

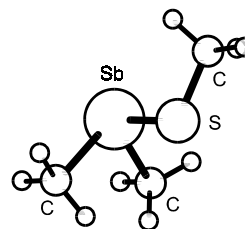
1418
ED

C₃H₉SSb

Dimethyl(methylthio)stibine
Dimethyl(methylthio)stibane

essentially C_s (*syn*)
C_s (*anti*) assumed
H₃C–S–Sb(CH₃)₂

r_a	Å ^{a)}	θ_a	deg ^{a)}
Sb–S	2.414(8)	C–Sb–S	98(1)
Sb–C	2.129(8)	Sb–S–C	101(2)
S–C	1.806(7)	Sb–C–H	99(3)
C–H (mean)	1.119(4)	S–C–H	104(9)
		C–Sb–C	89(2)
		ϕ (<i>syn</i>) ^{b)}	17(10)
		ϕ (<i>anti</i>) ^{b)}	180 ^{c)}



syn

It was assumed that the vapor contained a mixture of *syn* and *anti* conformers differing only in the value of the dihedral angle ϕ . The mole fraction of the *syn* conformer was found to be 79(11)%. Local C_{3v} symmetry for SbCH₃ and SCH₃ groups and local C_s symmetry for SSb(CH₃)₂ fragment were assumed. The torsion angles of the methyl groups were fixed in such a way that one C–H bond in each group was *anti* relative to the S–Sb bond. The nozzle was 20...25 °C.

^{a)} Twice the estimated standard errors including the scale error.

^{b)} Dihedral angle lp–Sb–S–C; lp is the lone pair at the Sb atom; $\phi = 0^\circ$ for the eclipsed position.

^{c)} Assumed.

Haaland, A., Verne, H.P., Volden, H.V., Breunig, H.J., Gülec, S.: Z. Naturforsch. **48b** (1993) 1065.