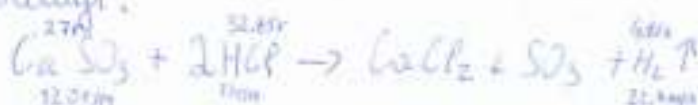


N=1

Берілгені:

 $Me(II) - Ca$ $X(IV) - SO_3$ $V(H_2) = 4,05л$

Шешуі:



$$\frac{m}{M} = \frac{27n}{120n} = 0,225 \text{ моль}$$

 $V =$

$$m(HCl) = M \cdot V = 73,1r \cdot 0,45m = 32,85r$$

$$0,225m : 0,45m = 1:2$$

$$m = pV = 1,165r/m \cdot 4,05л = 5,23 \approx 5,7r$$

Жауабы: $CaSO_3$, $m = 5,7r$, $1:2$ уясы.

N3.

Берілгені:

 $(p = 3,13r/m)$

Шешуі:

$$w(Cl) = \frac{m(Cl)}{m(A)} = \frac{0,15r}{0,632r} \cdot 100\% = 23,7\%$$

 $C_n H_n = ?$ $X, A, B \text{ нәрсесі?}$

1) Реакциясы?

2) $w(Cl)$?

$$V(H_2) = \frac{m}{M} = \frac{0,632r}{193,5r/m} = 0,004m$$

$$m(Cl_2) = M \cdot V = 35,5r/m \cdot 0,004m = 0,15r$$

4 Задача

1) $M(x) = \rho \cdot V_m = 3,132/n \text{ лд, ч л / моль} = 70,112 \text{ г / моль}$

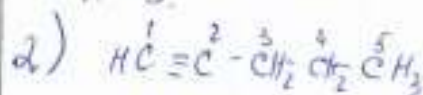
$C_n H_{2n} = 70 \text{ г / моль}$

(т.к. не обесцв. $KMnO_4$)

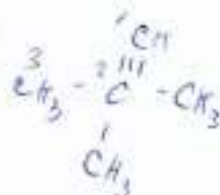
$12n + 2n = 70$

$14n = 70 \Rightarrow C_5 H_{10} / \text{ПЕНТАН}$

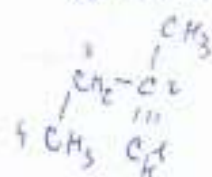
$n = 5$



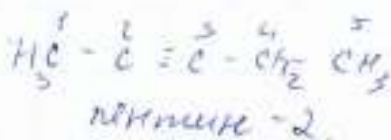
3-пентин-1



2,2-диметилпропан-1

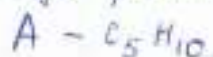


2-метилбутан-1



пентин-2

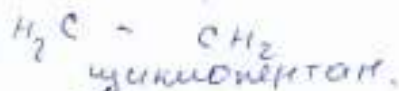
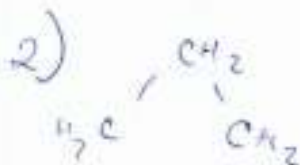
3) X - $C_5 H_{10}$ (т.к. молярная масса совпадает, так же не обесцв. раствором $KMnO_4$)



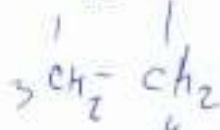
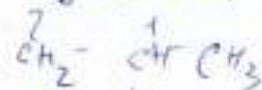
(т.к. $C_5 H_{10}$ насыщенный углеводород)

B -

C -

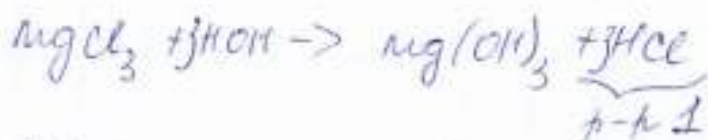
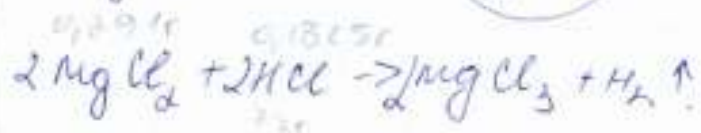
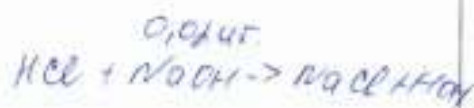
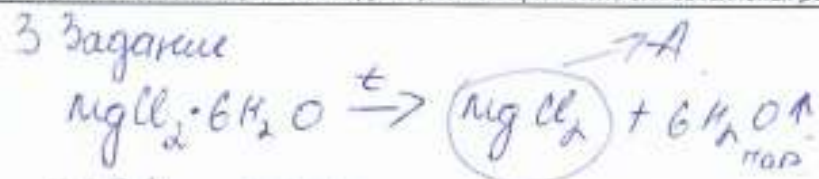


