

Structure Data of Free Polyatomic Molecules

 153
ED

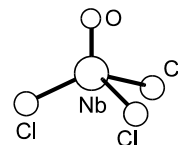
 Cl_3NbO
Trichloro(oxo)niobium(V)
Niobium(V) trichloride oxide

 C_{3v} assumed
 NbOCl_3

r_g	\AA^a
Nb=O	1.694(6)
Nb–Cl	2.289(5)

r_α	\AA^a
Nb=O	1.682(6)
Nb–Cl	2.276(5)

θ_α	deg ^{a)}
O=Nb–Cl	107.5(5)
Cl–Nb–Cl	111.3(4)



NbOCl_3 and HCl molecules were detected in the vapor over $\text{NbCl}_{2.72} \cdot n\text{H}_2\text{O}$ by a combined analysis of ED and mass spectrometric data. According to the ED data, the amounts of NbOCl_3 and HCl were 81 and 19 mol%, respectively. The temperature of the measurements was 470(7) °C.

^{a)} 2.5 times the estimated standard errors including a systematic error.

Giricheva, N.I., Girichev, G.V.: J. Mol. Struct. **484** (1999) 1.

See also: Belova, I.N., Giricheva, N.I., Girichev, G.V., Petrova, V.N., Shlykov, S.A.: Zh. Struct. Khim. **37** No.2 (1996) 257; J. Struct. Chem. (Engl. Transl.) **37** (1996) 224.

Replaces [II/25A\(2, 370\)](#)