

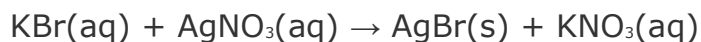
NAME: Guidevaux Aurélia

SAMPLE: Potassium Bromide

1) IDENTIFICATION REACTIONS OF IONS

- **CATIONS** (*describe briefly reactions*):

Potassium cation K⁺



Dissolve 0,1g of the substance to be examined in 2 mL of water R or use 2mL of the prescribed solution. Add 1mL of sodium carbonate solution R and heat. No precipitate is formed.

Add to the hot solution 0,05mL of sodium sulfide solution R. no precipitate is formed. Cool in iced water and add 2mL of a 150g/L solution of tartaric acid R. allow to stand.

A white crystalline precipitate is formed

Dissolve about 40mg of the substance to be examined in 1mL of water R or use 1mL of the prescribed solution.

Add 1mL of dilute acetic acid R and 1mL of a freshly prepared 100g/L solution of sodium cobaltinitrite R.

A yellow or orange-yellow precipitate is formed immediately.

- **ANIONS** (*describe briefly reactions*):

Bromide anion Br⁻

Dissolve in 2 mL of water R a quantity of the substance to be examined equivalent to about 3mg of bromide or use 2 mL of the prescribed solution.

Acidify with dilute nitric acid R and add 0,4mL of silver nitrate solution R1.

Shake and allow to stand. A curdled, pale yellow precipitate is formed.

Centrifuge and wash the precipitate with three quantities, each of 1mL of water R. Carry out this operation rapidly in subdued light disregarding the fact that the supernatant solution may not become perfectly clear.

Suspend the precipitate obtained in 2 mL of water R and add 1,5mL of ammonia R

The precipitate dissolves with difficulty

2) ASSAY

Volumetric solutions: 0, 1 M AgNO₃

Titre of volumetric solutions: 0. 9998

Titration No.	m [g] (4 decimal places)	Consumption of VS [ml]	ASSAY
1.	1.8954	16.02	57,38
2.	2.0045	15.63	56,55
3.	2.0215	15.32	57,88
4.	1.9854	15.34	58,82
Average			57,66

CALCULATION PROCEDURE:

$$\frac{(25 * 0,998 - 16,02 * 0,9897) * 11,9 * 100}{189,54} = 57,38$$

$$\frac{(25 * 0,998 - 15,63 * 0,9897) * 11,9 * 100}{200,45} = 56,55$$

$$\frac{(25 * 0,998 - 15,32 * 0,9897) * 11,9 * 100}{202,15} = 57,88$$

$$\frac{(25 * 0,998 - 15,34 * 0,9897) * 11,9 * 100}{198,54} = 58,82$$

STATISTICAL EVALUATION:

Range: R = 2,27

Standard deviation (estimated from range): sd = 1,10

Relative standard deviation: RSD = 1,91

CONCLUSION (does your sample meet/not meet Ph. Eur): My sample doesn't meet Ph.Eur