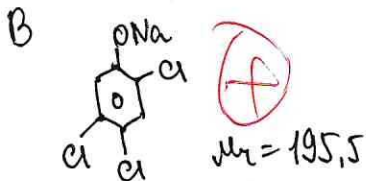
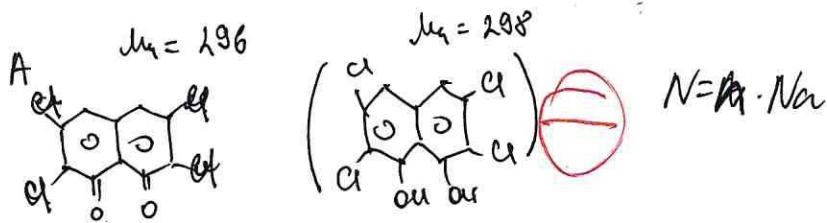


№ 1.2



1	2	3	4	5	6	7	8	9	10
3	10	26	6	5	1	10	1	0	

В смеси $16 \text{ e} = 96,52 \cdot 10^{23} \text{ атомов}$
 $0,299 \text{ e} = 1,805 \cdot 10^{23}$

на 1 моль б.б.:

$16 \text{ e} = 493,5$
 $0,5 \text{ e} = 8,6862 \text{ / моль} = 8,6862$

P

В смеси $4 \text{ e} = 4 \cdot 6,02 \cdot 10^{23} = 24,08 \cdot 10^{23}$
 $0,11 \text{ e} = 0,6622 \cdot 10^{23}$

$\frac{0,6622 \cdot 10^{23} \cdot 4}{24,08 \cdot 10^{23}} = 0,11 \text{ e}$

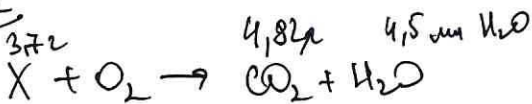
на 1 моль б.б.:

$4 \text{ e} = 493,5 \text{ e / моль}$
 $0,11 \text{ e} = 7,755 \text{ e / моль}$

$= 7,755 \text{ e}$

(-)

№ 2.2



$pV = nRT$

$101 \cdot 4,82 = X \cdot R \cdot (273 + 20)$

$X(n_{CO_2}) = 0,199 \text{ моль}$ $\omega_2 = n \text{ (e)}$

$m(C) = 0,199 \cdot 12 = 2,39 \text{ e} \approx 2,4 \text{ e}$

P

§ СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

АХ АС А

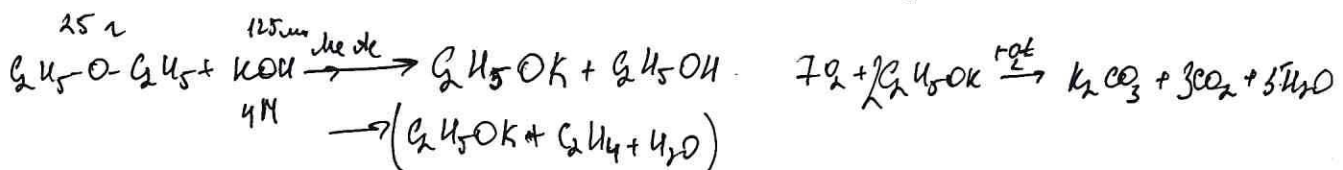
$$n(H) = 2n(H_2O) = 2 \cdot \frac{4,5}{18} = 0,5 \text{ моль} \quad m(H) = 0,5 \cdot 2$$

$$m(H_2O) = 4,5 \cdot 1 = 4,5 \text{ г}$$

$$m(O)_{\text{вх}} = 3,7 - 0,5 - 2,4 = 0,8 \text{ г}$$

$$n(O)_{\text{вх}} = \frac{0,8}{16} = 0,05 \text{ моль} \Rightarrow n(C) : n(H) : n(O) = 0,2 : 0,5 : 0,05 = 4 : 10 : 1 \Rightarrow C_4H_{10}O \Rightarrow$$

