

: 2

ATP

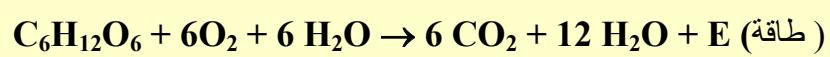
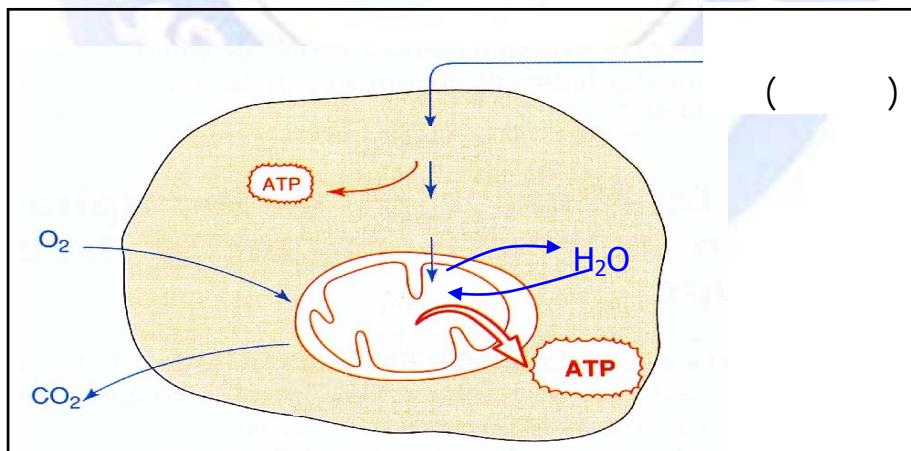
I

