

Re-cl-O

VI 231.

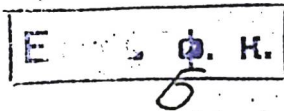
1932

ReO₂Cl₃ (Tm)

Briscoe H.V.A., Robinson P.L.,
Rudge A.J.

J. Chem. Soc., 1932, 1104-1107.

C.A., 1932, 3449.



VI 232

1932

ReO₄Cl₃

(Tm).

Briscoe H.V.A., Robinson P.L.,
Rudge A. J.

1. J. Chem. Soc., 1932, 2673-2676.

circ. 500

6cm of air.

B.

V1227.

1939
2

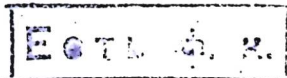
Re O₃ Cl, Re OCl₄ (Tm, Te)

Brinkl A., Ziegler K.

Ber., 1932, 65B, 916-918.

C.A., 1932, 4265

B.



F: ReO₃Cl

P: 1

2000

133:326232 Gas phase chemistry of technetium and rhenium oxychlorides. Eichler, R.; Eichler, B.; Gaggeler, H. W.; Jost, D. T.; Piguet, D.; Turler, A.

Department of Chemistry and Biochemistry, University of Bern Bern CH-3012, Switz. Radiochim. Acta, 88(2), 87-93 (English) 2000. The chloride and oxychloride chem. of the group 7 elements Tc and Re was investigated in order to develop an exptl. approach to a gas chem. characterization of bohrium (Bh, element 107).

In thermochromatog. expts. with trace amts. of ¹⁰¹Tc and ^{183,184}Re the formation of one volatile compd. was obsd. in O₂/HCl contg. carrier gas, which was attributed to MO₃Cl (M = Tc, Re). From the measured deposition temps. the adsorption enthalpies on quartz surfaces .DELTA.H_{ads}(TcO₃Cl) = -51 .+-. 3 kJ/mol and .DELTA.H_{ads}(ReO₃Cl) = -62 .+-. 3 kJ/mol were evaluated.

The sublimation enthalpies were derived using an empirical correlation between ΔH_{ads} and ΔH_{subl} : $\Delta H_{\text{subl}}(\text{TcO}_3\text{Cl}) = 49 \pm 10 \text{ kJ/mol}$ and $\Delta H_{\text{subl}}(\text{ReO}_3\text{Cl}) = 67 \pm 10 \text{ kJ/mol}$. A fast gas chem. sepn. technique for highly volatile compds. of short-lived isotopes based on isothermal gas solid adsorption chromatog. (OLGA-principle) was developed. With a modified OLGA device, model studies with the short-lived nuclides $^{106}, ^{107}, ^{108}\text{Tc}$ and $^{169}, ^{170}, ^{174}, ^{176}\text{Re}$ were carried out in prepn. of an exptl. gas chem. investigation of bohrium (Bh, element 107). Sepn. times of less than 3 s were achieved. A good sepn. of the oxychlorides of group 7 elements from chloride and oxychloride compds. of $^{152}\text{--}^{155}\text{Er}$, $^{151}\text{--}^{154}\text{Ho}$ (as models for actinide elements), $^{98}\text{--}^{101}\text{Nb}$, $^{99}\text{--}^{102}\text{Zr}$ (as models for light transactinide elements), ^{218}Po , and ^{214}Bi was accomplished in this chem. system.