дистилловый спирт $C_2H_5-O-C_2H_5$



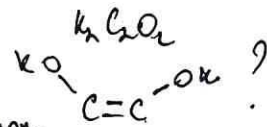
$$n(KOH) = 0,5 \text{ моль} - \text{изв}$$

$$\frac{4}{1000} = \frac{0,5}{125}$$

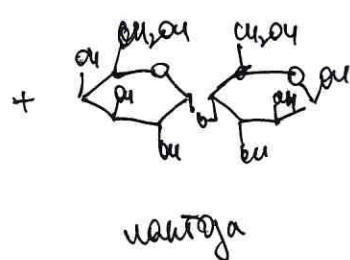
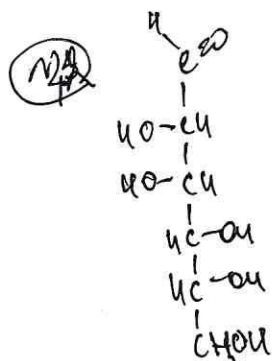
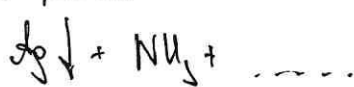
$$n(\text{глюкоз.}) = \frac{25}{174} = 0,1437 \text{ моль} - \text{негос.} \Rightarrow \text{полностью окислит глюкозу} \quad \omega = 0$$

$$\text{Если } n(K) = 1,70 \quad \frac{39}{M_r} = 0,5875 \Rightarrow M_r = 66,4 - 39 = 27,4 \quad KCO?$$

$$n(K) = 2,10 \quad \frac{39 \cdot 2}{M_r} = 0,5875 \Rightarrow M_r = 132,8 - 39 \cdot 2 = 54,8 \quad K_2C_2O_4H_{11}$$



оптимально



D-манноза

510 г



10%

$$n(AgNO_3) = n(Ag) = \frac{510 - 0,1}{M_r(AgNO_3)} = 20,5 \text{ моль}$$

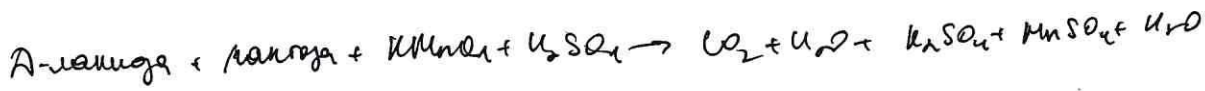
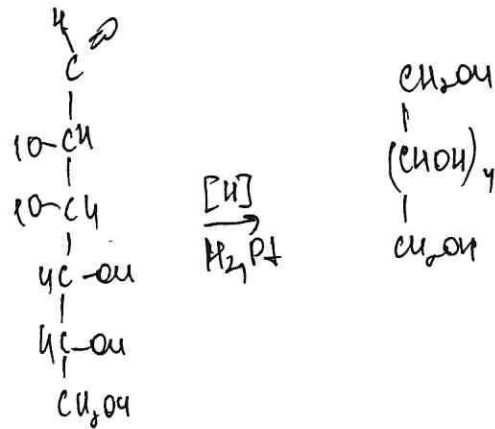
$$= n(D\text{-манноза})$$

$$m(D\text{-манноза}) = 0,3 \cdot 178 = 53,4$$



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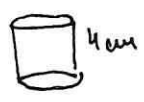


$pV = nRT$

$101,5 \cdot 27,8 = n \cdot R \cdot (273 + 10)$

$x = 1,2$ моль - $n(\text{CO}_2)$ после сжигания

N 5.2

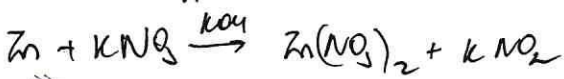
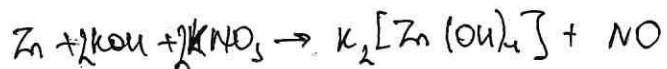
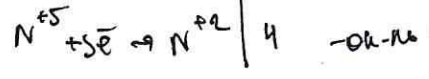
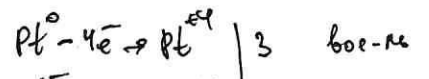
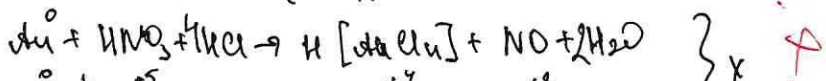
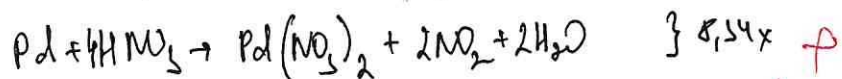


