ЧИСТОВИК
Лист № ______

43 (red)

ВСОШ Химия

1	2	3	4	5	6	7	8	9	10
1	10	8			10	12	12		20

3.1 $V = h \cdot \pi \cdot R^2 = 1570$

$V' = 0{,}6 \cdot 1570 = 942$

$V = 15{,}5 \cdot 0{,}942 = 14{,}6$

$\nu(NH_3) = \frac{14{,}6}{22{,}4} = 0{,}652$

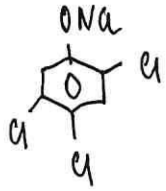
$C(NH_3) = 0{,}692$ моль/л

$pH(NH_3) = 14 - \frac{1}{2}(pK_b - \lg c(NH_3)) = 11{,}5$

+8

1.1

B -



+ (1)

2.1

$X + O_2 \rightarrow CO_2 + H_2O$

$m = 7{,}4$ г $V = 8{,}96$ л $m = 9$ г

$\nu(CO_2) = \frac{8{,}96}{22{,}4} = 0{,}4$ моль

$\nu(C) = \nu(CO_2) = 0{,}4$ моль, $m(C) = 0{,}4 \cdot 12 = 4{,}8$ г

$\nu(H_2O) = \frac{9}{18} = 0{,}5$ моль

$\nu(H) = 2\nu(H_2O) = 1$ моль, $m(H) = 1$ г

$m(O) = 7{,}4 - 1 - 4{,}8 = 1{,}6$ г

$\nu(O) = \frac{1{,}6}{16} = 0{,}1$ моль

$C_xH_yO_z$ $x : y : z = 0{,}4 : 1 : 0{,}1 \; | : 0{,}1$
$4 \quad 10 \quad 1$

$C_4H_{10}O$

+10

$CH_3COOC_2H_5 + NaOH \rightarrow CH_3COONa + C_2H_5OH$

$CH_3COONa + NaOH \rightarrow CH_4\uparrow + Na_2CO_3$

$m(CH_3COOC_2H_5) = 9{,}416$

$CH_3-CH_2-CH_2-CH_2-OH$ или

$CH_3-CH_2-O-CH_2-CH_3$

$m(C_2H_5-O-C_2H_5) = 5{,}584$

$\omega(C_2H_5-O-C_2H_5) = 37{,}2\%$

11 X 0 0 2

7.1

$4Fe(NO_3)_2 \xrightarrow{t^\circ} 2Fe_2O_3 + 8NO_2 + O_2$ | 1 | $Fe^{2+} - 1\bar{e} = Fe^{+3}$ | 1 | $N^{+5} + 1\bar{e} = N^{+4}$

$Fe_2O_3 + 6HBr = 2FeBr_3 + 3H_2O$

+125

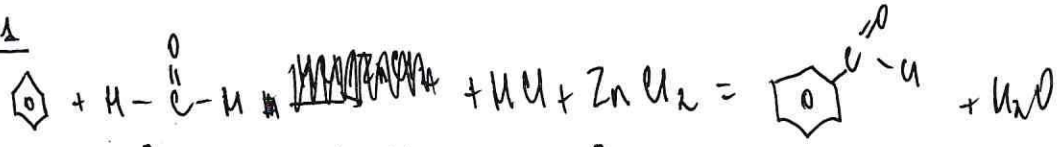
$2FeBr_3 + 3Na_2SO_3 + 6H_2O = 2Fe(OH)_3\downarrow + 3SO_2\uparrow + 6NaBr$

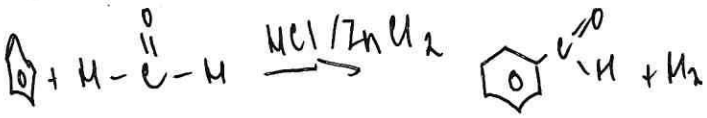
$NaOH + Fe(OH)_3 = Na_3[Fe(OH)_6]$

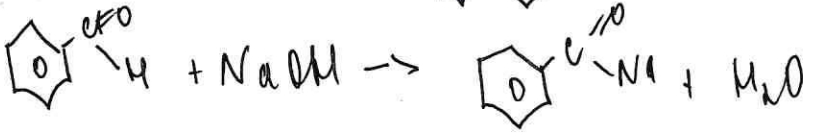
$Na_3[Fe(OH)_6] + 3CO_2 = 3Na_2CO_3 + 2Fe(OH)_3 + 3H_2O$

