

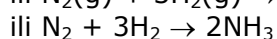
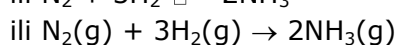
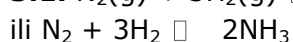
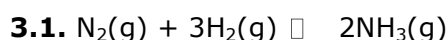
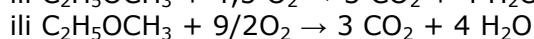
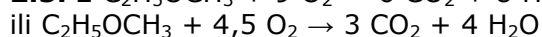
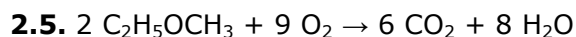
1.A.1. natrijev hidrogensulfid**1.A.2.** barijev peroksid**1.A.3.** propanon (acetona, dimetil-ketona, propan-2-on, 2-propanon)**1.B.1.** $\text{CuSO}_4 \cdot 5 \text{H}_2\text{O}$, $\text{CuSO}_4 \times 5 \text{H}_2\text{O}$ **1.B.2.** $\text{CH}_2=\text{CH}_2$ (C_2H_4)**1.B.3.** HCOH (CH_2O , H_2CO , strukturna formula)**2.1.** Postupak:

$$n(\text{C}) = 0,7777/12,01 = 0,064754/0,00925 = 7,000 \text{ mol}$$

$$n(\text{H}) = 0,0742/1,01 = 0,073465/0,00925 = 7,942 \text{ mol}$$

$$n(\text{O}) = 0,1481/16 = 0,00925/0,00925 = 1,000 \text{ mol}$$

$$n(\text{C}) : n(\text{H}) : n(\text{O}) = N(\text{C}) : N(\text{H}) : N(\text{O}) = 7 : 8 : 1$$

Molekulska formula etera je $\text{C}_7\text{H}_8\text{O}$.**2.2.** $\text{C}_2\text{H}_5\text{OCH}_3$ ili $\text{CH}_3\text{CH}_2\text{OCH}_3$ ili $\text{CH}_3\text{OCH}_2\text{CH}_3$ ili $\text{CH}_3\text{OC}_2\text{H}_5$ ili $\text{CH}_3\text{-CH}_2\text{-O-CH}_3$ **2.3.** $\text{C}_3\text{H}_7\text{OH}$ ($\text{C}_3\text{H}_8\text{O}$) – priznavati samo molekulsku formulu**2.4.** tercijarnim alkoholima**3.2.** \rightarrow , prema produktu, udesno, nastati će više produkta, nastati će više NH_3 , veće iskorištenje

$$\text{3.3. } K_p = \frac{p^2(\text{NH}_3)}{p(\text{N}_2) \cdot p^3(\text{H}_2)} \quad \text{ili} \quad K_p = \frac{p(\text{NH}_3)^2}{p(\text{N}_2) \times p(\text{H}_2)^3} \quad \text{ili} \quad K = \frac{p^2(\text{NH}_3)}{p(\text{N}_2) \times p^3(\text{H}_2)} \quad \text{ili} \quad K = \frac{p(\text{NH}_3)^2}{p(\text{N}_2) \times p(\text{H}_2)^3}$$

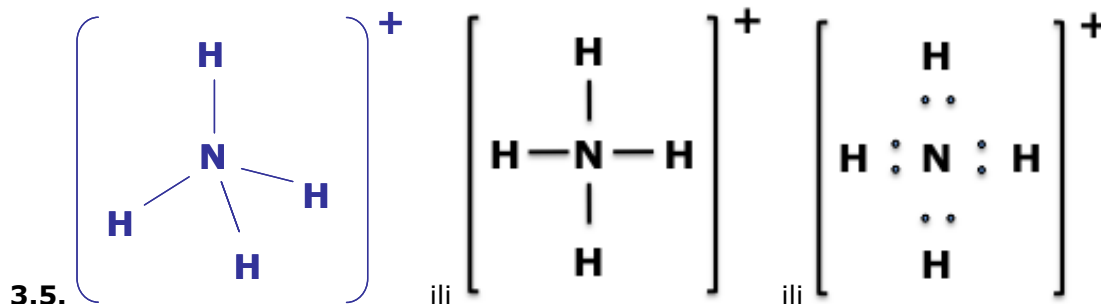
$$\text{ili} \quad K_p = \frac{p_{\text{NH}_3}^2}{p_{\text{N}_2} \times p_{\text{H}_2}^3}$$

$$3.4. K_c = \frac{c^2(\text{NH}_3)}{c(\text{N}_2) \cdot c^3(\text{H}_2)} \quad \text{ili} \quad K_c = \frac{\overset{\text{e}}{\text{N}}\overset{\text{H}}{\underset{\text{H}}{\text{H}}}}{\overset{\text{e}}{\text{N}}\overset{\text{H}}{\underset{\text{H}}{\text{H}}}}^2$$

$$c(\text{NH}_3)^2 = K_c \cdot c(\text{N}_2) \cdot c(\text{H}_2)^3 = 0,137 \text{ mol}^2 \text{ dm}^{-6}$$

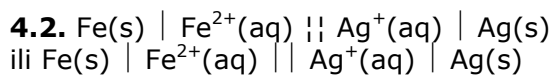
$$c(\text{NH}_3) = 0,37 \text{ mol dm}^{-3}$$

Ravnotežna koncentracija amonijaka je 0,37 mol dm⁻³.