$S_{\text{крышки}} = \pi r^2 = 0,8^2 \cdot 3,14 = 1,1304 \text{ см}^2$

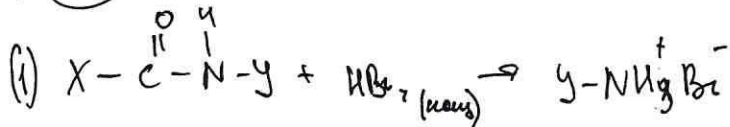
$V_{\text{ци}} = 4 \cdot 1,1304 = 4,5216 \text{ см}^3 = 4,5216 \cdot 10^{-6} \text{ м}^3$



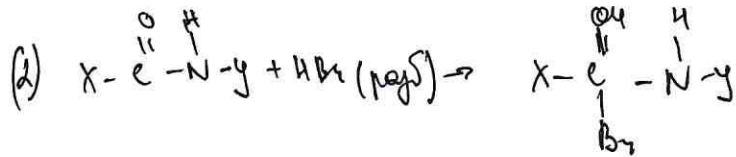
$n(\text{ш}) = 4,5216 \cdot 12800 \cdot 10^{-6} = 0,0578 \text{ м} = 57,8 \text{ мкм}$



№ 6.2



w(Br) 47,06



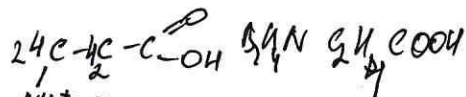
w(Br) 22,925

Пусть n Br в p.(1) = 1, тогда

$$\frac{80}{M_r} = 0,4706$$

M_r = 170 число

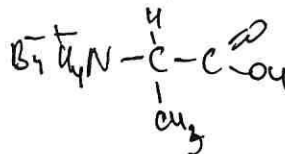
$$M_r = 170 - 80 = 90 - 14 - 3 = 72 - 12 - 16 - 16 - 1 = 28 \quad (\text{C}_2\text{H}_4)$$



← первое Аминокислота

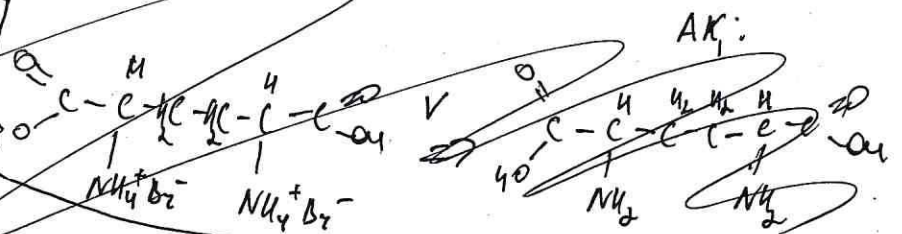
M_r = 157 число

~~при n=2, M_r=340~~



~~$$340 - 80 - 80 - 14 - 14 - 8 - 12 - 12 - 32 - 2 = 2 = 54 = \text{C}_4\text{H}_6$$~~