$2Fe(OH)_3 + 10KOH + 3Cl_2 = 2K_2FeO_4 + 6KCl + 8H_2O$

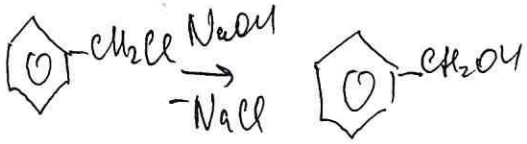
8.1

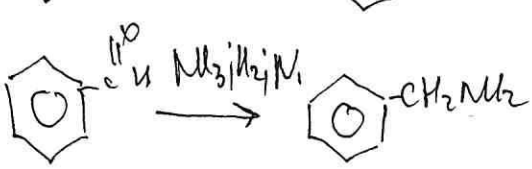


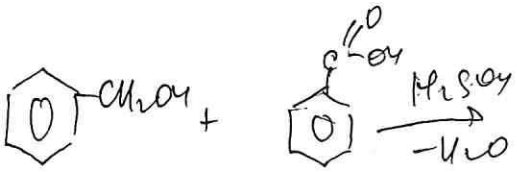


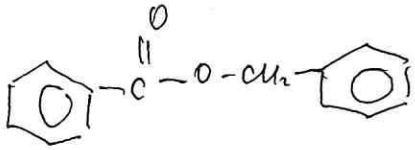


+125









6.1 $M(Cl-NH_2-CH(R)-COOH) = \frac{35,5}{0,2264} = 157,5$

$M(R) = 157,5 - 36,5 - 74 = 47 \rightarrow -CH_2SH$ (Cys)

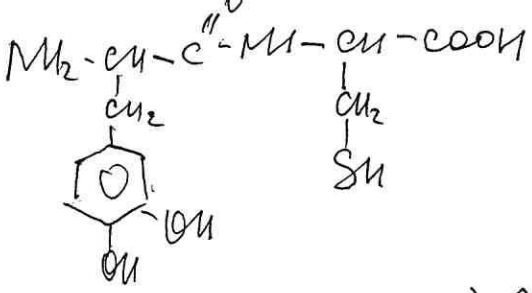
$A + HCl \rightarrow A \cdot HCl$

$M(A \cdot HCl) = \frac{35,5}{0,105498} = 336,5$

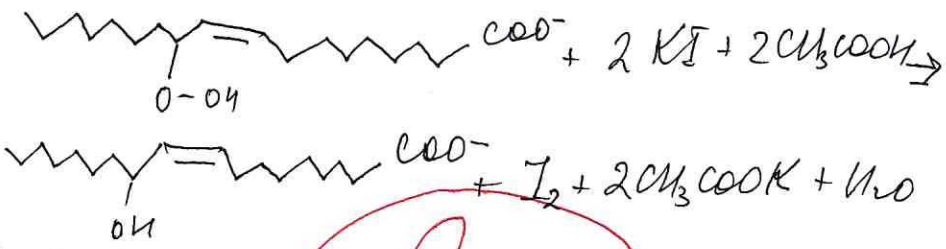
+105

$M(A) = 336,5 - 36,5 = 300$

$M(AK) = M(A) + M(H_2O) - M(Cys) = 197$



10.1 $CH_2-O-CO-C_{17}H_{33}$
$CH-O-CO-C_{17}H_{33}$
$CH_2-O-CO-C_{17}H_{31}$



$I_2 + 2Na_2S_2O_3 \rightarrow 2NaI + Na_2S_4O_6$

$\nu(Na_2S_2O_3) = 0,024$

$\nu(I_2) = \frac{0,024}{2} = 0,012$

$\nu(O) - 0,012$ — в 5 г.
24 — в 10000 г.
— ОК!

$\omega(O) = 3,84\%$

208

7