



>>Entry Name: **1,1,1-Trifluoroethane**

Synonym(s): Methylfluoroform. Fluorocarbon 143a. CFC 143a

CAS Registry Number: 420-46-2

F_3CCH_3

Molecular Formula: $\text{C}_2\text{H}_3\text{F}_3$

Molecular Weight: 84.041

Accurate Mass: 84.018684

Percentage Composition: C 28.58%; H 3.60%; F 67.82%

Use/Importance: Anaesthetic

Physical Description: Gas

Melting Point: Mp -111.3°

Boiling Point: Bp -47°

Density: d_4^{25} 1.176

Hazard & Toxicity: Flammable

References:

Henne, A.L. *et al.*, *J.A.C.S.*, 1936, **58**, 889, (*synth*)

McBee, E.T. *et al.*, *Ind. Eng. Chem.*, 1947, **39**, 409, (*props, synth*)

Whalley, W.B., *J. Soc. Chem. Ind., London*, 1947, **66**, 427, (*synth*)

Thompson, H.W. *et al.*, *J.C.S.*, 1948, 1428, (*ir*)

Mohler, F.L. *et al.*, *J. Chem. Phys.*, 1954, **22**, 394, (*ms*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **10**, 857; **11**, 65

Buerger, H. *et al.*, *Spectrochim. Acta A*, 1980, **36**, 7, (*ir, Raman, pmr*)

Eujen, R. *et al.*, *J. Fluorine Chem.*, 1983, **22**, 263, (*F-19 nmr*)