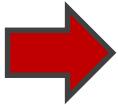


Cours Biochimie

Leçon 13: Examen de teste

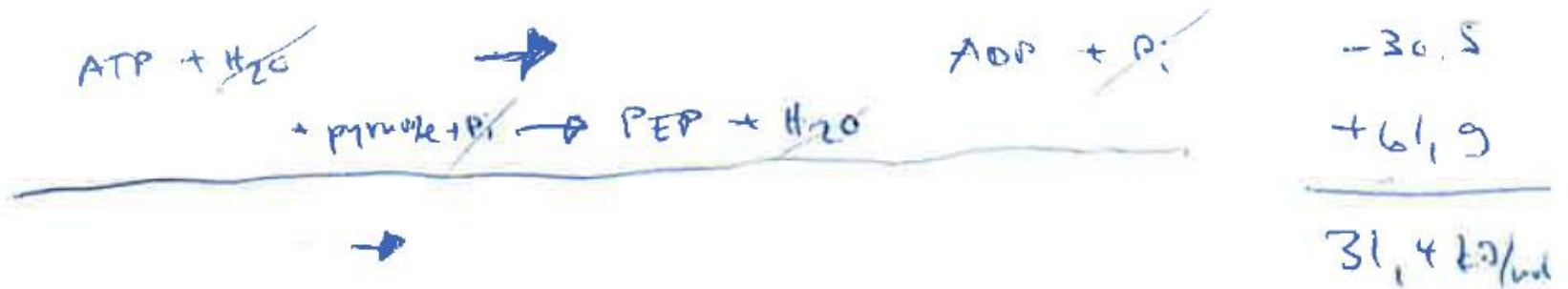
7	Exploration de l'Évolution
8	Portrait de haemoglobin / des anticorps
9	Enzymes: concepts de base et cinétique
10	Enzymes: stratégies catalytiques
11	Lipides et membranes cellulaires / Les glucides
12	Métabolisme



- 13 Examen de teste
- 14 Discussion examen de teste

Série 12

Question 1



(a) $\Delta G^{\circ'} = 31.4 \text{ kJ/mol}$

$$K'_{\text{eq}} = 3.18 \cdot 10^{-6}$$

Série 12

Question 1

$$\Delta G = 0 \rightarrow 0 = \Delta G^{\circ} + RT \ln K_{eq}$$

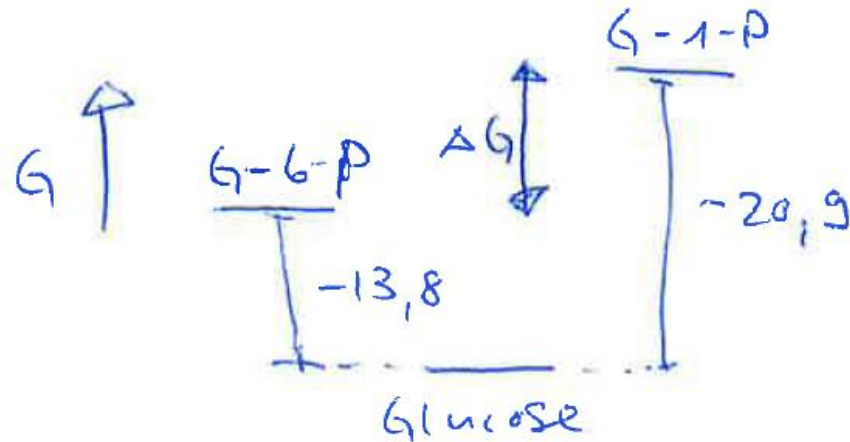
Handwritten annotations:

- An arrow points from ΔG° to $31,4 \text{ kJ/mol}$.
- An arrow points from RT to $8,315 \cdot 10^{-3}$.
- An arrow points from T to 298 .

