

## THE DETERMINATION OF POTASH IN KAINITE.

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**A**N aqueous solution of kainite contains nothing except potash which, upon evaporation with platinum chloride, forms a compound which is insoluble in alcohol and the ammonium chloride wash ordinarily used in potash determinations. It is, therefore, quite superfluous to precipitate out anything from such a solution by such reagents as barium chloride, ammonium oxalate or carbonate, etc., and to evaporate and ignite the residue obtained. A most accurate result is obtained by evaporating an aliquot portion of a filtered aqueous solution of kainite directly with platinum chloride. Upon the addition of alcohol to the residue obtained by evaporation, nearly to dryness, with platinum chloride, the sodium sulphate present renders the potassium platinochloride sticky and difficult to wash, just as in the Lindo-Gladding method. The sodium sulphate is readily washed out with the ammonium chloride wash, however, leaving a pure potash double salt. The method of direct evaporation of a solution of kainite with platinum chloride has the advantage that there is no loss from occlusion or retaining of potash by precipitates, since no precipitants, such as barium chloride, ammonium oxalate, etc., are used. There can also be no loss from spattering, volatilization, etc., upon ignition, since no ignition is used. Using the same aqueous solution of a sample of kainite, and making determinations by the Lindo-Gladding, the Alternate, and the Stassfurt methods, and also by direct evaporation with platinum chloride, I obtained the following results:

Lindo-Gladding .....	12.36	per cent.	potassium oxide.
Alternate.....	12.42	“ “	“ “
Stassfurt.....	12.40	“ “	“ “
Direct evaporation with platinum chloride .....	12.54	“ “	“ “

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