

$$m(C_{17}H_{26}O_3) = \frac{C(T) \cdot V_T \cdot M(C_{17}H_{26}O_3) \cdot V_K}{V_{II}} = \frac{0,1 \text{ моль} \cdot 6,8 \cdot 10^{-3} \text{ л} \cdot 238 \text{ моль/л} \cdot 0,05 \text{ л}}{0,01 \text{ л}} = 0,9452 \text{ г}$$

$$\omega(C_{17}H_{26}O_3) = \frac{0,9452}{0,995} = 0,95$$

0,95 · 100% = 95%

Ответ: 95%

1	2	3	4	5	6	7	8	9	10
6	4	X	6	6	6	12	4	1	12

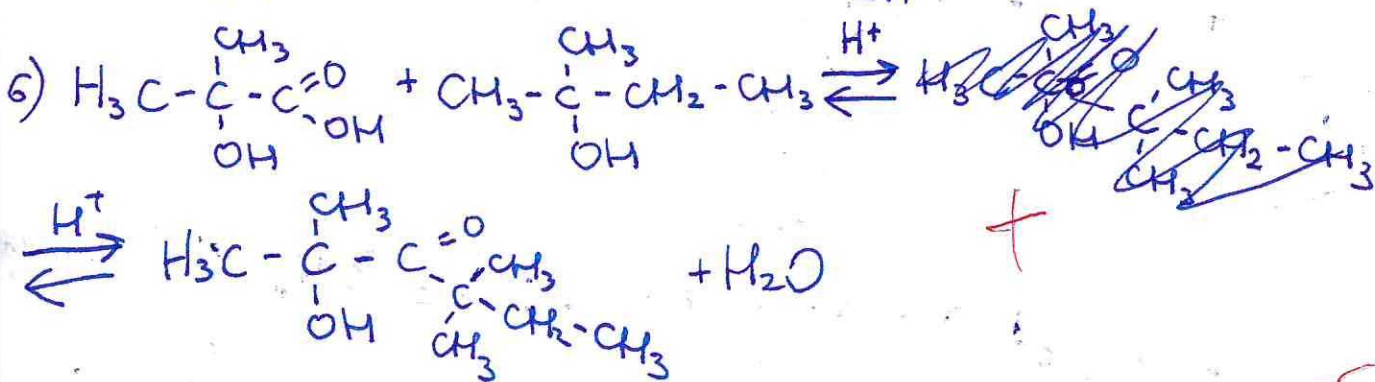
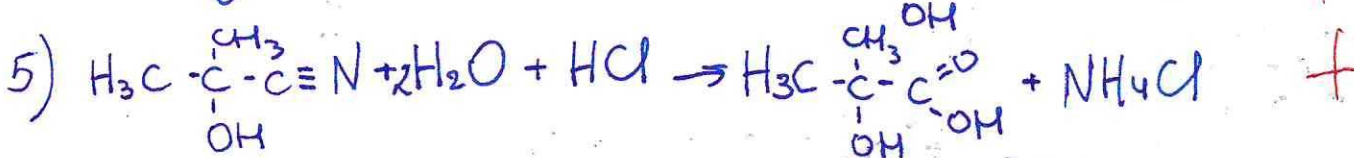
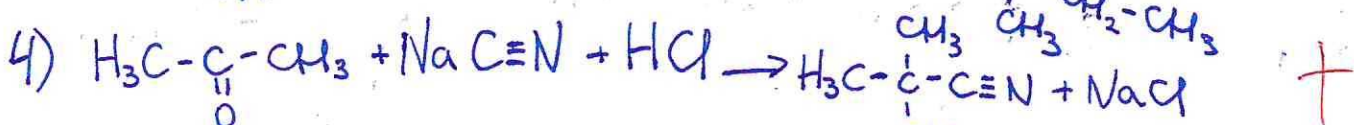
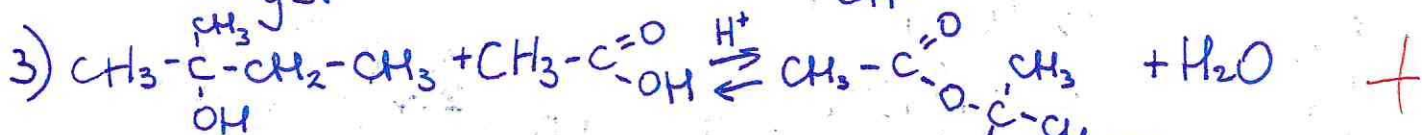
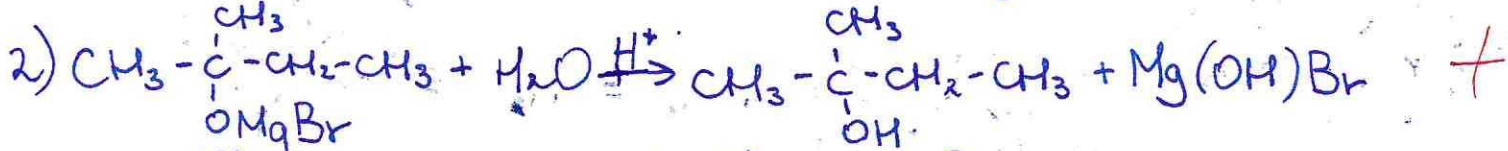
12 м

