

3.2

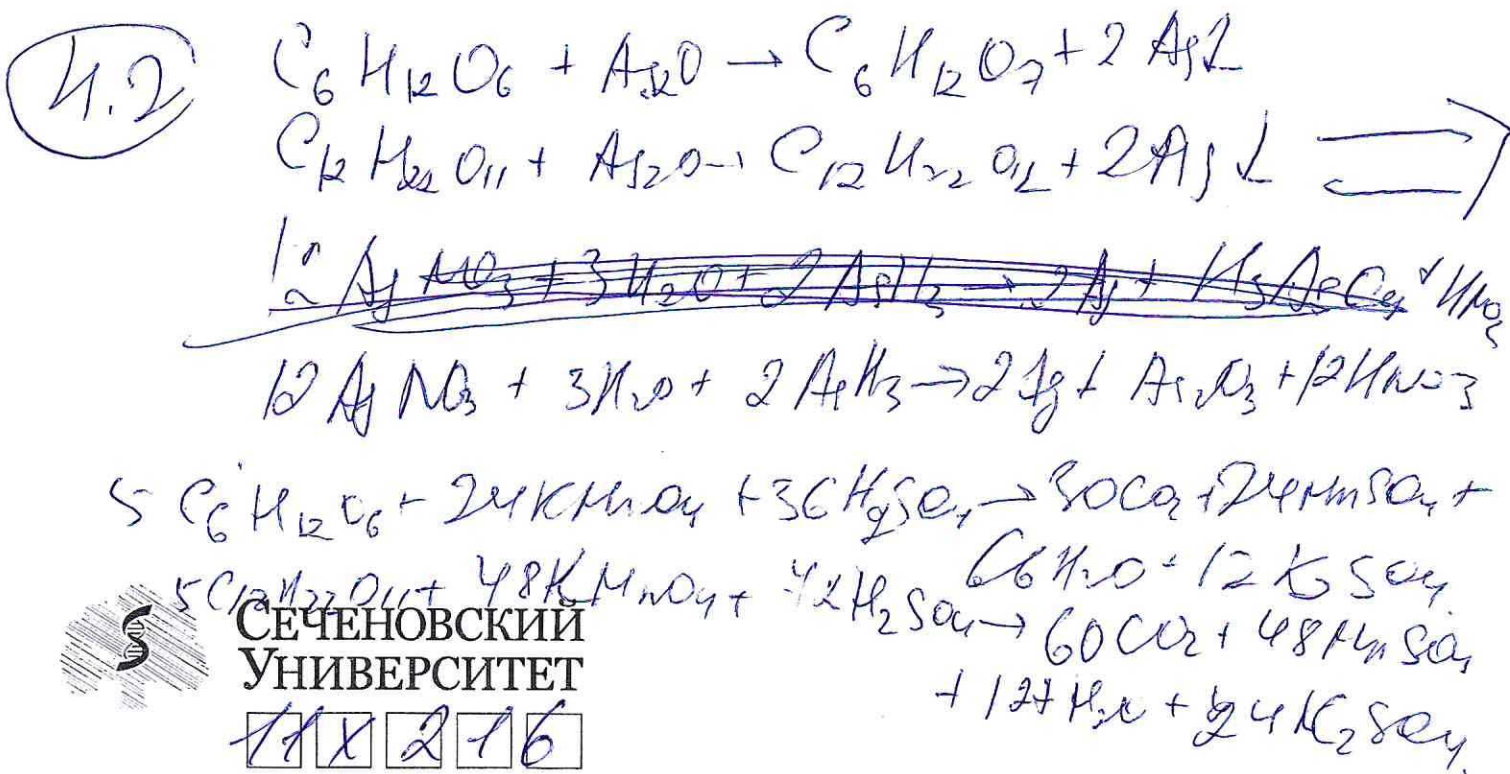
$$V = h \pi R^2 = 490,625$$

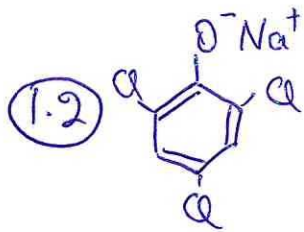
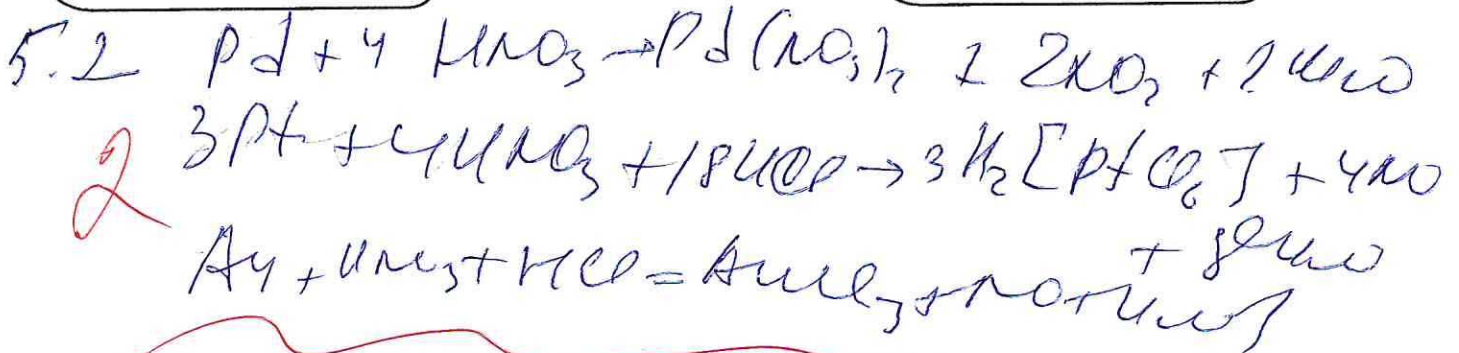
$$V_1 = 0,6 \cdot 490,625 = 294,375$$

