

Addyman 149



Health Department

CITY HALL

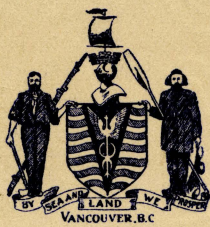
VANCOUVER, B. C.

Potash

For Potash Mammals, Kamit, Mixture of Potash, Extraction of Potash etc.

Wgt. .5 gram of Substance & dissolve in water & a small amount
of dil. HCl. filter off Sand. & wash well. To the filtrate add
.5 gram pure NaCl & 15 cc PtCl_4 (10%) & evaporate to a pasty
mass - add 2 cc PtCl_4 , shake round the beaker, allow
to stand for 5 minutes & filter through two counterpoised papers -
Allow the whole of the liquid to run through - then with 3 cc of
 PtCl_4 rinse the beaker & wash the ppt. when the liquid
has entirely passed through the rest of the ppt. must be removed to
the paper & well washed with strong alcohol. dried & weighed -

The addition of HCl is to convert all K_2SO_4 into HCl.
The preliminary washing with PtCl_4 is to remove any double compounds
of Platinum with Magnesia & Soda which are insoluble in alcohol



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Qualitative test - dip a Pt wire with a loop into a strong acid solⁿ of the supposed potash compound and view through a piece of cobalt glass, the coloration produced thereby when held in the Bunsen flame - the red purple tint produced is compared with a known Potash Salt similarly treated -

Official Methods

Reagents

1- (a) Ammon chloride solⁿ

Dissolve 100 grms Ammon chloride in 500 cc of water add from 5 to 10 grms of pulverized potassium-platonic chloride, and shake at intervals for 6 or 8 hours - the mixture is allowed to settle over night and filtered, and the residue is ready for the preparation of a fresh supply -

(b) Platinum solⁿ

The Pt solⁿ used contains 1 gram of metallic Pt

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(2.1 grams of $H_2 PO_4$) in env. 10 cc



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(2) Methods of making solns

(a) with potash salts & mixed fertilizers

Boil 10 grams of sample with 300 cc water for 30 minutes. In case of mixed fertilizers add to the hot soln a slight excess of $NH_4 OH$ and then sufficient Ammonium Oxalate (powd) to ppt lime present -

cool, dilute to 500 cc mix & pass thro' a dry filter - In case of Moniate & Sulphate of Potash, Sulphate of Potash & Magnesia and Kainit, dissolve and dilute to 500 cc without the addition of Ammonia or Ammonium Oxalate -

(B) with organic Compounds

When it is desired to determine the Total potash in organic substances, such as, cotton seed meal, Tobacco stems - etc. Saturate 10 grams with conc $\frac{1}{2}$ Sol & ignite in a muffle at a low red heat to destroy organic matter - add a little conc HCl, warm slightly in order to loosen the mass from the dish and proceed as directed under (3) (a)

Determination - (3) (a) In mixed fertilizers

Evaporate 50 cc of Soln made according to (2) corresponding to 1 gram of the sample, nearly to dryness, add 10 cc of dilute $\frac{1}{2}$ St₄ (1-1) evaporate to dryness and ignite to whiteness - As all the Potash is in form of sulphate - no loss need be apprehended by volatilization of Potash & a full red heat must be maintained until the residue is perfectly white - dissolve the residue in hot water using at least 20 cc for each decigram of H_2O - add a few drops of hydrochloric acid and platinum soln in excess - Evaporate on a water bath to a thick paste and treat the residue with 80% alcohol ppt - .8645, avoiding absorption of ammonia - Wash the ppt thoroughly with 80% alcohol 7 or 8 times and on the filter continuing the washings after the filtrate is colorless, Wash finally with 10 cc of Ammonium chloride soln (1)(a) to remove impurities from the ppt - and repeat this washing 5 or 6 times - Wash again thoroughly with 80% alcohol and dry the ppt for 30 minutes @ 100°C - the ppt should be perfectly sol in water -

(B) Murate of Potash

Obtain 25 cc of the soln prepared according to (2) (a) with 25 cc water acidify with a few drops of hydrochloric acid, add 10 cc of PT soln and evaporate to a thick paste, treat the residue as under (3) (a) -

(c) Sulphate of Potash, Sulphate of Potash and Magnesia & Kainit

Dilute 25 cc of the soln prepared according to (2)(a) with 25 cc water acidify with a few drops of Hydrochloric acid, and add 15 cc of Pt soln. evaporate the mixture and proceed as under (3)(a) except that 25 cc portions of Ammonium chloride soln should be used —

(d) water-sol potash in wood ashes and Cotton hull ashes

use the above method making the soln according to (2)(a) and pay special attention to the last sentence (3)(a)