II





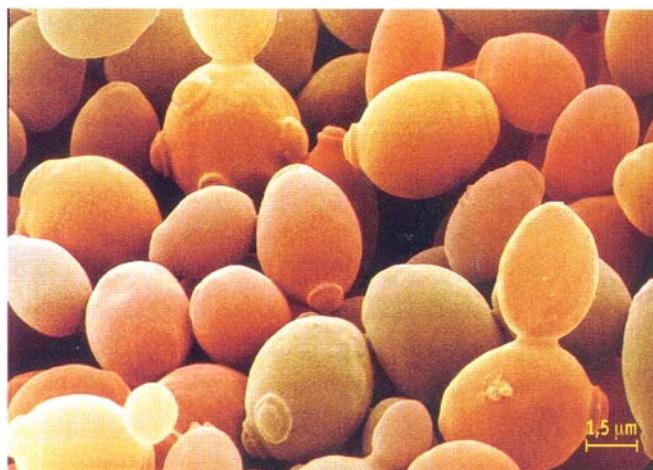
.ATP



ATP

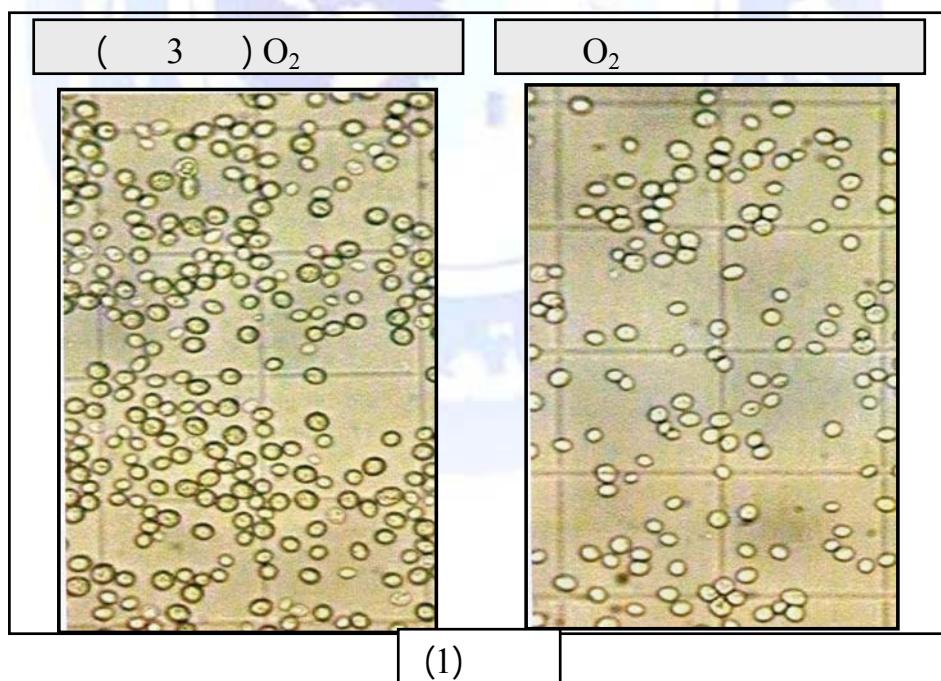
I

: 1



(1)

()
()



(1)

