

## Exercise no. 5

### Determination of phenol using a bromometric method

Dilute the analytical sample with distilled water in a measuring flask to the mark (100 mL) and mix completely.

**Pipette** 10 mL of the solution into the conical flask and dilute with distilled water to about 50 mL. **Pipette 25 mL** of  $\text{KBrO}_3$  at a concentration of  $c_{1/6} = 0,1$  mol/L. Then, add 0.5 g of KBr and 15 mL of HCl at a concentration of 2 M. Mix the content of the flask, cover flask with piece of paper and leave for about 10 minutes.

After 10 min., add 2 g of KI, mix and titrate iodine with 0.1 M  $\text{Na}_2\text{S}_2\text{O}_3$  solution. At the end of titration, when the colour of the solution becomes slightly yellow, add few drops of the starch solution and titrate till blue colour disappear. Repeat the titration to obtain three concordant results (not differing more than 0.2 mL). Calculate the amount of phenol present in the sample using formula:

$$X = 10 \cdot (25 \cdot 0.1 - V_1 \cdot 0.1) \cdot 15,67$$

$V_1$  – volume of 0.1M  $\text{Na}_2\text{S}_2\text{O}_3$ .