Date 10/05/22

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Aim :-

Determination of Potassium iodide.

Reference :-

Selected experiment of Pharmaceutical analysis -I by A Siddique. Page no - 91.

Requirement :-

1) Chemicals :⇒ 0.05M $KIO_3$ Solution, HCl, Chloroform.

2. Glassware :⇒ Conical flask, Beaker, Measuring cylinder, burette, spatula and weigh balance.

Theory :-

Potassium iodide occurs as colourless as white crystals as a white crystalline powder. It is very soluble in water, soluble in ethanol and practically insoluble in diethyl ether. It is slightly deliquescent in moist air.

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## Experimental Overview

Potassium iodide contains not less than 99 % w/w of calculated with reference to the dried substance potassium iodide oxidizes quantitatively iodides in to iodine.

$$5KI + KIO_3 + 6HCl \rightarrow KCl + 5ICl + 3H_2O.$$

The liberated iodine reacts with excess of ~~iodine~~ in iodate in presence of strong HCl to Iodine mono chloride.

$$2I_2 + KIO_3 + 6HCl \rightarrow KCl + 5ICl + 3H_2O.$$

## Procedure :-

1. Weigh accurately about 0.5g of potassium iodide dissolve in 10 ml of water and add 25 ml HCl and 5 ml of chloroform.
2. Titrate it with 0.05 M Potassium iodate until purple colour disappear from the chloroform layer.

## Result :-

The percentage (%) purity of KI ....

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