

- I. Sb: Rb as 1 : 2.297.  
 II. Sb: Rb as 1 : 2.294.  
 III. Sb: Rb as 1 : 2.297.  
 Mean Sb: Rb as 1 : 2.296.

From this the following ratios are derived. They are the only ones, at all simple, in which the figures are approximately whole numbers:

- Sb: Rb as 4 : 9.184  
 Sb: Rb as 7 : 16.072  
 Sb: Rb as 10 : 22.960

The simplest of these ratios, 4 to 9, must be rejected, as the experimental errors due to impurities in the salt or to defects in the analytical methods can hardly have been as great as those which would be indicated by the formula  $4\text{SbCl}_3 \cdot 9\text{RbCl}$ . The figures calculated from the ratios 7 to 16 and 10 to 23 are given below, together with the analytical results obtained by taking the mean of the determinations made with this last sample of the salt. That these results are uniformly higher than those found in the former analyses is probably due to imperfect drying of the salt in the earlier samples. The atomic weights used are Sb 119.6, Rb 85.2, Cl 35.37.

	Calculated for $7\text{SbCl}_3 \cdot 16\text{RbCl}$	Calculated for $10\text{SbCl}_3 \cdot 23\text{RbCl}$	Found.
Sb	23.86	23.776	23.91
Rb	38.85	38.957	39.10
Cl	37.29	37.267	37.08
	<hr/> 100.00	<hr/> 100.000	<hr/> 100.09

It will be seen that the agreement between the calculated composition and that found is closer for the larger formula than for the smaller. Assuming the larger formula to be correct, the disagreement between the figures may be due to errors in analysis, impurities present in the salt, and also perhaps to inaccuracy in the atomic weights used. While it is evidently impossible from these figures to establish the formula of this compound on a firm basis, the analyses prove that the salt is unusually complex in composition, and indicate that the most probable formula is  $\text{Sb}_{10}\text{Rb}_{23}\text{Cl}_{58}$ .

The salt is extremely stable in some respects. Though easily decomposed by water, as would be expected, it can be heated