

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

4456

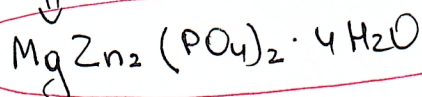
N 1.3

$$\frac{18 \cdot x}{18x + 24 + 65 \cdot 2 + (31 + 16 \cdot 4) \cdot 2} = 0,1731$$

5

$$x = 4,008 \approx 4$$

A simple hand-drawn smiley face with two vertical lines for eyes and a curved line for a mouth, drawn on a red horizontal line.



N 2.3

B

 $0,3517$

10,2

F

0,6076

/ 19

M

$$1 - 0,3517 - 0,6076$$

0, 0326

0,03198

0,041

1

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1

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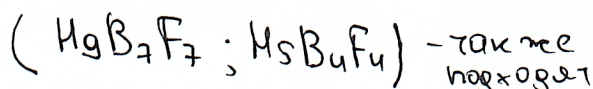
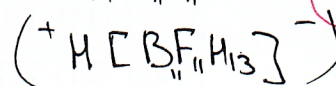
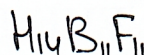
•

W

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(4)

→



СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

10x052

№ 3.3

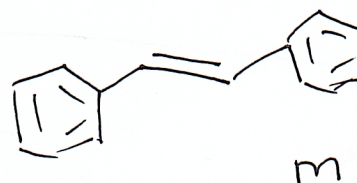
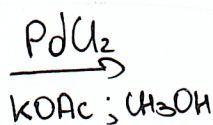
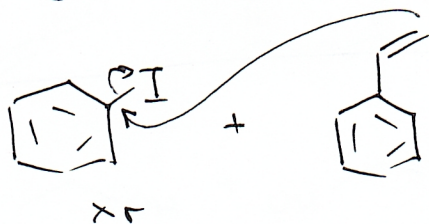
реакц. 2 :



реакц. 1 :

$$M^{\uparrow} = 224 \text{ г/моль}$$

$$M = 180 \text{ г/моль}$$



Пусть $\eta = 2$

$$\begin{cases} 2 \cdot \frac{16,8}{224} = \frac{m}{180} & -(2) \\ 1,52 \cdot \frac{x \text{ г}}{204} = \frac{m}{180} & \rightarrow (1) \end{cases}$$

$$\frac{2 \cdot 16,8 \cdot 204}{224 \cdot 1,52 \cdot x} = \frac{m \cdot 180}{180 \cdot m}$$

$$\frac{16,8 \cdot 204}{224 \cdot 1,52} = 1$$

$$x = 10,2 \text{ г}$$

$$m(\text{C}_6\text{H}_5\text{I}) = 10,2 \text{ г}$$

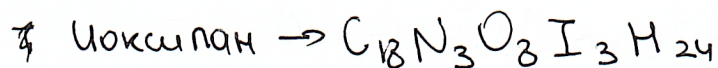
+ 80



СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

10 X O 5 2

№ 4.3



$$M = 791 \text{ г/моль}$$

$$M(I \text{ в иоксипане}) = 381 \text{ г/моль}$$

Пусть $\rho_{\text{р-ра}} = 1 \text{ мл/г} = 1 \text{ см}^3/\text{г}$

$\Downarrow$

$$20 \text{ мл} = 20 \text{ г}$$

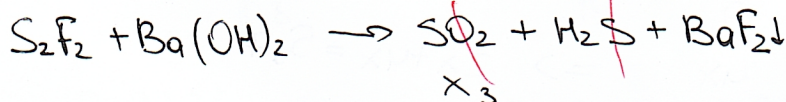
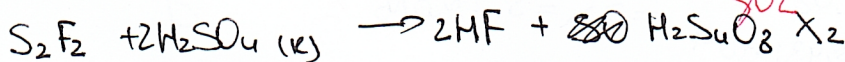
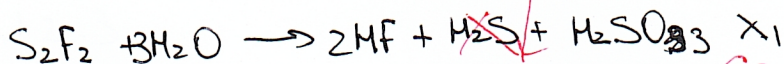
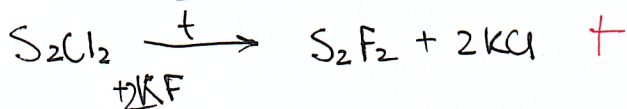
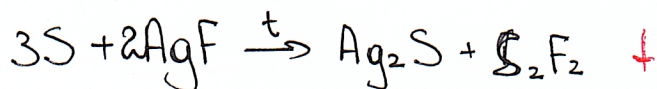
В 20 г содержится ~~20~~ $20 \cdot 0,727 = 14,54 \text{ г}$ - иоксипана

