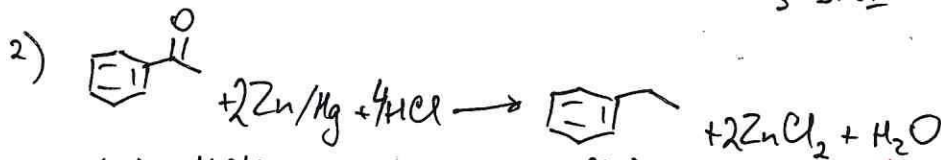
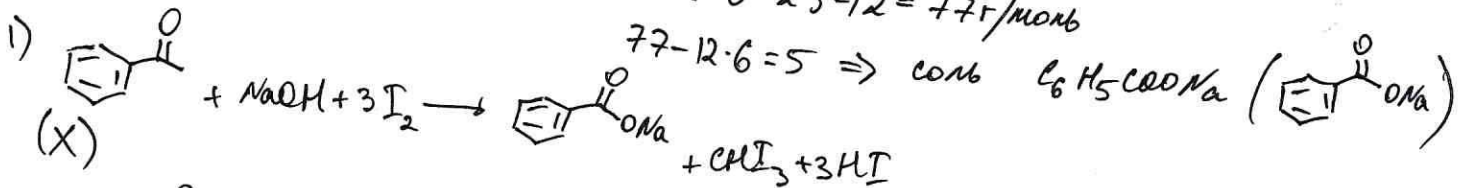


4.2. Пусть  $m(\text{осадок}) = 100\text{г}$ , тогда  $n(\text{C}):n(\text{H}):n(\text{I}) = \frac{3,1}{12} : \frac{96,7}{127} : \frac{0,25}{1} = 1:3:1$   
 $\Rightarrow \text{CHI}_3$  - осадок.  $n(\text{CHI}_3) = \frac{17,73}{394} = 0,045 \text{ моль}$ . Пусть  $n(\text{CHI}_3) = n(\text{соли})$ , тогда  
 $M(\text{соли}) = \frac{6,48\text{г}}{0,045 \text{ моль}} = 144\text{г/моль}$ ;  $144 - 2 \cdot 16 - 23 - 12 = 77\text{г/моль}$   
 $77 - 12 \cdot 6 = 5 \Rightarrow$  соль  $\text{C}_6\text{H}_5\text{COONa}$  (c1ccccc1C(=O)O[Na])

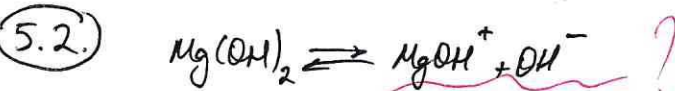


$n(\text{Y}) = \frac{4,24}{4,77} \cdot 100\% = 88,89\%$   $n(\text{X}) = n(\text{Y})$ ;  $m_{\text{T.}}(\text{Y}) = 0,045 \cdot 106 = 4,77\text{г}$

$n(\text{I}_2) = 3n(\text{CHI}_3) = 0,135 \text{ моль}$

$m(\text{I}_2) = \frac{0,135}{254} = 34,29\text{г}$

45



$K_p = [\text{MgOH}^+][\text{OH}^-]$

$x^2 = 6,8 \cdot 10^{-12}$

$x = 2,6 \cdot 10^{-6}$

$[\text{H}^+] = \frac{K_w}{[\text{OH}^-]} = \frac{10^{-14}}{2,6 \cdot 10^{-6}} = 0,385 \cdot 10^{-8} \text{ M}$

$\text{pH} = -\lg 0,385 \cdot 10^{-8} = 8,415$

45

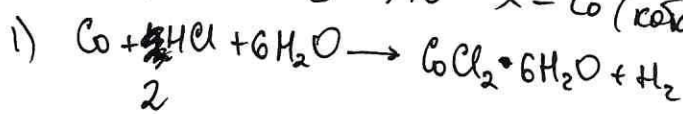
≤ 60



1	2	3	4	5	6	7	8	9	10
-	-	-	8	4	10	9	5	6	18

6.2.  $M(\text{соед. } X) = \frac{a}{0,2206} = a + 6 \cdot 17 + 35,5 \cdot 3$  (где  $a = M(X)$ )