№7.1

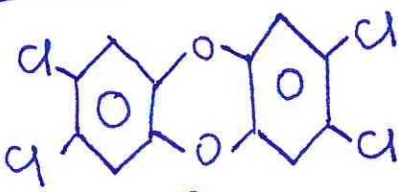
ЧИСТОВИК

Лист № 2

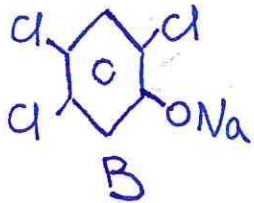
ВСОШ ХИМИЯ



№1.1



A



B

$35 + 3 = 65$

Пусть  $n(\text{C}_{12}\text{H}_4\text{Cl}_4\text{O}_2) = 10x$  моль  
 Тогда  $n(\text{C}_6\text{H}_2\text{Cl}_3\text{ONa}) = x$  моль

$m_{\text{смеси}} = m_1 + m_2 \quad m = n \cdot M$   
 $10x \cdot 322 + 219,5x = 100$   
 $3220x + 219,5x = 100$   
 $x = 0,02907$

~~Масса смеси = 100 г~~

~~$100 \text{ г} = 322 \cdot 10x + 219,5x$~~   
 ~~$100 \text{ г} = 10x + x$~~



СЕЧЕНОВСКИЙ  
УНИВЕРСИТЕТ

□ □ □ □ □

~~$3220x + 219,5x = 100$~~   
 ~~$100 \text{ г} = 322 \cdot 10x + 219,5x$~~   
 ~~$100 \text{ г} = 10x + x$~~

~~$x = 0,03086$~~   
 ~~$100 \text{ г} = 322 \cdot 10x + 219,5x$~~   
 ~~$x = 10 \text{ г} / 10x$~~



$$n_1(C_{12}H_4Cl_4O_2) = 10x = \cancel{0,2907} = 0,2907 \text{ моль}$$

$$n_2(C_6H_2Cl_3ONa) = 3x = \cancel{0,8721} = 0,8721 \text{ моль}$$

$$n_1(Cl) = 4 \cdot 10x = 40x = \cancel{11,628} = 1,1628 \text{ моль}$$

$$n_2(Cl) = 3x = \cancel{0,8721} = 0,8721 \text{ моль}$$

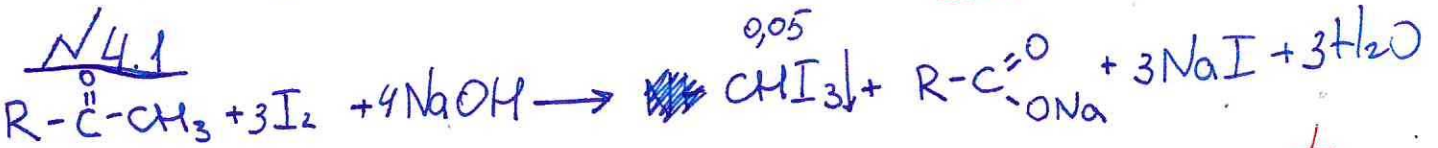
$$\Sigma = 43x = \cancel{18,45} = 1,25$$

$$m(Cl) = 1,25 \cdot 35,5 = 44,375$$

$$\cancel{m(Cl) = 1,25 \cdot 35,5 = 44,375}$$

Ответ: 44,375 г

~~0,2907 моль~~



C	:	H	:	I
$\frac{3,05}{12} = 0,25$		$100 - 96,7 - 3,05 = 0,25$	$= 0,25$	$\frac{96,7}{127} = 0,76$
1	:	1	:	3

$$n(CHI_3) = \frac{m}{M} = \frac{19,7}{394} = 0,05 \text{ моль}$$

$$n(CHI_3) + n(R-\overset{\overset{O}{\parallel}}{C}-ONa) = n(R-\overset{\overset{O}{\parallel}}{C}-CH_3) = 0,05 \text{ моль}$$

$$M = \frac{m}{n}$$

$$M(R-\overset{\overset{O}{\parallel}}{C}-ONa) = \frac{4,8 \text{ г}}{0,05 \text{ моль}} = 96 \text{ г/моль}$$

$$R + 12 + 32 + 23 = 96$$

$$R + 67 = 96$$

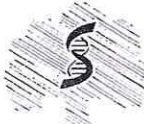
$$R = 29 \Rightarrow R \text{ это } H_3C-CH_2-$$



$$n(C_4H_{10}) = \frac{2,61}{58} = 0,045 \text{ - реакт}$$

$$n(C_4H_{10}) = n(CHI_3) = 0,05 \text{ - теор}$$

$$\eta = \frac{n_{\text{реакт}}}{n_{\text{теор}}} = \frac{0,045}{0,05} = 0,9 \quad 0,9 \cdot 100\% = 90\%$$