$\Downarrow$

$$\begin{array}{rcl} 14,54 \text{ г} & - x \text{ г } I & \Rightarrow x = 7 \text{ г} \\ 791 \text{ г} & - 381 \text{ г} & \end{array} \quad + 85$$

Отв: в организме человека попадает 7 г I.

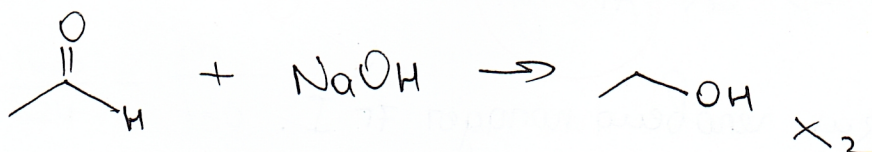
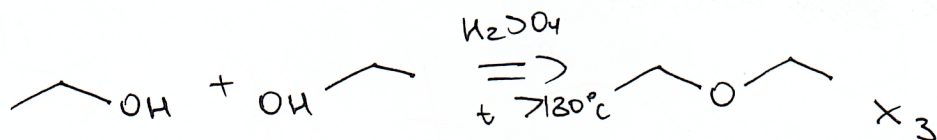
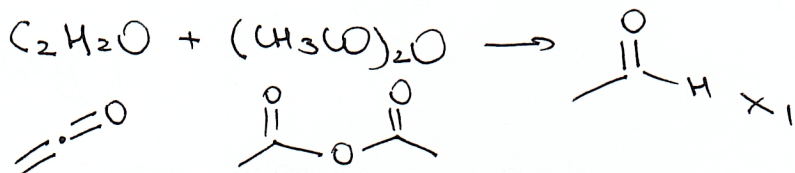
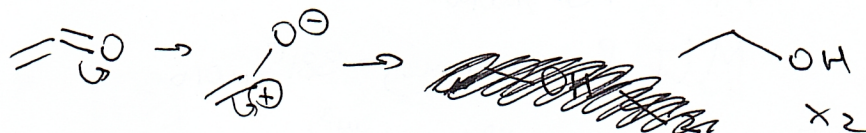
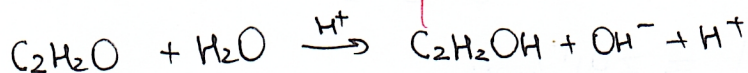
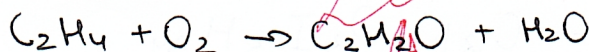
№ 5.3



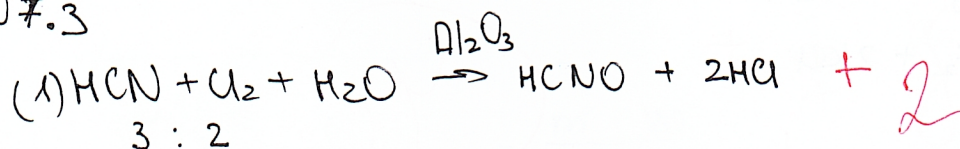
СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

10 X O S 2

№ 6.3



№ 7.3



Если 1 моль - 6,02 · 10²³
x моль - 3,431 · 10²⁴ ⇒ x = 5,7 моль

Б	3x	2x	0	0	⇒ 2x + 4x = 5,7 x = 0,95
Н	2x	2x	2x	4x	
С	x	0	2x	4x	

Пусть S_{было} → 3x n(HCN) и 2x (Cl₂)