(b) En équilibre: pyruvate : phosphoénolpyruvate = 10600

Série 12

Question 2



$$\Delta G^{\circ} = 7.1 \text{ kJ/mol}$$

En équilibre: glucose 6-phosphate : le glucose 1-phosphate = 18 : 1

Série 12

Question 3

(a) Relation entre le $\Delta G^{\circ'}$ et le pK_a : $\Delta G = \Delta G^{\circ'} + RT \ln K_a$, en équilibre $\Delta G = 0$

$$\rightarrow \Delta G^{\circ'} = -RT \ln K_a \rightarrow \Delta G^{\circ'} = -2.3 * RT \log K_a \rightarrow \Delta G^{\circ'} = 2.3 * RT pK_a$$

(b) $\Delta G^{\circ'} = 35.9 \text{ kJ/mol}$

Série 12

Question 4

Nicotinamide adénine dinucléotide (NAD)

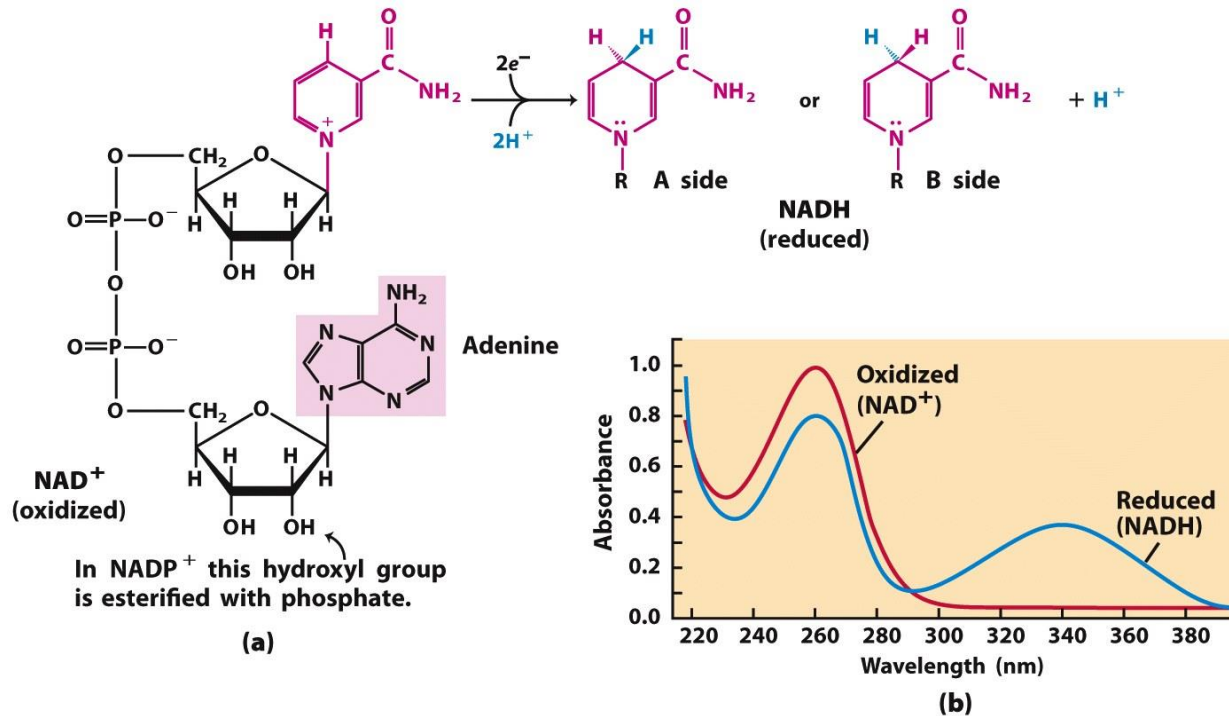
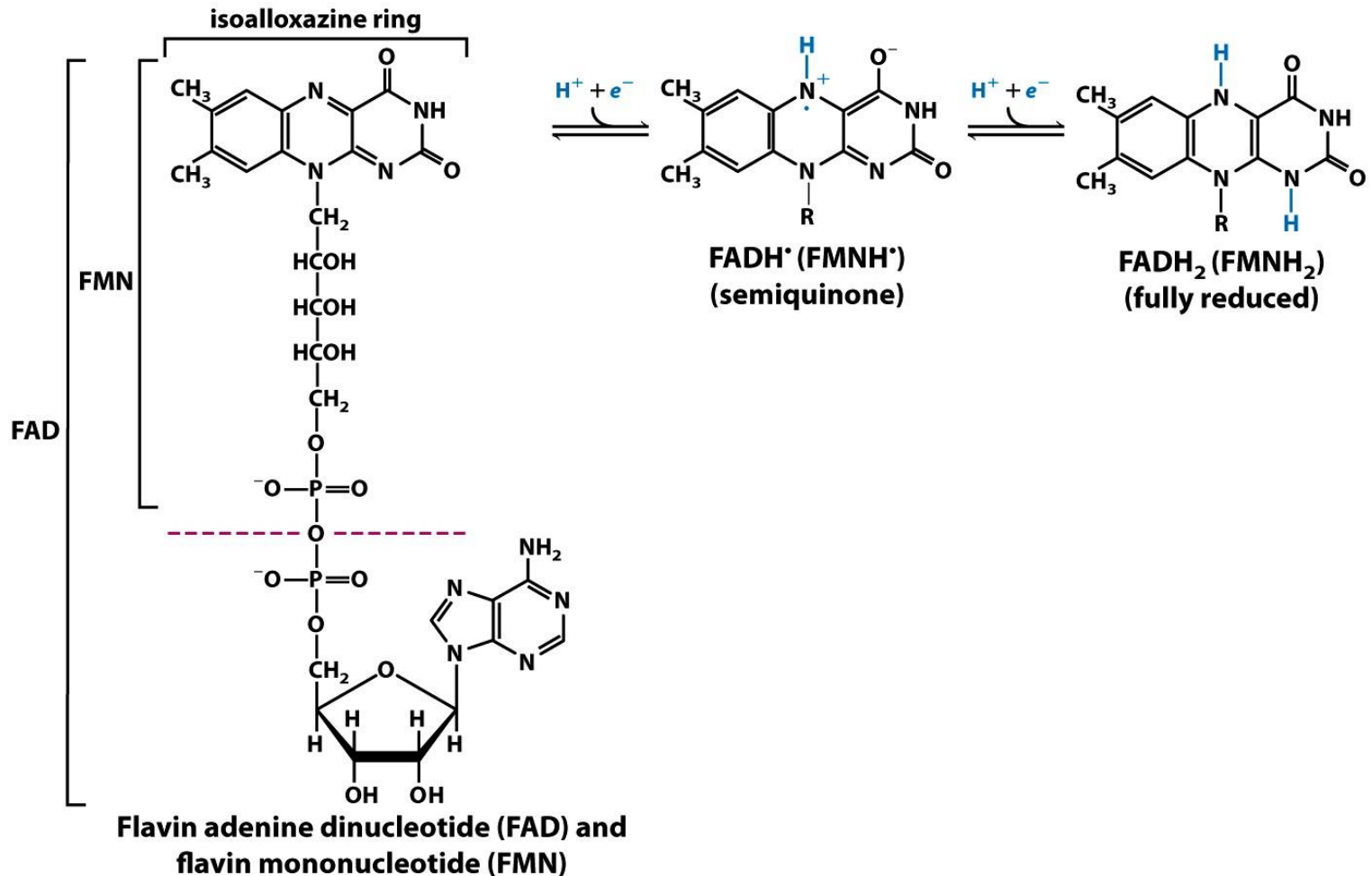


Figure 13-24
Lehninger Principles of Biochemistry, Fifth Edition
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Flavine adénine dinucléotide (FAD)



Coenzyme A

Coenzyme A

