



A FIELD TEST FOR RARE-EARTH ELEMENTS

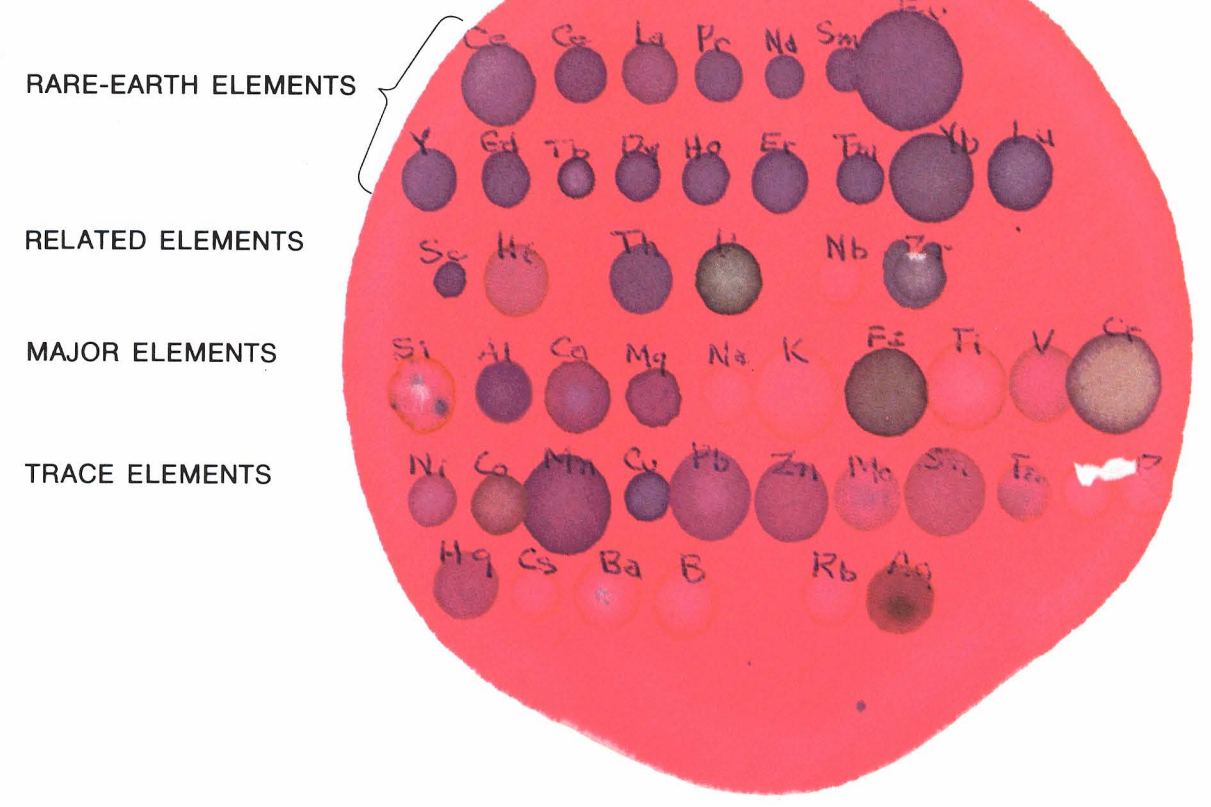
PLATE 1 (USING CHEMICALS)

E.R. ROSE

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.

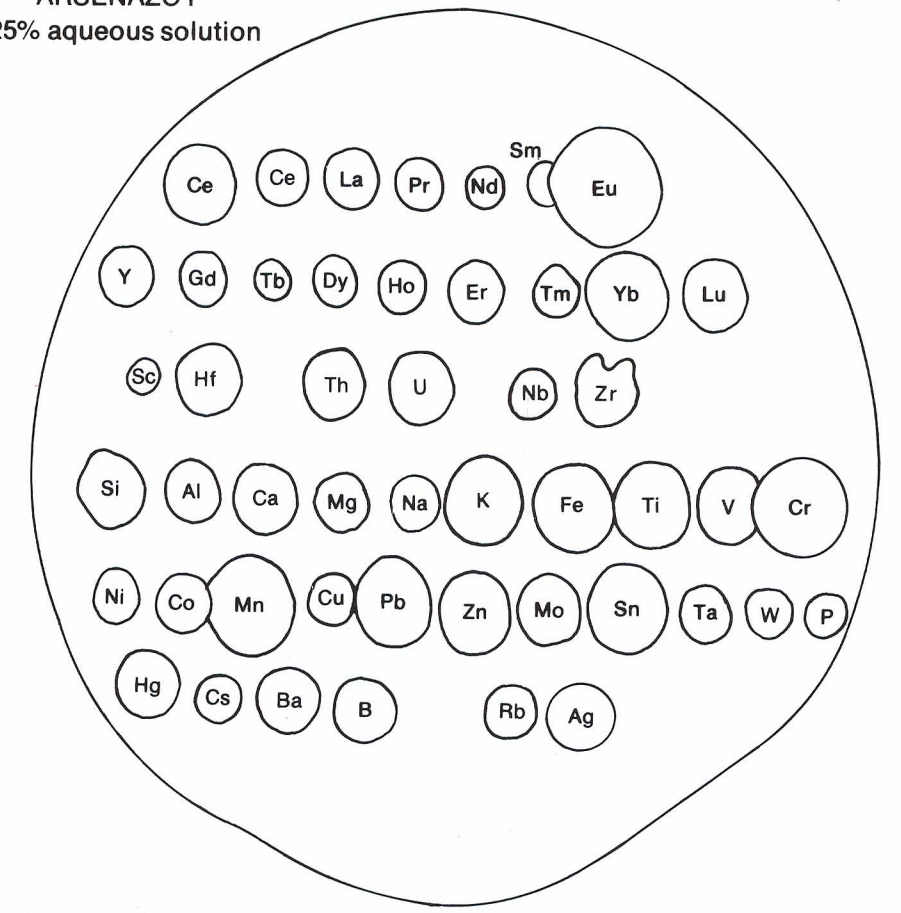
A
ARSENAZO I PAPER 0.25%
0.25% aqueous solution