1

2

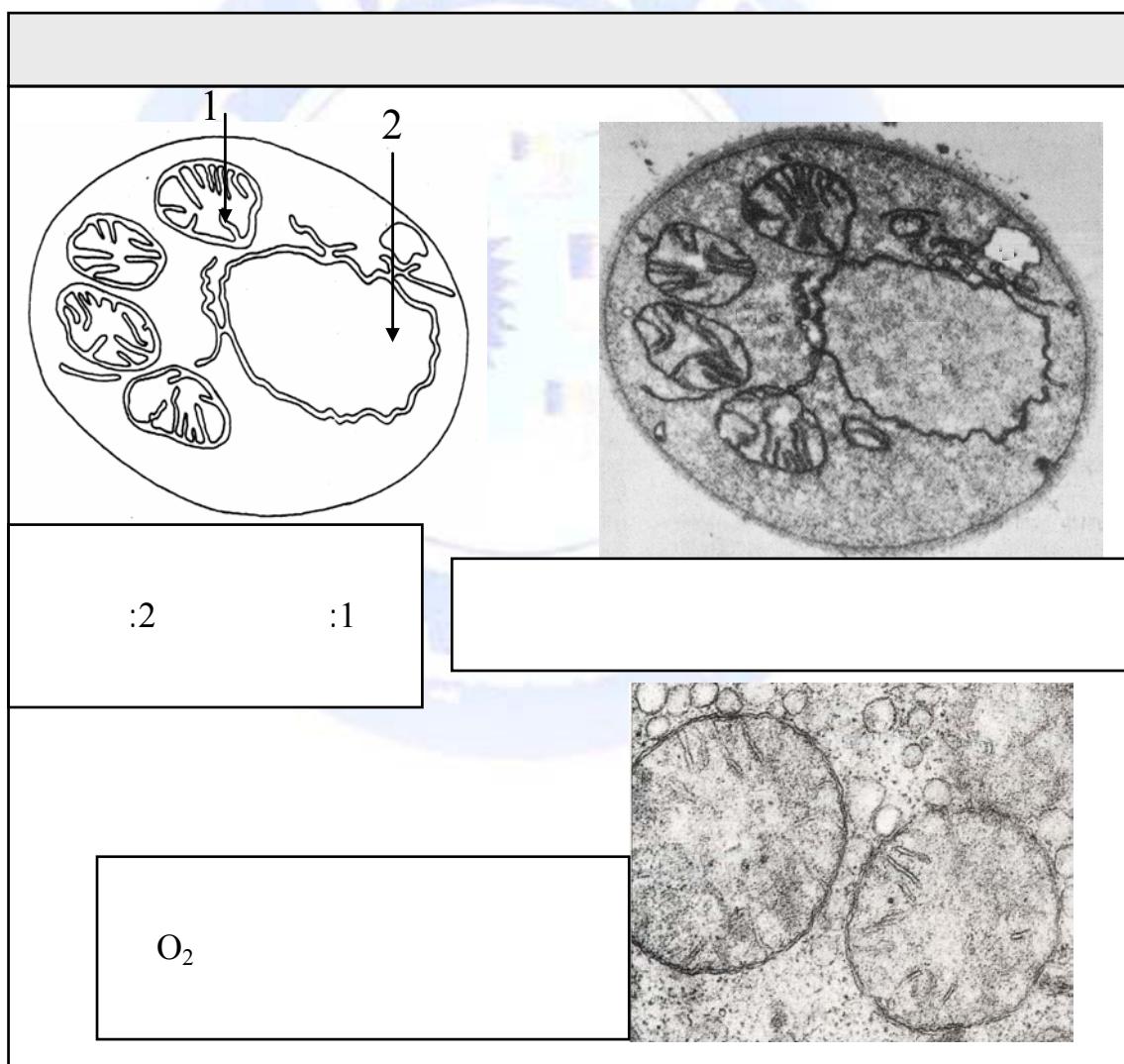
3

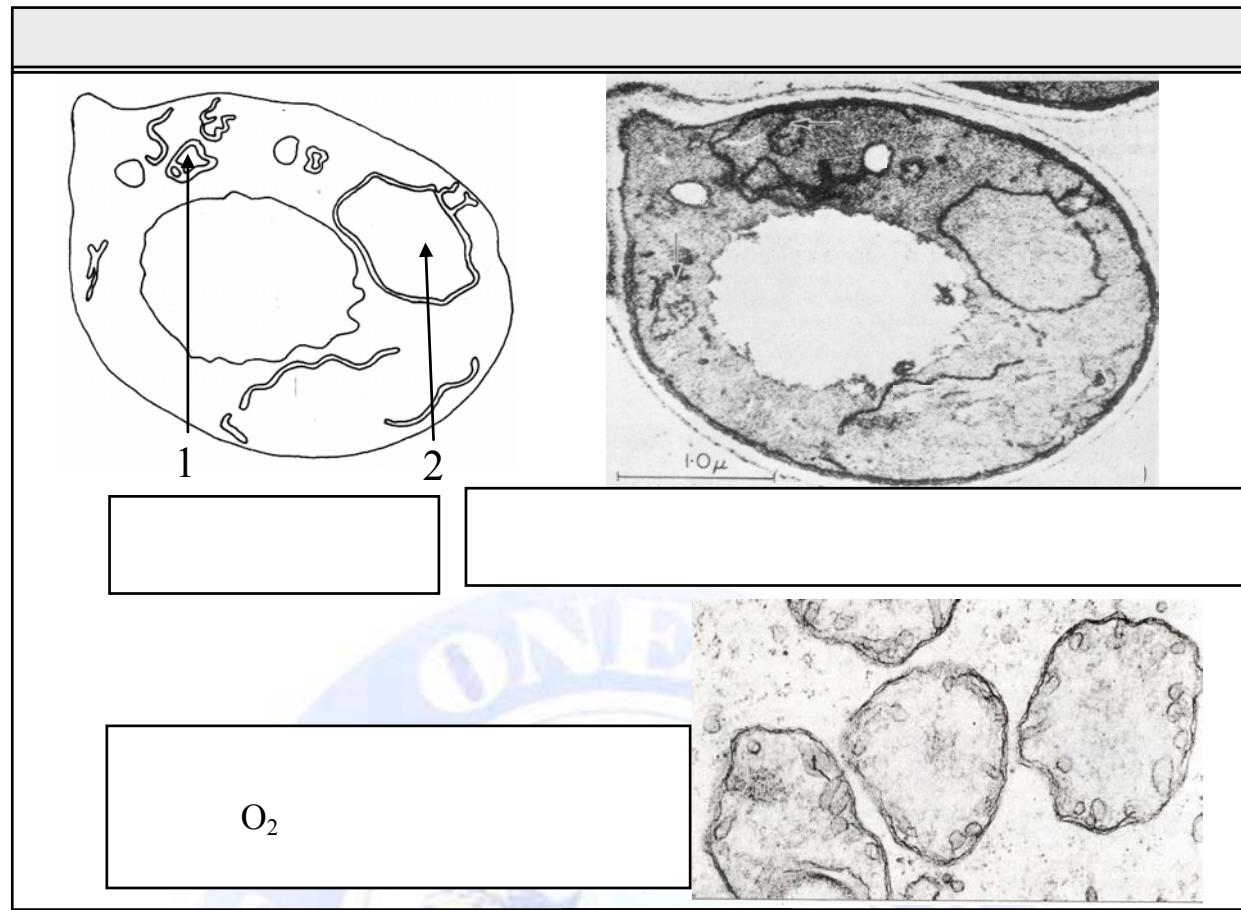
1

2

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.(2)