$$n(\text{CH}_3\text{COOH}) = 0,623$$

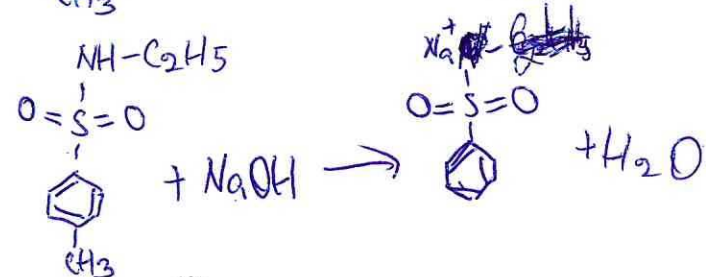
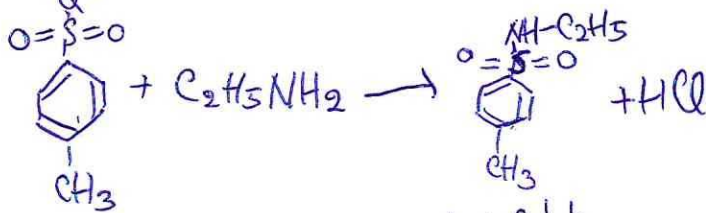
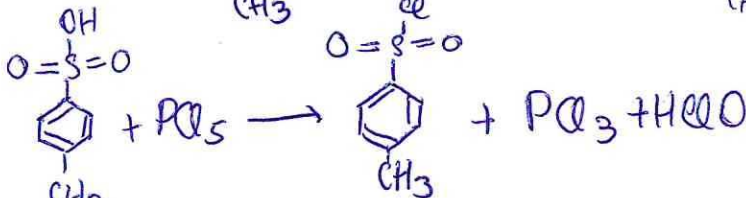
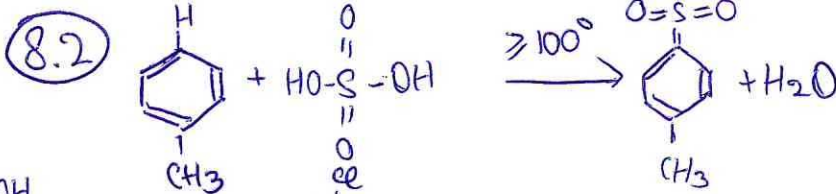
$$c(\text{CH}_3\text{COOH}) = 2,11$$

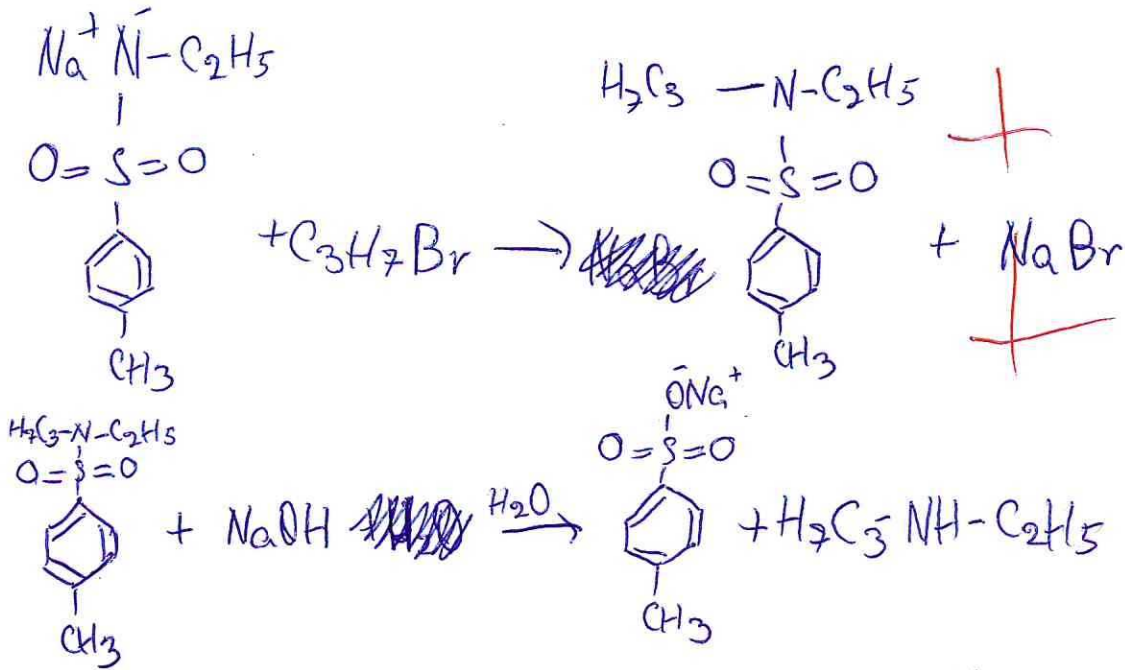
$$\text{pH}(\text{CH}_3\text{COOH}) = \frac{1}{2}(\text{p}K_a - \lg c(\text{CH}_3\text{COOH})) = 2,9$$