ARSENAZO I
0.25% aqueous solution

4th Row
MAJOR
ELEMENTS

- Si
- Al
- Ca
- Mg
- Na
- K
- Fe
- Ti
- V
- Cr



1st Row
RARE-EARTH
ELEMENTS

- Cerium, Ce
- Lanthanum, La
- Praseodymium, Pr
- Neodymium, Nd
- Samarium, Sm
- Europium, Eu

2nd Row
RARE-EARTH
ELEMENTS

- Yttrium, Y
- Gadolinium, Gd
- Terbium, Tb
- Dysprosium, Dy
- Holmium, Ho
- Erbium, Er
- Thulium, Tm
- Ytterbium, Yb
- Lutetium, Lu

3rd Row
RELATED
ELEMENTS

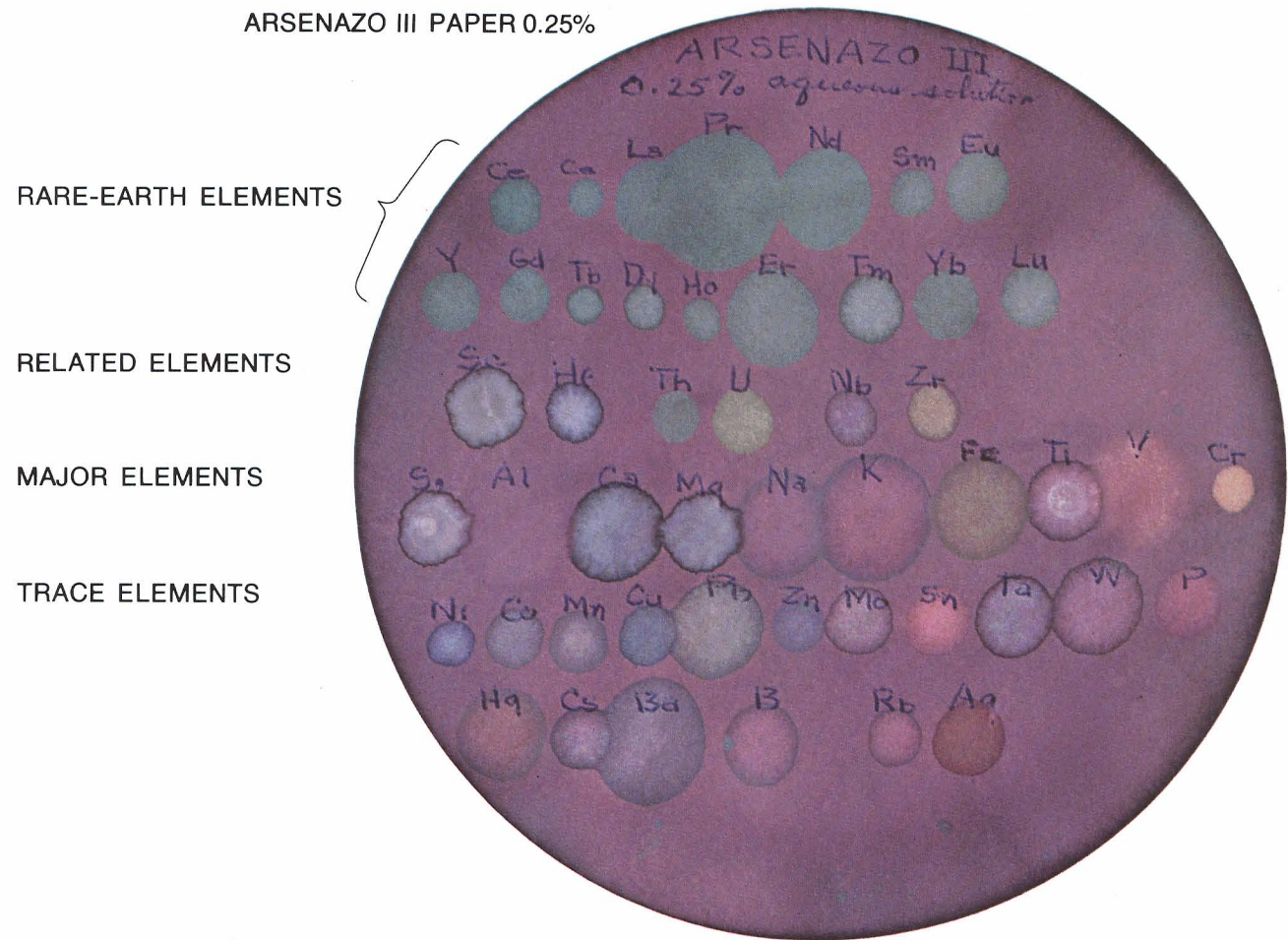
- Scandium, Sc
- Hafnium, Hf
- Thorium, Th
- Uranium, U
- Niobium, Nb
- Zirconium, Zr

5th Row
TRACE
ELEMENTS

- Ni
- Co
- Mn
- Cu
- Pb
- Zn
- Mo
- Sn
- Ta
- W
- P

ARSENAZO III
0.25% aqueous solution

B
ARSENAZO III PAPER 0.25%



6th Row
TRACE
ELEMENTS

- Hg
- Cs
- Ba
- B
- Rb
- Ag

