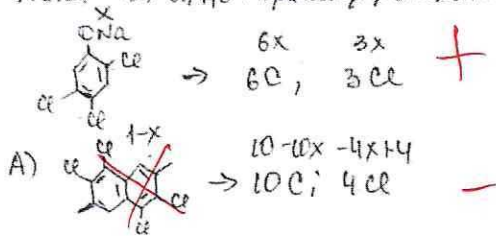


50 балл

ЧИСТОВИК
Лист № 3

ВСОШ Химия

N1.1. В) 2,4,5 трихлорфенолят натрия:



Пусть $n(\text{соедин}) = 1 \text{ моль}$.

$$n(\text{Cl}) = 3x + 4 - 4x = 4 - x.$$

$$n(\text{C}) = 10,909 - 2,7273x.$$

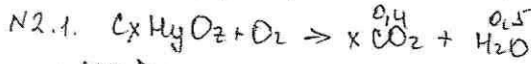
$$n(\text{C}) = 6x + 10 - 10x = 10 - 4x.$$

$$10,909 - 2,7273x = 10 - 4x.$$

$$1,2727x = 0,909$$

$$x = 0,714 \text{ моль}$$

$$m(2,4,5 \text{ трихлорфенолят натрия}) = 156,723 \text{ г}$$



$$n(\text{CO}_2) = 0,4 \text{ моль}$$

$$n(\text{H}_2\text{O}) = 0,5 \text{ моль}$$

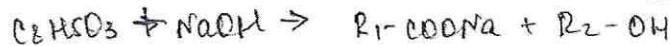
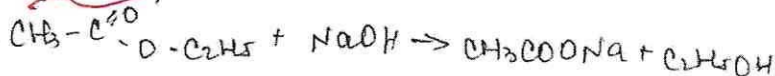
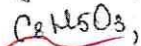
$$n(\text{C}) = 0,4 \text{ моль}$$

$$n(\text{H}) = 0,25 \text{ моль}$$

$$m(\text{C}) = 4,8 \text{ г}, \quad m(\text{H}) = 0,25 \text{ г}$$

$$m(\text{O}) = 7,4 - 4,8 - 0,25 = 2,35 \text{ г}, \quad n(\text{O}) = 0,147 \text{ моль}$$

$$x : y : z = 0,4 : 0,25 : 0,147 \approx 8 : 5 : 3.$$



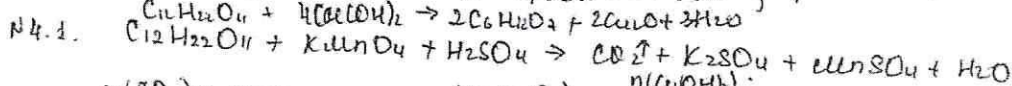
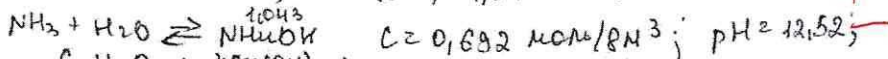
1	2	3	4	5	6	7	8	9	10
1	4	6	4	5		4	6		20

СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

№3.1. Радиус шара $r = 5 \text{ см}$ - $V_{\text{ш}} = 4,9 \text{ см}^3$

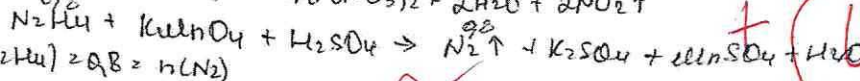
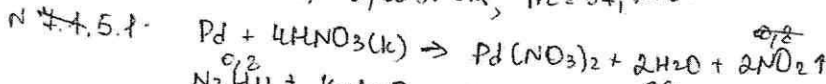
$V_{\text{ш}} = \frac{4}{3} \pi r^3 = 1507,83 \text{ см}^3$; $1,508 \text{ г/см}^3$ $V(\text{NH}_3) = 23,37 \text{ г/см}^3 \cdot 0,6 = 14,022 \text{ г/см}^3$