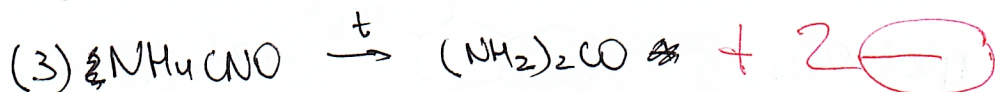
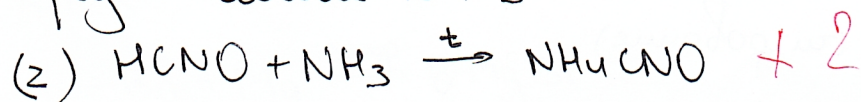
n(HCN) = 1,9 моль



СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

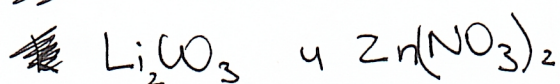
10 x 0 5 2

Продолжение №7.3



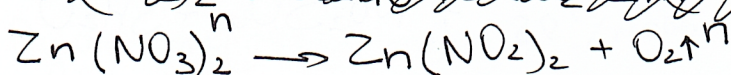
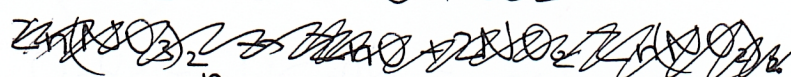
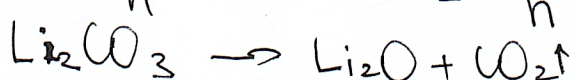
$m(\text{NH}_4\text{CNO}) = 1,9 \cdot M_{\text{NH}_4\text{CNO}} = 1,9 \cdot 60 = 114 \text{ г}$

~~№8.3~~ №9.3



$m_1 \neq m_2$

$n_1 = n_2$



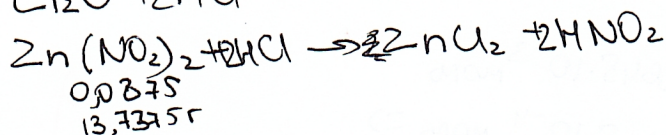
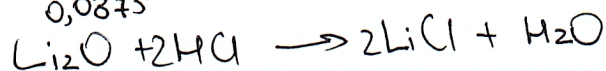
$pV = nRT$

$n = \frac{pV}{RT} = \frac{101,2 \cdot 4,21}{8,314 \cdot 293} = 0,175 \text{ моль}$

$n + n = 0,175$

$n = 0,0875 \text{ моль}$

$\frac{2,625 \text{ г}}{0,0875}$



$m(\text{HCl р-ра}) = 108 \text{ г}$

$m(\text{HCl}) = 12,96 \text{ г}$

$m(\text{LiCl}) = 0,0875 \cdot 2 \cdot M = 7,44 \text{ г}$ $m(\text{HCl ост}) = 0,1825 \text{ г}$