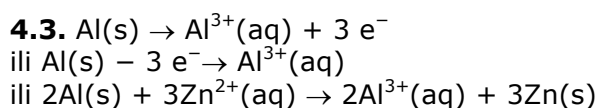


3.6. Tetraedarske

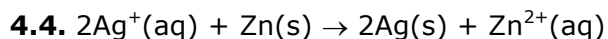
4.1. Na slici nedostaje elektrolitski most, most (ić), elektrolitski ključ, elektrolitska poveznica



može se priznati i bez agregacijskih stanja



može se priznati i bez agregacijskih stanja



može se priznati i bez agregacijskih stanja

4.5. $\Delta E = E^\circ_{\text{katoda}} - E^\circ_{\text{anoda}} = (-0,44 \text{ V}) - (-1,66 \text{ V}) = 1,22 \text{ V}$

Rezultat: $\Delta E = 1,22 \text{ V}$ V.

4.6. ili Od negativnog pola prema pozitivnom polu.
 ili Od negativne elektrode prema pozitivnoj elektrodi.

5.1. b)

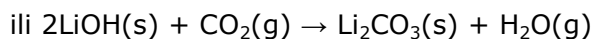
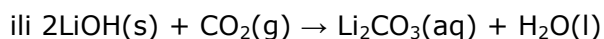
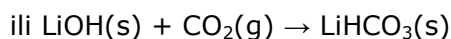
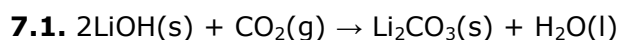
5.2. d)

5.3. e)

6.1. c)

6.2. e)

6.3. d)



7.2. pH > 7, lužnata

7.3. $m(\text{CO}_2) = 2 \text{ kg}$ dnevno

$m(\text{CO}_2) = 50 \text{ kg}$ za 25 dana

$$n(\text{CO}_2) = \frac{m(\text{CO}_2)}{M(\text{CO}_2)} = \frac{50 \times 10^3 \text{ g}}{44 \text{ g mol}^{-1}} = 1136,36 \text{ mol}$$

$$n(\text{LiOH}) = 2 \cdot n(\text{CO}_2) = 2 \cdot 1136,36 \text{ mol} = 2272,72 \text{ mol}$$

$$m(\text{LiOH}) = n(\text{LiOH}) \cdot M(\text{LiOH}) = 2272,72 \text{ mol} \cdot 24 \text{ g mol}^{-1} = 54545,45 \text{ g} = 54,54 \text{ kg}$$

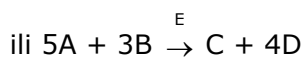
Potrebna masa litijevog hidroksida je 54,54 kg.

Ako je navedena reakcija nastajanja LiHCO_3 može se priznati i sljedeći postupak:

$$n(\text{LiOH}) = n(\text{CO}_2) = 1136,36 \text{ mol}$$

$$m(\text{LiOH}) = n(\text{LiOH}) \cdot M(\text{LiOH}) = 1136,36 \text{ mol} \cdot 24 \text{ g mol}^{-1} = 27272,64 \text{ g} = 27,27 \text{ kg}$$

Potrebna masa litijevog hidroksida je 27,27 kg.

**8.2.** katalizator, enzim, biokatalizator**8.3.** tvar B

8.4.
$$r = \frac{Dc(B)}{v(B) \cdot Dt} = \frac{-4 \text{ mmol dm}^{-3}}{(-2) \cdot 30 \cdot 60 \text{ min}} = 0,00111 \text{ mmol dm}^{-3} \text{ min}^{-1}$$

Srednja brzina kemijske reakcije je 0,00111 mmol dm⁻³ min⁻¹.**9.1. jednostavna** (prosta, primitivna, kubična elementarna ćelija ili kocka)**9.2.** 1**9.3. prostorno** (volumno centrirana kocka, volumno centrirana kubična el. ćelija)**9.4.** 2**9.5. plošno** (gusta centrirana kocka, kubična el. ćelija)**9.6.** 4**10.1.** CH₃CH(Br)CH₃ **10.2.** 2-brompropan, izopropilbromid**10.3.** supstitucija CH₃CH(NH₂)CH₃

ili eliminacija

CH₂=CHCH₃ **10.4.** supstitucija: 2-aminopropan, izopropilamin, 2-propanamin, 1-metiletanamin

ili eliminacija: propen (prop-1-en)

10.5. C₆H₅CH(CH₃)₂**10.6.** 2-fenilpropan, izopropilbenzen**11.1.** b)**11.2.** c)**11.3.** d)**12.1.** e)**12.2.** c) ili d) ili b)**12.3.** a)