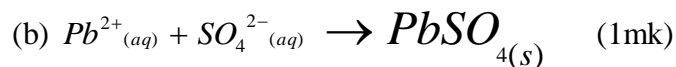


# SALTS

## MARKING SCHEME

1. React dilute nitric acid with solid lead (II) carbonate to get lead (II) nitrate solution ✓ 1/2
- Dissolve solid potassium sulphate in distilled water to get potassium sulphate solution ✓ 1/2
  - React lead (II) nitrate solution with potassium sulphate solution to get a white precipitate of lead (II) sulphate ✓ 1
  - Filter the mixture to get a residue of lead (II) sulphate and filtrate of potassium nitrate.
  - Dry the residue lead (II) sulphate ✓ 1

2. (a) precipitation (double decomposition) (1mk)



- (c) An insoluble coating of  $PbSO_{4(s)}$  would prevent contact of the metal with the acid and stop the reaction almost immediately. (1mk)

3. Add excess ✓ 1/2 copper turnings to 50% nitric acid. ✓ 1/2 Filter ✓ 1/2 to obtain Copper (II) Nitrate solution. ✓ 1/2 Add Sodium Carbonate ✓ 1/2 Solution and Copper (II) Carbonate will precipitate. Filter ✓ 1/2 and allow the residue to dry.
4. Insoluble lead (II) sulphate ✓ 1 coats the carbonate hence stops further action of the acid on the carbonate ✓ 1.