циклопентан.



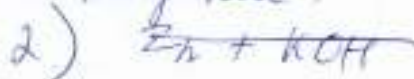
4-метилциклобутан

3 Задача



$$1) w(\text{Cl}) \text{ в } \text{MgCl}_2 = \frac{71}{95} \cdot 100\% = 74,73\%$$

1 Задача



Задача 2.

B - Cl_2

A -

B -

Г -

~~A~~ + X -

1 Задача

 $\text{Me} + 2\text{HCl} \rightarrow \text{MeCl}_2 + \text{H}_2 \uparrow$ $11,2 \text{ л} = 3 \text{ экв./моль}$

$$n(\text{H}_2)_{\text{экв}} = \frac{4,3 \text{ л}}{11,2 \text{ л экв./моль}} = 0,429 \text{ экв./моль}$$

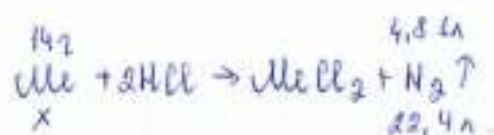
$$M_3(\text{Me}) = \frac{M(\text{Me})}{n_2(\text{H}_2)} = \frac{14r}{0,429} = 32,62$$

$$M_3(\text{Me}) = \frac{Ar}{B} = Ar(\text{Me}) = M_3 \cdot A = 32,62 \cdot 2 \approx 652 \Rightarrow \text{Zn}$$

$$\omega(\text{Zn}) = \frac{10}{167} \cdot 100\% = 5,98\%$$

$$\omega(\text{X}) = 43,2\%$$

№1 Заттар үлестісі.



$$x = \frac{22,4 \cdot 14}{4,8} = 65,2$$

$$65,2 - \text{Zn}$$

$$27 - 14 = 132$$

$$\frac{14}{27} \cdot 100\% = 51,8\% (\text{Zn})$$

$$\frac{13}{24} \cdot 100\% = 54,2\%$$

№2. Күрделі заттар.

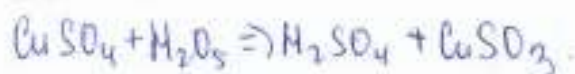
Реакция:

$$w(x) = 80,2\%$$

$$B = 0,202$$

$$m(B) = 52$$

$$B \cdot n \text{H}_2\text{O} = 9,042$$



Есеп №4 Бағалық қайыратқыс

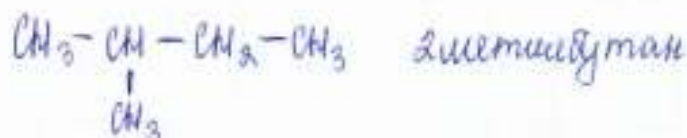
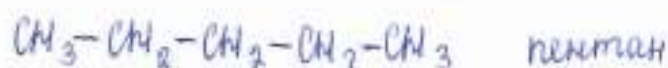
$$D(x) = 3,132/4$$

$$M = \rho \cdot V_m = 3,132/4 \cdot 22,4 \text{ л/моль} = 70,112 \text{ г/моль}$$

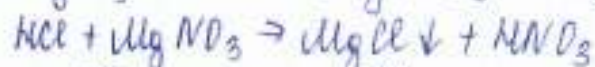
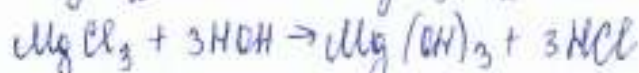
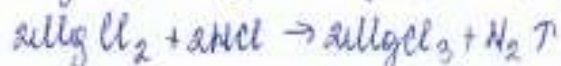
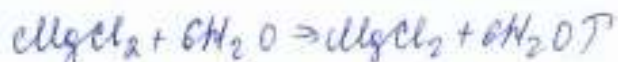
$$10 + 2n + 2 = 70,112 \text{ г/моль}$$

$$14n = 68,112$$

$$n = 4,865 \approx 5 \quad C_5H_{12}$$

Изомерлері (C_5H_{12}):