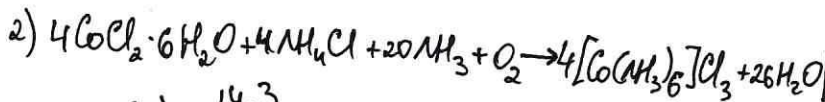
имеет розовый цвет, то  $X$  -  $\text{Co}$  (кобальт)



$M(\text{CoCl}_2) = 130 \text{ г/моль}$

$A - \text{CoCl}_2 \cdot X \text{H}_2\text{O}$ , откуда  $X = \frac{130}{1,203 \cdot 18} \approx 6$

$\Rightarrow A - \text{CoCl}_2 \cdot 6 \text{H}_2\text{O}$



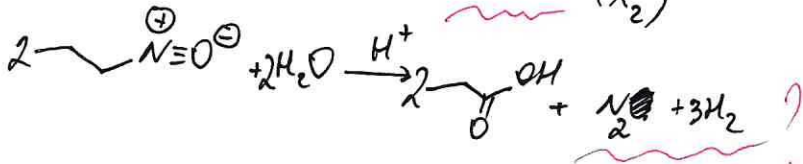
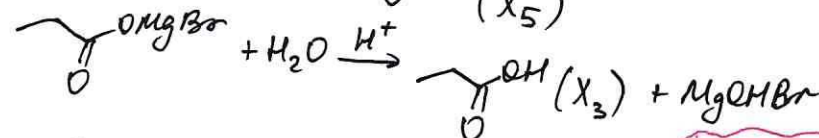
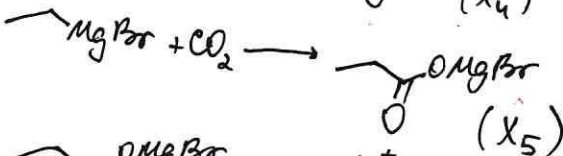
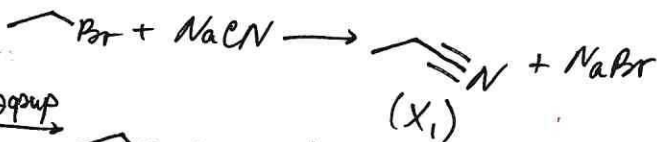
$n(A) = \frac{14,3}{238} = 0,06 \text{ моль} = n([\text{Co}(\text{NH}_3)_6] \text{Cl}_3)$

$n(\text{O}_2) = \frac{1}{4} n(A) = \frac{0,06}{4} = 0,015 \text{ моль}$

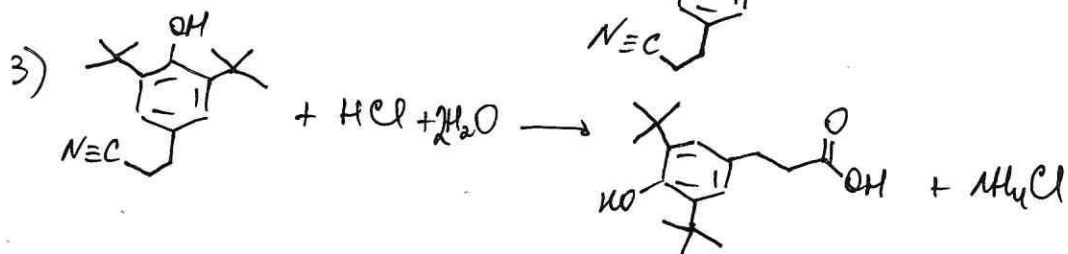
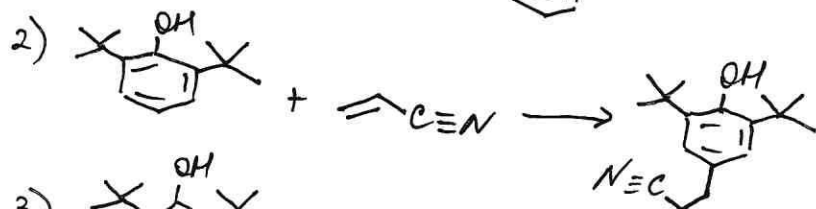
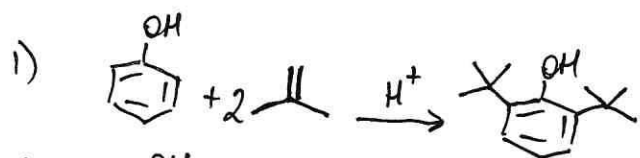
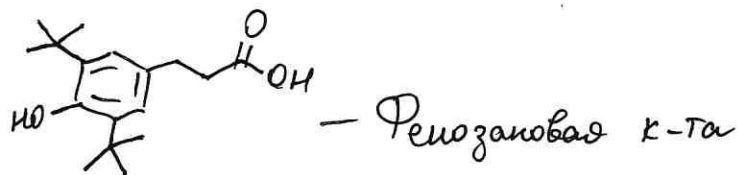
$m(\text{осадка}) = 0,06 \cdot 267,5 = 16,05 \text{ г}$