~~$$540 - 80 - 80 - 14 - 14 - 8 - 12 - 32 - 2 = 98$$~~



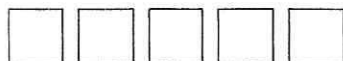
Пусть n Br в p.(2) = 1, тогда

$$\frac{80}{M_r} = 0,22925$$

M_r = 349

~~$$349 - 80 = 269 - 16 - 2 - 14 = 237 - 176 = 61 = 1 = 60 - 14 - 2$$~~

~~$$269 - 176 = 93 - 1 = 92 - 12 - 17 = 63 - 14 - 2 = 47$$~~



№ 6.2 продолжение

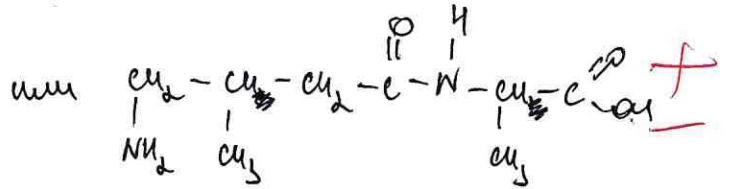
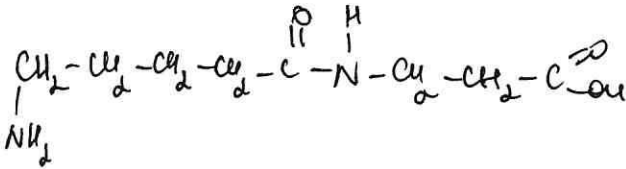
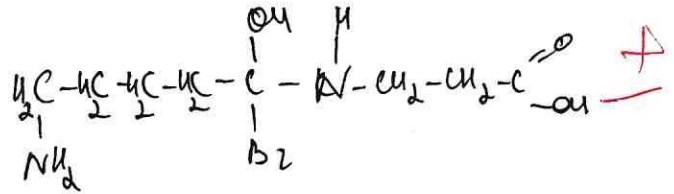
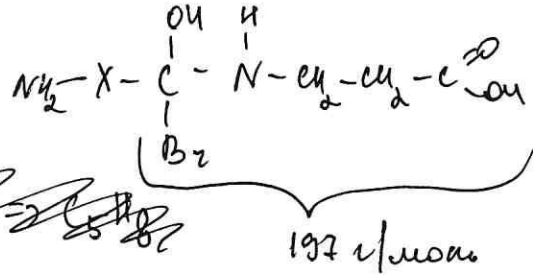
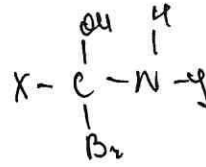
т.е. $n(\text{Br})$ в р-ции (2) = 1, тогда

$$\frac{80}{M_r} = 0,29925$$

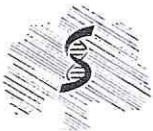
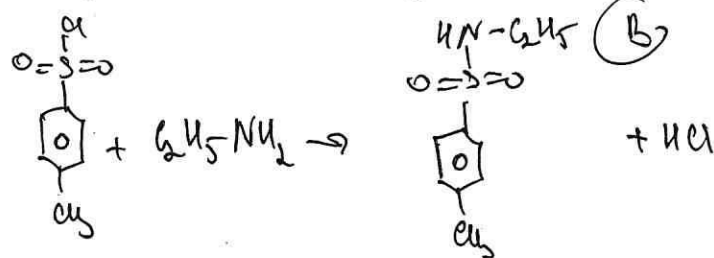
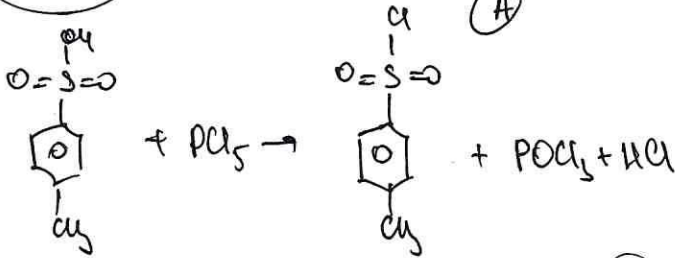
$$M_r = 349 \text{ г/моль}$$