СЕЧЕНОВСКИЙ  
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$$n(I_2) = 3 \cdot 0,15$$

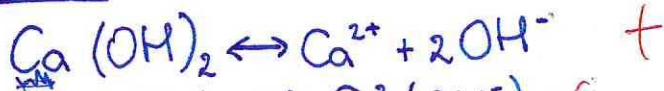
$$m(I) = 0,15 \cdot 71 = 10,65 \text{ г}$$

52

65

ZnCl<sub>2</sub>

№5.1



$$K_s = \tilde{c}(\text{Ca}^{2+}) \cdot \tilde{c}^2(\text{OH}^-)$$

$$K_s = x \cdot (2x)^2 \quad K_s = 4x^3$$

$$x = \sqrt[3]{\frac{6,2 \cdot 10^{-6}}{4}} \quad x = 1,157 \cdot 10^{-2}$$

$$x = \sqrt[3]{1,55 \cdot 10^{-6}}$$

$$V = \frac{m}{c \cdot M} = \frac{2}{0,85618} = 2,335957$$

Ответ: 2,335957

№8.1

Пусть  $n(\text{NH}_3) = x$

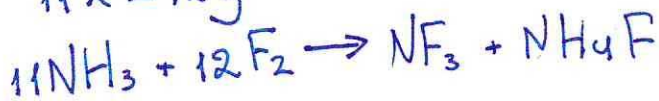
тогда  $n(\text{F}_2) = y$

$$M_{\text{ср}} = \frac{n_1 M_1 + n_2 M_2}{n_1 + n_2}$$

$$M_{\text{ср}} = \frac{15x + 38y}{x + y} = 26 \text{ г/моль}$$

$$26x + 26y = 15x + 38y$$

$$11x = 12y$$



$$\text{NH}_3 : \text{F}_2 = 11 : 12$$

№9.1

вес-во  $x = \text{K}_2\text{O}_2$

вес-во  $y = \text{K}_2\text{O}$







~~$M_{sp} = \frac{n_1 M_1 + n_2 M_2}{n_1 + n_2}$~~



№ 6.1

Пусть  $Ar(NaCO_3)$

Пусть  $Ar(x) = x$

$0,5175 = \frac{x}{55+x}$

~~$x = 55$~~

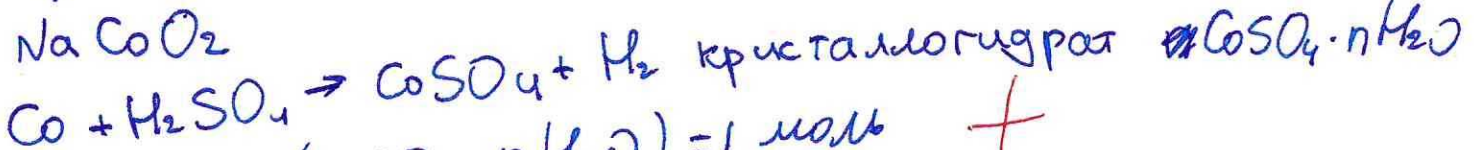
$1,932x = 55 + x$

$0,932x = 55$

$x = 59 \text{ (Co)}$

↓

$Na_2CO_3$



Пусть  $n(CoSO_4 \cdot nH_2O) = 1 \text{ моль}$

$\frac{m(O_2)}{m(H)} = 12,57$

~~$n = 5$~~   
 $n = 5$

$\frac{128+n}{2n} = 12,57$



№2.1

10 мг - 1 мл

x мг - 5 мл

x = 50 мг

50 мг - 0,5 мл

y мг - 1 мл

y = ~~50~~  $\frac{50}{0,5} = 100$  мг

~~50 мг - 0,5 мл  
y мг - 1 мл  
y = 100~~

$\frac{0,69}{16} = \frac{0,69}{16} = 0,43125$

~~0,69~~  $\ln \frac{C_0}{C_t} = \frac{0,69}{16} = 0,43125$

~~0,69~~  
0,69  
С<sub>0</sub> = 100 мг  
С<sub>t</sub> = 10 мг  
2 : 1

3

1 - 2 = 4

X

