certainly $2K_2RuCl_5.3H_2O$, the difference in behavior on chlorination might possibly be explained.

BIRSTALL, NR. LEEDS, ENGLAND
S. H. C. BRIGGS

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The Isomeric Ruthenium Chlorides.—The statement in the recent paper of Howe and Haynes[1] that "Briggs considers that the normal alpha salt is a monohydrate, $K_2RuCl_5.H_2O$, in which the ruthenium has a coördination number of 6," was based on a misunderstanding of his paper. He there states:[2] "It is evident that the coördination number of ruthenium is greater than 6 in the compound $2K_2RuCl_5.3H_2O$." It was wrongly assumed that in $K_2RuCl_5.H_2O$ he considered the number to be 6, as would naturally be expected. There is no reason for assuming a higher coördination number for ruthenium in this compound. On the other hand, the anhydrous form, K_2RuCl_5, which seems undoubtedly to exist, would call for a coördination number of 5.

With Briggs' conclusion that "no deductions with regard to the formula of any individual preparation can be drawn with safety unless *every* constituent is directly estimated during analysis," I should heartily agree, if the sentence were qualified by writing it "no *complete* deduction." In practically all of our recent analyses of the halo-ruthenium salts, we have heated the salt in hydrogen, recovering the evolved halogen in silver nitrate solution. Thus, for example, in the analysis of $K_2RuCl_5.H_2O$ ("aquo" salt), $2KCl + Ru$ is left in the boat, and Cl_3 collected as silver chloride. There can be no more water than is indicated by loss, and as this has in no case amounted to $1^1/_2$ H_2O, we have been unable to accept Briggs' formula, $2K_2RuCl_5.3H_2O$, for the "aquo" salt.

CONTRIBUTION FROM
WASHINGTON AND LEE UNIVERSITY
LEXINGTON, VIRGINIA
JAS. LEWIS HOWE

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The Reaction between Selenium Tetrachloride and Copper.—The reactions between the chlorides of selenium and copper are comparatively much simpler than those between the oxychloride and the same metal.[1] We have determined the course of the reactions both with the monochloride and with the tetrachloride, by analysis. Our results with the former compound agree with those obtained about the same time by Lenher and Kao.[2] On account of qualitative observations we consider that the reaction probably proceeds according to Equations 3 and 4 below.

[1] Howe and Haynes, THIS JOURNAL, **47**, 2920 (1925).

[2] Briggs, *J. Chem. Soc.*, **127**, 1042 (1925).

[1] Ray, THIS JOURNAL, **45**, 2090 (1923).

[2] Lenher and Kao, *ibid.*, **48**, 1550 (1926).