

The above analyses show that the substance obtained is not a definite compound, but, in all probability, an isomorphous mixture of two salts. It was found by calculation that the mixture might consist of 77.2 per cent. $\text{KMnCl}_3 \cdot 2\text{H}_2\text{O}$ with 22.8 per cent. $\text{KMnBr}_3 \cdot 2\text{H}_2\text{O}$, or, supposing the mixed salts to exist, of 48.05 per cent. $\text{KMnCl}_3 \cdot 2\text{H}_2\text{O}$ with 51.95 per cent. $\text{KMnCl}_3\text{Br} \cdot 2\text{H}_2\text{O}$.

	Calculated for both mixtures.	Found.
Cl	34.73	34.62
Br	14.78	14.53
Mn	21.32	21.29
K	15.19	14.88
H ₂ O	13.98	14.22
	<hr/> 100.00	<hr/> 99.54

As the substance comes out of a solution containing a large excess of manganous chloride, as well as some manganous bromide, the agreement between the calculated composition and that found can hardly be expected to be very close. The fact that the salt $\text{KMnBr}_3 \cdot 2\text{H}_2\text{O}$ was not obtained in the experiments with the pure bromides might be considered as an argument in favor of the belief that the constituent containing bromine in this mixture was really some *mixed* salt, such as $\text{KMnCl}_3\text{Br} \cdot 2\text{H}_2\text{O}$. However, the explanation that the presence of the salt $\text{KMnCl}_3 \cdot 2\text{H}_2\text{O}$ gives crystallising power to the salt $\text{KMnBr}_3 \cdot 2\text{H}_2\text{O}$, so that the two can form an isomorphous mixture, involves perhaps less speculation.

When potassium iodide was used instead of the bromide, in attempting to prepare a mixed salt, crystals of the same habit as before were obtained. A complete analysis of these was made, and the salt was found to contain an amount of iodine so small that it must be considered as a non-essential constituent, present merely by the adhering of a certain amount of mother-liquor. The salt is too easily soluble to admit of its being washed to any considerable extent. In no case was so much as 1 per cent. of iodine found. The salt was, in fact, $\text{KMnCl}_3 \cdot 2\text{H}_2\text{O}$.

These experiments are of interest as showing what large amounts of potassium bromide and iodide are converted into the chloride by being dissolved in a solution of manganous chloride. These crystallisations were all made in neutral solutions so as to avoid the complications, in interpreting the results, which the presence of even a small quantity of acid would have introduced.