GENERAL FLOWCHART FOR GROUP A CATIONS

ORIGINAL SOLUTION: SOURCE OF CATIONS

Test your sample for precipitation and centrifuge

RESIDUE

Wash sample (solids) with 10 drops of COLD distilled water. Add 2 drops of room temperature distilled water.

Heat in boiling water bath for 3 minutes with constant stirring. Centrifuge quickly and decant supernatant liquid while sample is HOT.

CENTRIFUGATE

CA1: CATIONS FOR OTHER GROUPS

RESIDUE

Wash it with 10 drops of HOT distilled water. Add 2 drops of 6M NH_3. Stir and Centrifuge

CENTRIFUGATE

Add 3 drops of 1 M KI

The sample should produce YELLOW precipitates (solids) to indicate presence of PbI_2.

Your sample is Pb^{2+}

RESIDUE

Your residue appears to be BLACK GRAY or BLACK

Your sample is Hg_2^{2+}

CENTRIFUGATE

Add 6 M HNO_3 dropwise with stirring until acidic The blue litmus paper should turn RED which means it is now acidic.

Your sample produced WHITE precipitates/solids

Your sample is Ag^+