$n(\text{NH}_3) = 1,043 \text{ моль}$; $n(\text{OH}^-) = 1,043 \text{ моль}$



$n(\text{CO}_2) = 1,313 \text{ моль}$ $n(\text{C}_{12}\text{H}_{22}\text{O}_{11}) = \frac{n(\text{CO}_2)}{4}$

$n(\text{C}_{12}\text{H}_{22}\text{O}_{11}) = 0,209 \text{ моль}$; $m = 87,2782$

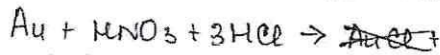
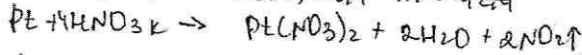


$n(\text{N}_2\text{H}_4) = 0,8 = n(\text{N}_2)$

$V_{\text{кон.}} = \frac{1}{3} S_{\text{осн}} \cdot h = \frac{1}{3} \pi r^2 \cdot h = 4,5216 \text{ см}^3$

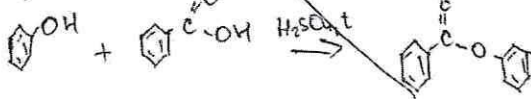
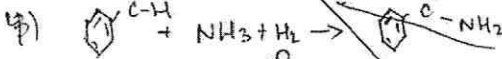
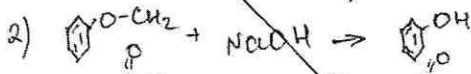
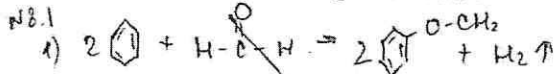
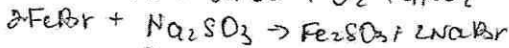
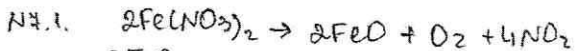
$m = 57,2462$

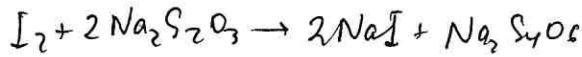
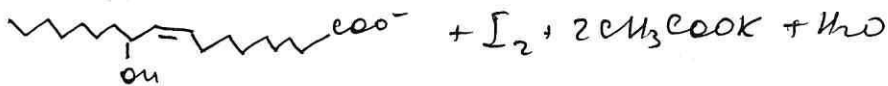
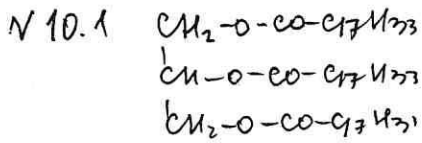
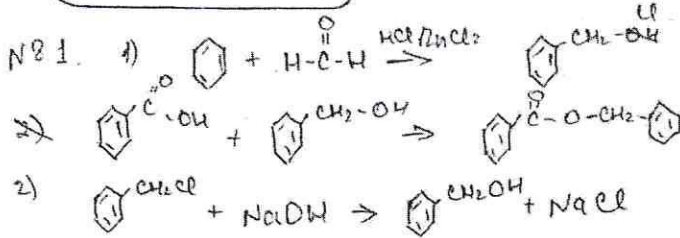
$n(\text{NO}_2) = 0,8$ $n(\text{Pd}) = 0,2$ $m = 42,4$



$n(\text{Au}) = 0,096$; $m = 12,82$

$\begin{cases} 2x + 2y = 0,8 \\ 106x + 195y = 33,926 \end{cases}$ $\begin{cases} x = 0,4 - y \\ 42,4 - 106y = 33,926 \end{cases}$





$n(\text{Na}_2\text{S}_2\text{O}_3) = 0,024$

$n(\text{I}_2) = 0,012$

$n(\text{O}) = 0,012 \cdot 5 = 2,46 / 1000$ все ОК! $w(\text{O}) = 3,84\%$

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