$V(\text{O}_2) = \frac{nRT}{P} = \frac{0,015 \cdot 8,314 \cdot 298}{101,3} = 0,37 \text{ л}$

7.2.

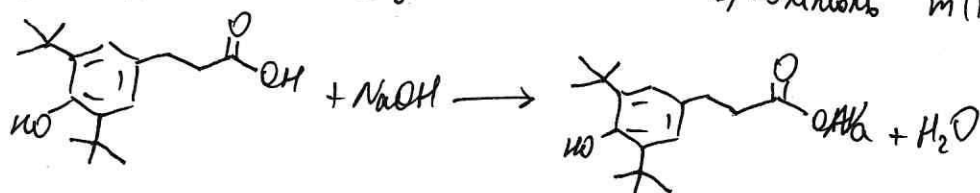


10.2.



$$n(\text{NaOH}) = 0,1 \cdot 6,45 = 0,645 \text{ моль} = n(\text{фенилозановой к-ты})$$

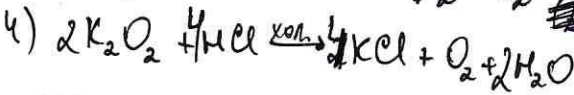
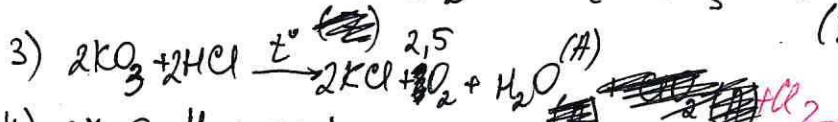
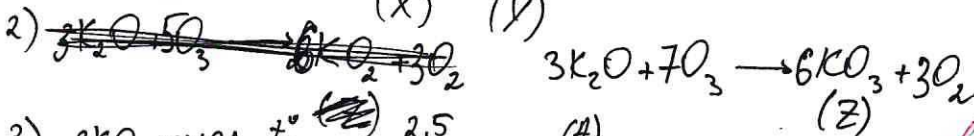
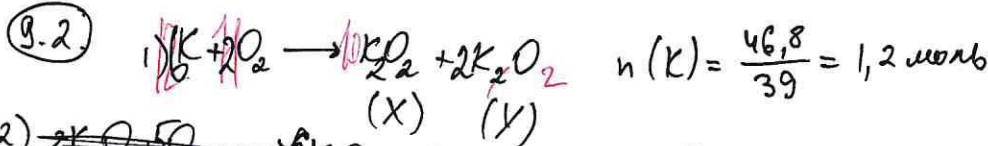
$$n_{\text{доб.}}(\text{к-ты}) = 0,645 \cdot 10 = 6,45 \text{ моль} \quad m(\text{к-ты}) = 0,00645 \cdot 278 = 1,7931 \text{ г}$$



$$\omega(\text{к-ты}) = \frac{1,7931}{1,990} \cdot 100\% = 90,106\%$$

Р5



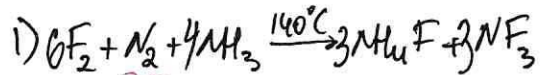
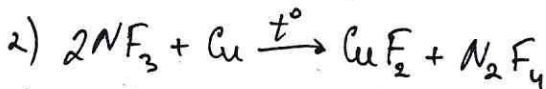


8.2.  $M(\text{смеси}) = 6,5 \cdot 4 = 26 \text{ г/моль}$

$M_1(\text{газа}) = 3,168 \cdot 22,4 = 71 \text{ г/моль} \Rightarrow \text{NF}_3$



$M_2(\text{газа}) = 4,643 \cdot 22,4 = 104 \text{ г/моль} \Rightarrow \text{N}_2\text{F}_4$



$26 = 17x + 38(1-x)$

$21x = 12$

$x = 0,57 \Rightarrow n(\text{NH}_3) = 0,57$

$n(\text{F}_2) = 0,43$

ω смеси!