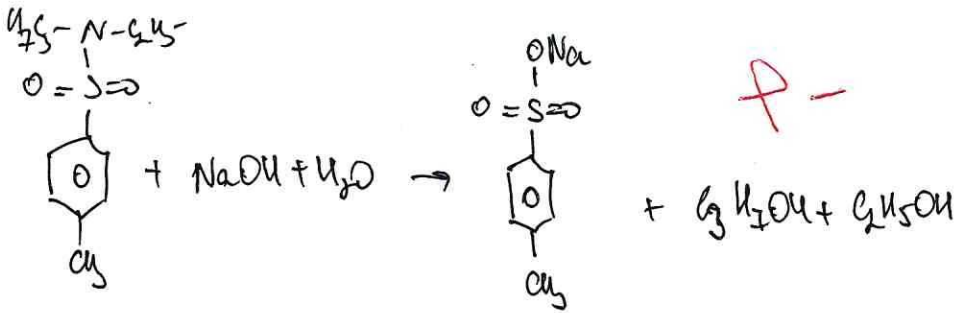
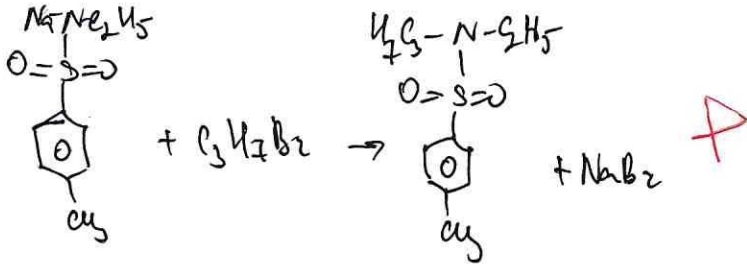
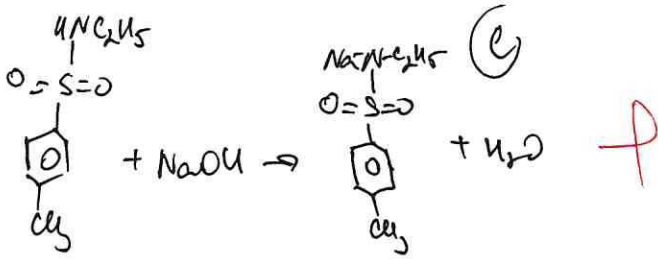
~~$349 - 80 - 156 - 12 - 14 = 84 - 14 \cdot 2 = 68 \Rightarrow C_5H_8$~~

$$349 - 80 - 197 - (NH_2) = 56 \Rightarrow C_4H_8 \Rightarrow$$



№ 8.2





N7.2



N9.2

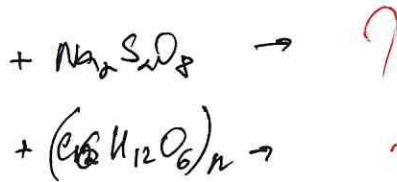
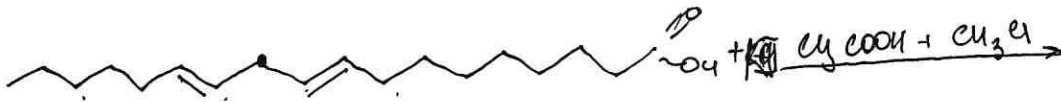
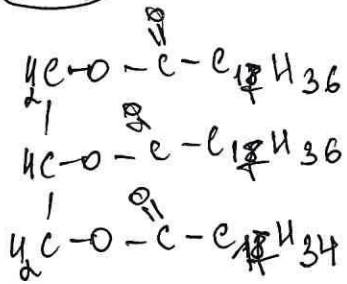


цитирин

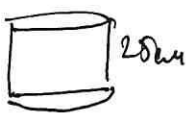
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N10.2



N32



$$S_{\text{шляпки}} = \pi r^2 = 2,5^2 \cdot 3,14 = 19,625 \text{ см}^2$$

$$V_{\text{шляпки}} = 25 \cdot 19,625 = 490,625 \text{ см}^3 \approx 490,6 \text{ л}$$

$$m(\text{ук}) = 50 \cdot 1,0685 = 53,425 \text{ г}$$

$$n(\text{ук}) = 0,05 \cdot 12,46 = 0,623 \text{ моль}$$

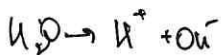
$$m(\text{ук})_{\text{мас}} = 0,623 \cdot 60 = 37,38 \text{ г}$$

$$m(\text{H}_2\text{O})_{\text{б-р}} = 53,425 - 37,38 = 16,045 \text{ г}$$

$$60\% V_{\text{шляпки}} = 294,375 \text{ л}$$

$$= 294,375 \text{ кг} = 294,375 \text{ л}$$

$$m(\text{H}_2\text{O})_{\text{обш}} = 294,375 + 16,045 = 294,391,045 \text{ г}$$



$$n(\text{H}_2\text{O})_{\text{обш}} = \frac{294391}{18} = 16355 \text{ моль}$$

$$\text{pH} = -\lg [\text{H}^+]$$

