



H = 1, C = 12, N = 14, O = 16, Na = 23, Mg = 24.3, Al = 27, :
P = 31, S = 32, Cl = 35.5, Ca = 40, Fe = 56, Cu = 63.5,
$N_A = 6.02 \times 10^{23}$, $R = 0.0821 \text{ atm L mol}^{-1} \text{ K}^{-1} = 8.314 \text{ J mol}^{-1} \text{ K}^{-1}$:

	:	:	:	:
	:	(O ₃)	4.0 g	-1
1.51×10^{22} (	5.02×10^{22} (	3.01×10^{23} (	1.51×10^{23} (
	:	(HCl)	2.0×10^{19}	-2
3.32×10^{-4} (	1.66×10^{-4} (	3.32×10^{-5} (	1.66×10^{-5} (
	:	(CaSO ₄)	51.4 g	-3
3.01×10^{22} (	4.21×10^{22} (	9.09×10^{23} (	3.01×10^{23} (
	:	Fe ₂ (SO ₄) ₃	6.0 g (O ₂)	-4
0.03 (	0.09 (	0.06 (	0.15 (
	:	(C ₆ H ₁₂ O ₆)	2.0×10^{24}	-5
432.7 (	598.2 (	519.3 (	465.0 (
	:			-6
$\text{kg m}^{-1} \text{ s}^{-1}$ (	\text{kg m s^{-2} ($\text{kg m}^2 \text{ s}^{-2}$ (	$\text{kg m}^{-1} \text{ s}^{-2}$ (
	:			-7
((((
	:	Fe(C ₂ H ₃ O ₂) ₃		-8
20.9% (	25.8% (	24.0% (	22.8% (
	:	Mg(NO ₃) ₂	75.0 g	-9

11.1 (10.9 (12.3 (10.3 (30.4% 40.5% 29.1% -10

Na₂S₂O₃ (Na₂SO₄ (Na₂SO₃ (NaSO₃ (

: 35.0 g 50.0 g -11
 $3\text{CaCO}_3 + 2\text{H}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 3\text{CO}_2 + 3\text{H}_2\text{O}$
 : 48.3 g

89.78% (93.48% (95.22% (95.25% ((11) -12

2.3 (6.8 (1.9 (4.5 (

: (22%) (C₂H₅OH) -13

58% (22% (39% (78% (

T₂ T₁ $\sqrt{U_1^2}$ O₂ -14

T₂ = $\frac{T_1}{2}$ (T₂ = $\sqrt{2}T_1$ (T₂ = 4T₁ (T₂ = 2T₁ (

25°C (1.5 atm) (1 L) -15

.20°C (1.2 atm) (3 L) (He)
 : 25°C (3 L)

2.70 (1.72 (2.25 (1.15 (

27°C 57°C -16

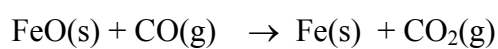
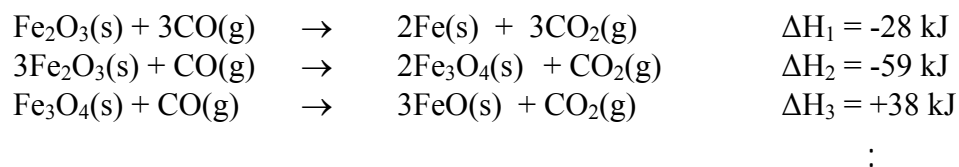
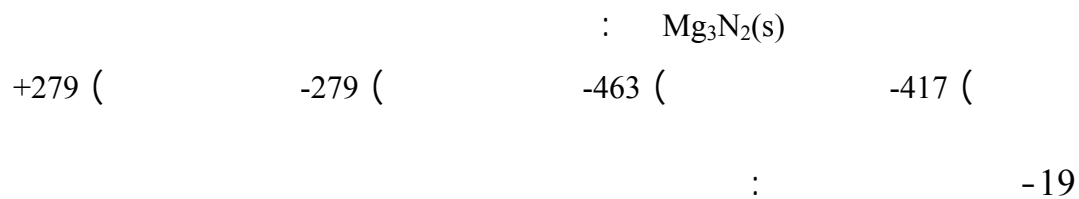
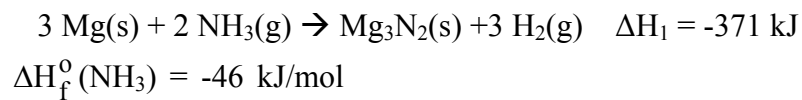
: g .37°C

600 (500 (400 (300 (

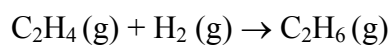
2.6 g .ΔH_C = -1300 kJ/mol (C₂H₂) -17
 .(kJ)

260 (130 (26 (13 (

: -18



:kJ



: (kJ/mol)



10	9	8	7	6	5	4	3	2	1	
20	19	18	17	16	15	14	13	12	11	