.46%; H 8.99%; N 5.95%; O 13.60%

Use/Importance: Used as 0.1mM soln. CCl_4 for extraction separation of Co, Ni, Zn, Pb, V(*V*) (λ_{max} 510 nm, ϵ 4000, 4M HCl), lanthanides

Physical Description: Cryst. (Et_2O /hexane)

Melting Point: Mp 64.5-65.5°

Solubility: Sol. CCl_4 , CHCl_3

>>Derivative: *N*-(4-Methylphenyl)

Synonym(s): *N*-*p*-Tolyloctanohydroxamic acid. *N*-Hydroxy-*N*-(4-methylphenyl)octanamide

CAS Registry Number: 25310-15-0

Molecular Formula: $\text{C}_{15}\text{H}_{23}\text{NO}_2$

Molecular Weight: 249.352

Accurate Mass: 249.172879

Percentage Composition: C 72.25%; H 9.30%; N 5.62%; O 12.83%

Use/Importance: Used for extraction-photometric detn. of V(*V*) (λ_{max} 510 nm, ϵ 4200, 4M HCl)

Physical Description: Cryst.

Solubility: Sol. CHCl_3 , C_6H_6

References:

- Inoue, Y. *et al.*, *Nippon Kagaku Kaishi*, 1940, **16**, 504; 510; *CA*, 1941, **35**, 731, (*synth*)
Bass, V.C. *et al.*, *Talanta*, 1966, **13**, 735, (*detn, V*)
Gupta, V.K. *et al.*, *J. Indian Chem. Soc.*, 1969, **46**, 831
Agrawal, Y.K. *et al.*, *J. Chem. Eng. Data*, 1971, **16**, 495, (*deriv, synth*)
Gupta, V.K. *et al.*, *Anal. Chim. Acta*, 1973, **66**, 39, (*detn, V*)
Sosnovsky, G. *et al.*, *Synthesis*, 1980, 654, (*synth, ir, nmr*)
Haraguchi, K. *et al.*, *Anal. Sci.*, 1989, **5**, 735; 1990, **6**, 877, (*deriv, use*)
Ruiqin, W. *et al.*, *J.A.C.S.*, 1989, **111**, 114, (*N-14 nmr*)