

1

1.1. X – . KNO₂. x –
X. , ,

$$\check{S} = \frac{x}{39 + x + 2 \cdot 16} = 0.1647, \quad x = 14.$$

1.2. :

	X	X, %
KNO ₃	+5	13.86
KNO ₂	+3	16.47
KNH ₂	-3	25.45
KN ₂ H ₃	-2	40.00

1.3. : KNO₃ – , KNO₂ –
KNH₂ – , KN₂H₃ – .

2



$$n(\text{CO}_2) = \frac{V(\text{CO}_2)}{V_m} = \frac{1.12}{22.4 /} = 0.05$$

$$m(\text{Na}_2\text{CO}_3) = n(\text{CO}_2) \times M(\text{Na}_2\text{CO}_3) = 0.05 \times 106 = 5.3$$

$$m(\text{Na}_2\text{CO}_3) = m(\text{Na}_2\text{CO}_3) / \check{S}(\text{Na}_2\text{CO}_3) = 5.3 / 0.053 = 100$$

100 .

60

$$m(\text{Na}_2\text{CO}_3) = \frac{160 \times 0.053}{106} = 0.08$$

$$m(\text{H}_2\text{SO}_4) = 0.08 \times 98 = 7.84$$

$$\check{S}(\text{H}_2\text{SO}_4) = 7.84 / 100 = 0.0784, \quad 7.84\%.$$

3



$$4 \cdot (HNO_3) = 4 \cdot 63 = 252$$

$$= 4 \cdot 46 + 1 \cdot 32 + 12 \cdot 18 = 432$$

$$\check{S}(HNO_3) = \frac{252}{432} = 0.583, \quad 58.3\%$$

4

4.1. X – $KMnO_4$.

4.2.

MnO_2 (H_2MnO_3)

4.3. :



1.	
	5
(4)	12
(4)	8
	25
2.	
	5
CO ₂	5
Na ₂ CO ₃	5
H ₂ SO ₄	5
H ₂ SO ₄	5
	25
3.	
	5
HNO ₃	5
NO ₂ O ₂	5
	15
	30
4.	
A	3
	2
(3)	15
	20
	100