



A FIELD TEST FOR RARE-EARTH ELEMENTS

PLATE 2 (USING MINERALS)

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PROCEDURE

1. Grind sample to a fine powder.
2. Dissolve or partly dissolve a small portion of the powdered sample in enough concentrated hydrochloric acid to make a translucent solution in a small beaker or test tube, heating if necessary to effect solution.
3. Transfer a drop of the resulting solution to a piece of prepared Arsenazo I (pink coloured) or Arsenazo III (violet coloured) paper.
4. Record the resulting colours produced on the Arsenazo paper, as the drop dries.
5. If a green color similar to that illustrated in Plates 1 and 2, it is a strong indication of the presence of rare-earth elements in the solution; but as also shown a few other elements may likewise produce a green colour, or an interference in colour.



OUTER RING - HNO_3 SOLUTION
INCOMPLETE RING-HEATED HCl
INNER RING UNHEATED HCl

- 1 Monazite (Brazil)
- 2 Monazite (Australia)
- 3 Bastnaesite (California)
- 4 Fergusonite (Quebec)
- 5 Euxenite (Ontario)
- 6 Samarskite (Quebec)
- 7 Lyndochite (Ontario)
- 8 Pyrochlore (Quebec)
- 9 Pitchblende ore (Saskatchewan)
- 10 Uraninite-brannerite ore (Ontario)
- 11 Uramothorite ore (Ontario)
- 12 Ellsworthite (Ontario)
- 13 Allanite (Quebec)
- 14 Allanite in pegmatite (Quebec)
- 15 Chevkinite, etc. (Quebec)
- 16 Eudialyte (Quebec)
- 17 Sphene (Ontario)
- 18 Y-Garnet (Quebec)
- 19 Apatite (Ontario)
- 20 Phosphate rock (Idaho)
- 21 Titaniferous Magnetite (Quebec)
- 22 Titaniferous Magnetite conc. (Quebec)
- 23 Fe_3O_4 (HNO_3 solution) (HCl solution)