$m(\text{ZnCl}_2) = 0,0875 \cdot M = 11,9 \text{ г}$

$\sum m \text{ HCl} = 0,35 \text{ моль}$

$n \text{ HCl ост} = 5 \cdot 10^{-3} \text{ моль}$

$\omega(\text{LiCl}) = \frac{7,44}{108 + 2,625 \text{ г} + 13,7375 \text{ г}} =$

$= 0,06 = 6\%$

$\omega(\text{ZnCl}_2) = 0,096 = 9,6\%$

$\omega(\text{HCl ост}) = 1,47 \cdot 10^{-3} = 0,147\%$

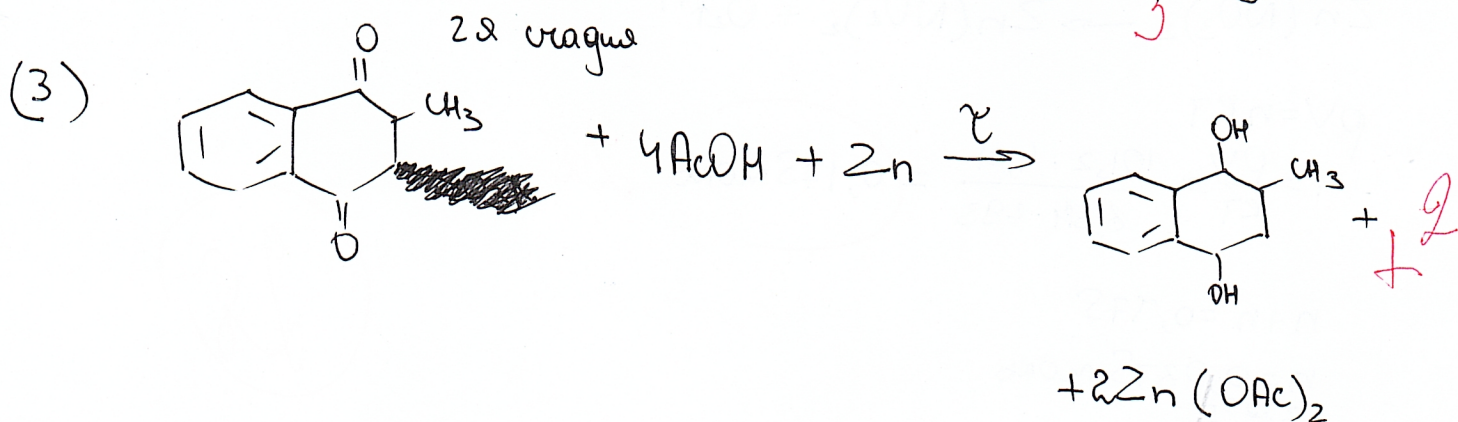
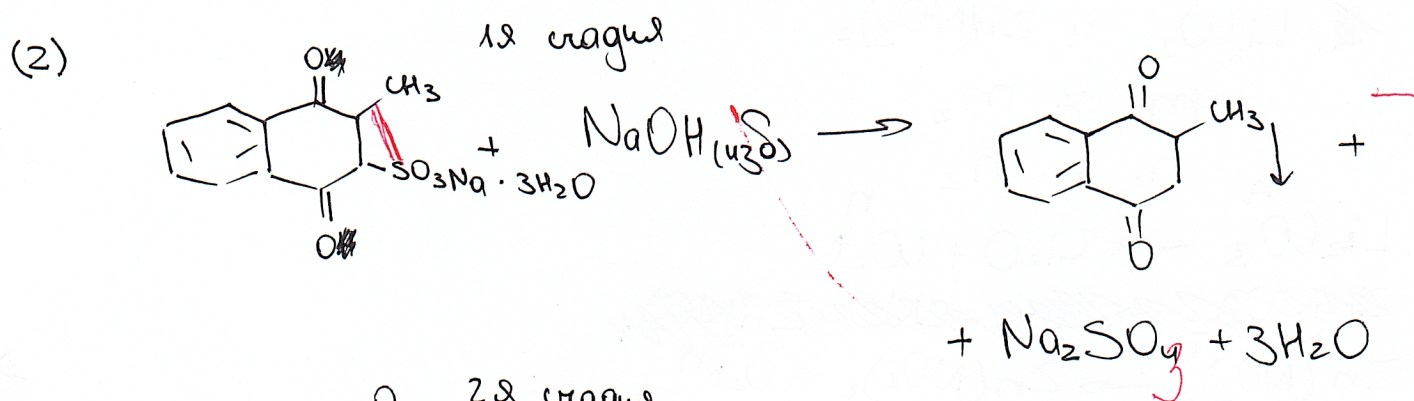
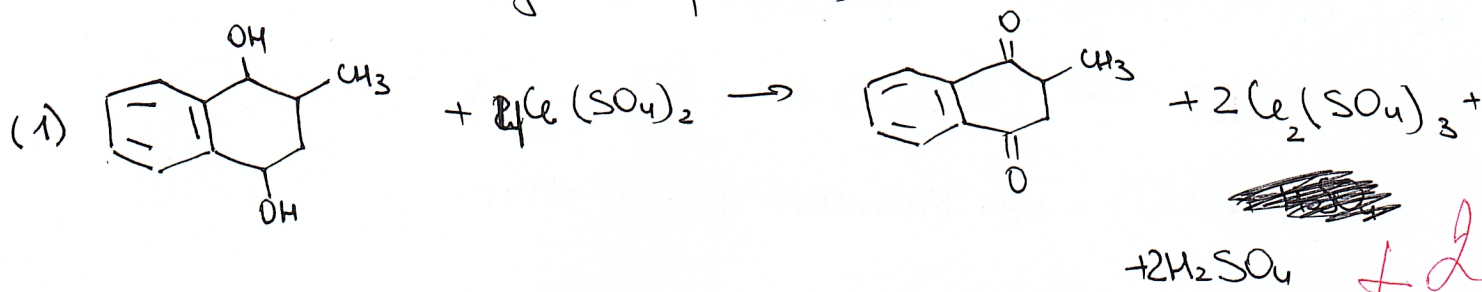


СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

10052

№10.3

3х шагов (титрование)



Расчеты:

$$n(\text{Ce}(\text{SO}_4)_2) = 0,1 \cdot \frac{16,45}{1000} = 1,645 \cdot 10^{-3} \text{ моль}$$

$$n(\text{C}_{11}\text{O}_2\text{H}_{11}) = \frac{1,645 \cdot 10^{-3}}{4} = 4,1125 \cdot 10^{-4} \text{ моль} \Rightarrow$$

Везде реакт. 1:1 $\Rightarrow$ викасола $4,1125 \cdot 10^{-4}$ моль в препарате

$$M(\text{викасола}) = \text{C}_{11}\text{O}_2\text{H}_8\text{SO}_3\text{Na} \cdot 3\text{H}_2\text{O} = 329 \text{ г/моль}$$

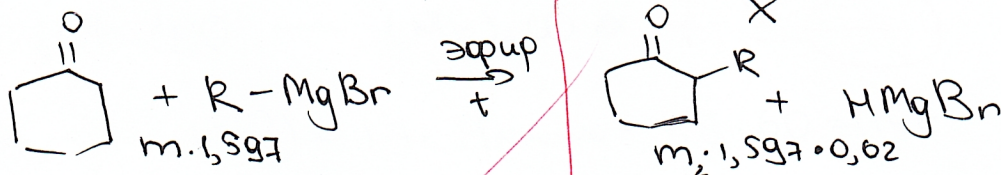
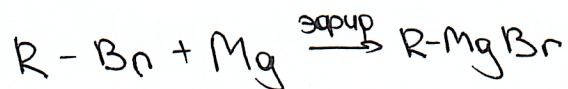
$$m(\text{викасола}) = 0,1353 \text{ г} \Rightarrow \omega(\text{викасола в препарате}) = \frac{0,1353}{0,28} = 0,483 = 48,3\%$$



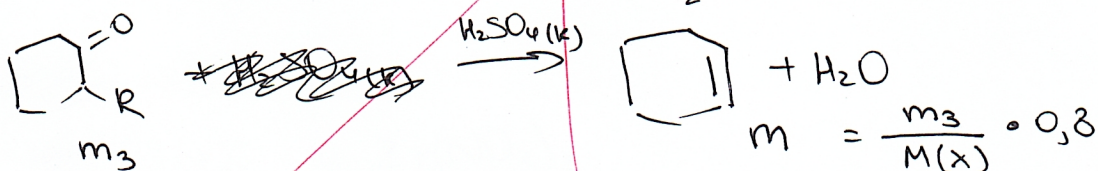
СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

10 x 0 5 2

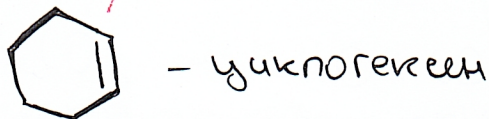
№ 3



$$m_2 = \frac{m \cdot 1,597}{98 \text{ г/моль}}$$



Структурная формула полученного циклоалкена:



Пусть $m = M(\text{у.гек-на}) = 98 \text{ г/моль}$

m