Есеп №3 Фосфорит



$$1) \omega(Cl) \text{ } MgCl_2 = \frac{71}{95} \cdot 100\% = 74,7\%$$

Задача №4. Кеңітпейтін углеводород

1) Дірегімізін молекулалық формулаға X және бұл үшін табыңыз оның молекулалық массасы:

$$M(X) = \rho \cdot V_m = 3,13 \cdot 22,4 \cdot 10^{-3} = 70,112 \text{ г/моль}$$

Біз білеміз, бұл углеводород қанбақтандырмайды қызылтан, сондықтан да X — циклопентан:

$$12n + 2n + 2 = 70,112 \quad C_n H_{2n+2}$$

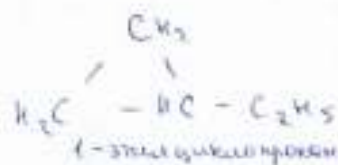
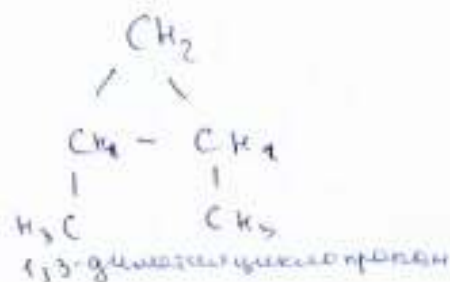
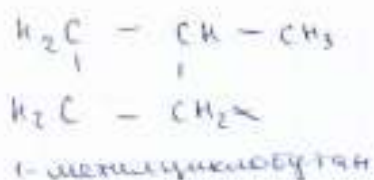
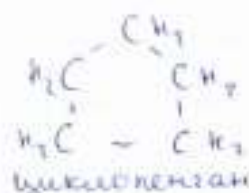
$$14n + 2 = 70,112$$

$$14n = 68,112$$

$$n = 4,86$$

$$n \approx 5 \quad C_5 H_{10}$$

2) Измеряем циклопентан $C_5 H_{10}$:



3) Вещество X — $C_5 H_{10}$ (циклопентан)
вещество

N1. Силезь вшыгелб

$$\frac{m=14r}{M=37}$$



$$V = 4,81 \text{ л}$$

$$M(Me) = 27r - 13r = 14r$$

$$\left. \begin{array}{l} Me + HCl \rightarrow MeCl_2 + H_2 \\ X + HCl \rightarrow XCl + H_2 \end{array} \right\} 4,81 \text{ л} = V(H_2)$$

$$V_{\text{экр}}(H_2) = \frac{V_{\text{м}}}{\nu \cdot N} = 11,2 \text{ л}$$

$$n_{\text{экв}}(Me) = n_{\text{экв}}(H_2)$$

$$n_{\text{экв}}(H_2) = \frac{V(H_2)}{V_0(H_2)} = \frac{4,81 \text{ л}}{11,2 \text{ л}} = 0,429 \text{ моль}_{\text{экв}}$$

$$M_2(Me) = \frac{M(Me)}{n_{\text{экв}}(Me)} = \frac{14r}{0,429 \text{ моль}_{\text{экв}}} = 32,6 \text{ г/моль}_{\text{экв}}$$

$$M_3(Me) = \frac{Ar(Me)}{\nu} \Rightarrow Ar(Me) = M_2(Me) \cdot \nu(Me) = 32,6 \cdot 2 = 65,2 \approx 65 - Me - Zn$$

$$\omega(Me) = \frac{14r}{27r} = 0,518 \cdot 100\% = 51,8\%$$

$$\omega(X) = 100\% - 51,8\% = 48,1\%$$

N3. Бишофит

вшыгелб А - $MgCl_2$ 

$$1) \omega(Cl) = \frac{71r}{95r} \cdot 100\% = 74,73\%$$