Calculations OF Mass fraction, volume fraction and concentration.

1. Calculate, the volume of vine, if volume fraction of etylalcohole is 12,5 % situated 1 dcl of etylalcohole.

2. Calculate, the concentration of solution of sodium hydroxide, if is found 400 cm3 of solution 1 mole of sodium hydroxide.

3. Calculate, the mass of potassium chloride which is necessary for preparation 200 ml of solution with concentration c(KCl)=0.5 $mol.dm^{-3}$. M(KCl)=74,55 $g.mol^{-1}$

4. Calculate, the volume of ethylalcohole contains:
   a) 0,5 l of beer, φ (ethylalcohole)=3 %
   b) 0,2 dcl of plum-brandy, φ (ethylalcohole)= 52%

5. Calculate, the is concentration of 200 ml of solution which was prepared by dissolving 10 g of sodium hydroxide in water. M (NaOH)=40 $g.mol^{-1}$

6. Calculate, the moles of sodium hydroxide which are found of its in 50 g solution with mass fraction 20 %. M (NaOH)=40 $g.mol^{-1}$

7. Calculate, the moles of potassium hydroxide are in 35 g its solution with mass fraction 15 %. M (KOH)=56 $g.mol^{-1}$

8. Calculate, the volume of whisky, if volume fraction of etylalcohole is 42 % situated 2 dcl of etylalcohole.

Mixture and dissolving of solution

1. Calculate. The mass of solution potassium hydroxide with mass fraction w/KOH/=0,2 we need mix with 50 g of solution potassium hydroxide with mass fraction w/KOH/=0,4 when we want realize solution with mass fraction w/KOH/=0,3.

2. calculate the mass of water, which we need add in 210 g 40% of solution of sodium hydroxide, that we want realize solution of sodium hydroxide with mass fraction w/NaOH/=0,250.

3. calculate the mass of solution sodium hydroxide with mass fraction w/NaOH/=3% we need mix with 40 g of solution potassium hydroxide with mass fraction w/KOH/=7% when we want realize solution with mass fraction w/KOH/=5%.

4. What is mass of water, which we need add in 225 g 11% of solution of potassium iodide, that we want realize solution of potassium iodide with mass fraction w/KI/=0,1.