



>>Entry Name: 1-Isothiocyanatobutane, 9CI

ENTRY UNDER REVIEW

Synonym(s): Butyl isothiocyanate, 8CI. Butyl mustard oil

CAS Registry Number: 592-82-5

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

Molecular Formula: $\text{C}_5\text{H}_9\text{NS}$

Molecular Weight: 115.199

Accurate Mass: 115.045569

Percentage Composition: C 52.13%; H 7.87%; N 12.16%; S 27.84%

Biological Source: Volatile constituent of cabbage and other crucifers arising from enzymic hydrolysis of Butyl glucosinolate [LBB59-Y](#)

Use/Importance: Shows fungicidal and insecticidal activity

Physical Description: Liq.

Boiling Point: Bp 167°. Bp₉ 58-59°

Refractive Index: n_D^{20} 1.4980

Hazard & Toxicity: Irritant

Aldrich: 25379-0

Fluka: 20140

References:

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **1**, 1411A, (*nmr*)

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 874C, (*ir*)

Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 827B, (*ir*)

Schmidt, E. *et al.*, *Annalen*, 1954, **585**, 230, (*synth*)

Jensen, K.A. *et al.*, *Acta Chem. Scand.*, 1966, **20**, 2107, (*ms*)

Kessler, H. *et al.*, *Chem. Ber.*, 1978, **111**, 2947, (*cmr*)

Gifford, M. *et al.*, *J.C.S. Perkin 2*, 1985, 157, (*pmr*, *cmr*, *N-15 nmr*)

Olejniczak, B. *et al.*, *Synthesis*, 1989, 300, (*synth*)

Yamamoto, T. *et al.*, *Org. Prep. Proced. Int.*, 1994, **26**, 555, (*synth*, *pmr*)

Sax, N.I., *Dangerous Properties of Industrial Materials, 5th edn.*, Van Nostrand Reinhold, 1979, 448