



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.

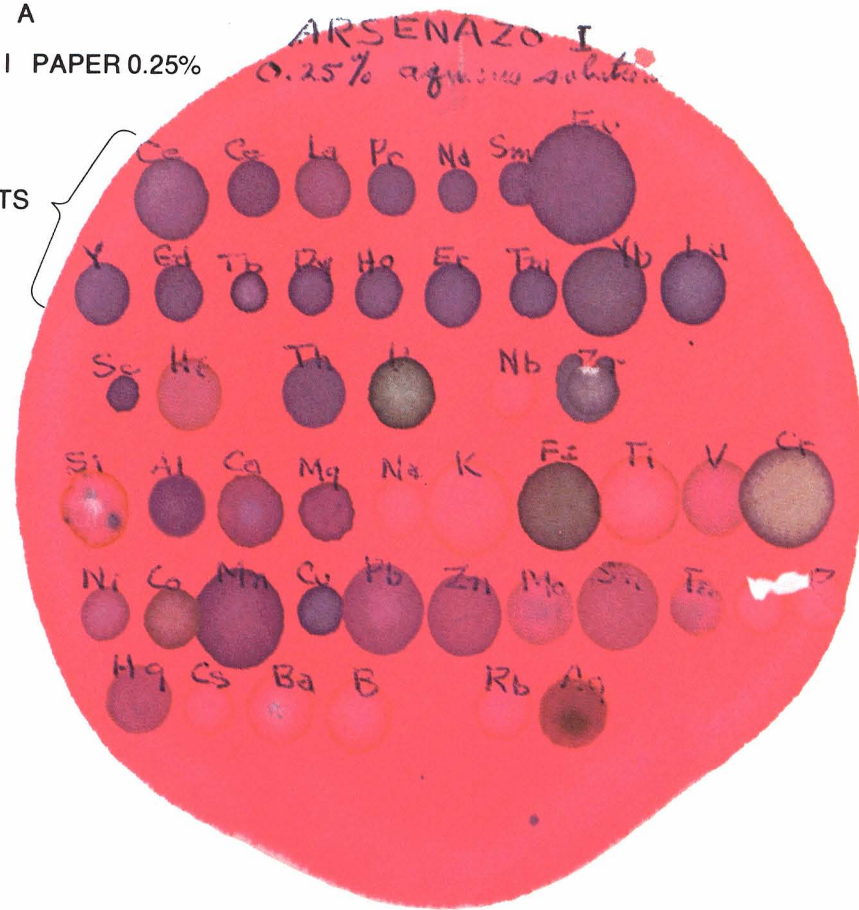
A
ARSENAZO I PAPER 0.25%

RARE-EARTH ELEMENTS

RELATED ELEMENTS

MAJOR ELEMENTS

TRACE ELEMENTS



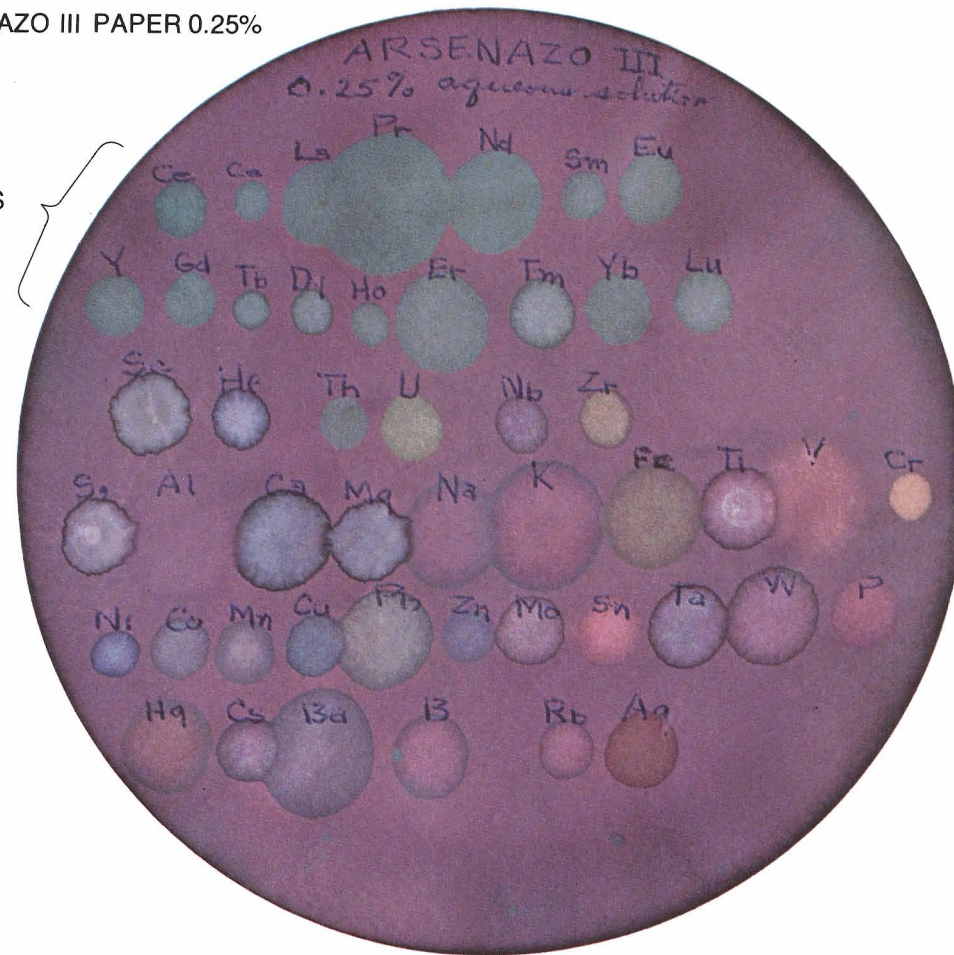
B
ARSENAZO III PAPER 0.25%

RARE-EARTH ELEMENTS

RELATED ELEMENTS

MAJOR ELEMENTS

TRACE ELEMENTS



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

6th Row
TRACE
ELEMENTS
Hg
Cs
Ba
B
Rb
Ag

ARSENAZO III
0.25% aqueous solution