2,4,5 трихлорбензоат натрия





2.2) $\text{C}_x\text{H}_y\text{O}_z \rightarrow x\text{CO}_2 + \frac{y}{2}\text{H}_2\text{O}$

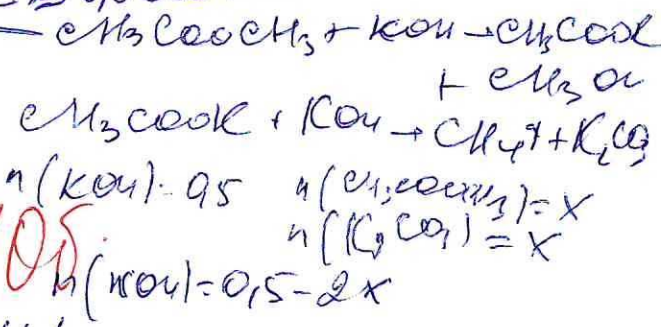
$pV = \frac{m}{M} RT \quad \rho = 0,2$
 $n(\text{C}) = n(\text{CO}_2) = 0,2 \quad m(\text{C}) = 2,4$
 $n(\frac{1}{2}\text{O}) = 0,25 \quad n(\text{H}) = 0,5$
 $n(\text{O}) = 0,05 \quad \text{C} : \text{H} : \text{O}$
 $0,2 \quad 0,5 \quad 0,05$
 $4 \quad 10 \quad 1$

1) $n\text{H}_2\text{O} = \frac{V_{\text{H}_2\text{O}} \cdot \rho_{\text{H}_2\text{O}}}{M_{\text{H}_2\text{O}}} = \frac{45 \text{ мл} \cdot 1 \frac{\text{г}}{\text{мл}}}{18 \frac{\text{г}}{\text{моль}}} = 2,5 \text{ моль}$
 2) $n\text{CO}_2 = \frac{V_{\text{CO}_2}}{V_m} = \frac{4,82 \text{ л}}{22,4 \frac{\text{л}}{\text{моль}}} = 0,215 \text{ моль}$
 3) $n\text{O} = \frac{m(\text{C}_x\text{H}_y\text{O}_z) - m(\text{C}) - m(\text{H})}{16} = \frac{3,74 - (0,215 \cdot 12) - (0,5 \cdot 1)}{16} = 0,0388 \text{ моль}$

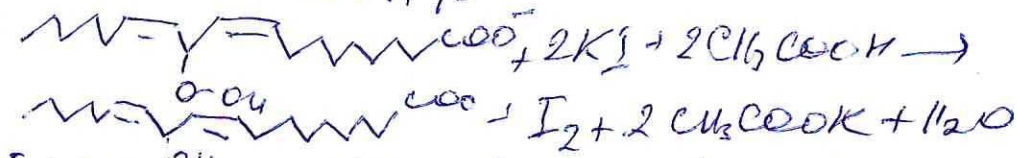
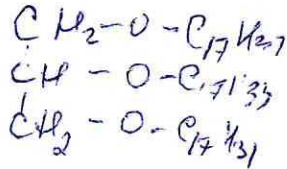
4) $x : y : z = 0,215 : 0,5 : 0,0388 = 12 : 26 : 2$

Вещество $x - \text{C}_{12}\text{H}_{26}\text{O}_2$ или $\text{C}_{12}\text{H}_{24}(\text{OH})_2$

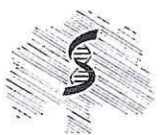
$m(\text{C}_{12}\text{H}_{24}(\text{OH})_2) = 192$
 $m(\text{C}_{12}\text{H}_{26}\text{O}_2) = 194$



10.2



$\text{I}_2 + 2\text{Na}_2\text{S}_2\text{O}_3 = 2\text{NaI} + \text{Na}_2\text{S}_4\text{O}_6 \quad n(\text{Na}_2\text{S}_2\text{O}_3) = 0,033$
 $= 9,033$
 $n(\text{I}_2) = 0,0165$
 $n(\text{O}) = 0,0165 \cdot 52 = 0,858$
 $3,17 - 0,858 = 2,312$



СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

□ □ □ □ □

200

3,17 - не год.