

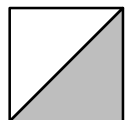
Worksheet 4

Identification of negative ions (anions)

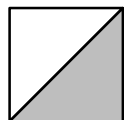
Use 0.1 M to 0.2 M potassium or sodium salts in the relevant squares.

Wear eye protection

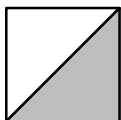
Potassium/
sodium chloride



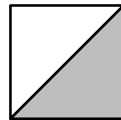
Potassium/
sodium bromide



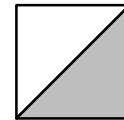
Potassium/
sodium iodide



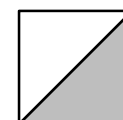
Potassium/
sodium carbonate



Potassium/
sodium sulfate



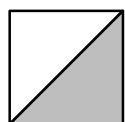
Potassium/
sodium nitrate



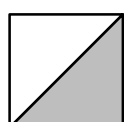
Add 2 drops of the relevant solution to each of the squares above. Add 2 drops of 0.4 M nitric acid and 1 drop of 0.05 M silver nitrate.

Stir mixtures with a with a pointed wooden splint. Record observations before adding 2 drops of 2 M ammonia.

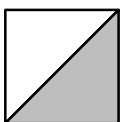
Potassium/
sodium chloride



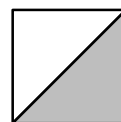
Potassium/
sodium bromide



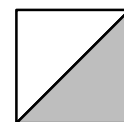
Potassium/
sodium iodide



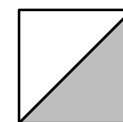
Potassium/
sodium carbonate



Potassium/
sodium sulfate

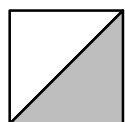


Potassium/
sodium nitrate

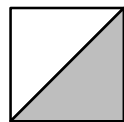


Add 2 drops of the relevant solution to each of the squares above. Add 1 drop of universal indicator solution. To any solution that is alkaline, add 1 drop of 1 M hydrochloric acid and look for bubbles of carbon dioxide.

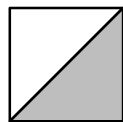
Potassium/
sodium chloride



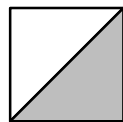
Potassium/
sodium bromide



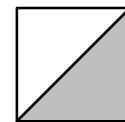
Potassium/
sodium iodide



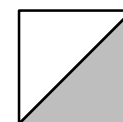
Potassium/
sodium carbonate



Potassium/
sodium sulfate



Potassium/
sodium nitrate



Add 2 drops of the relevant solution to each of the squares above. Add 2 drops of 0.4 M nitric acid and add 1 drop of barium chloride or nitrate to each square and stir mixture with a with wooden splint.