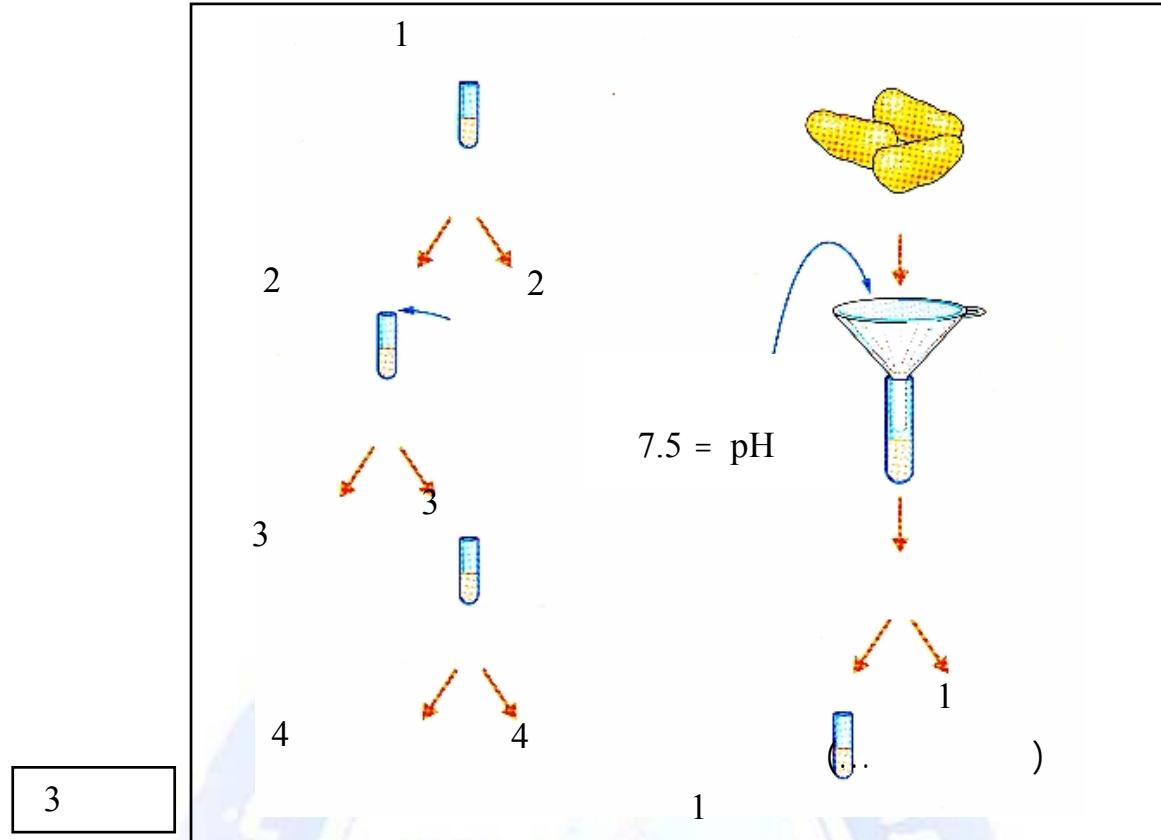




(2)



(3)



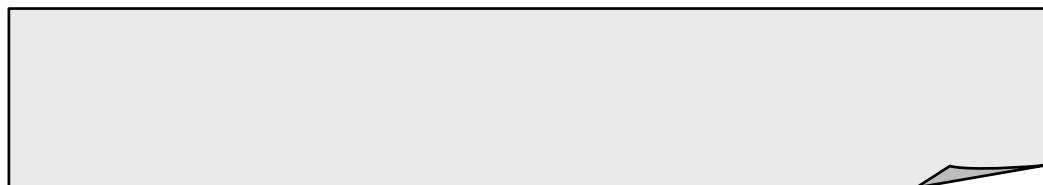
CO₂) * .((4)

O ₂	O ₂	
CO ₂	CO ₂	+ :
CO ₂	CO ₂	: .
CO ₂	CO ₂	: .

4

O₂

CO₂

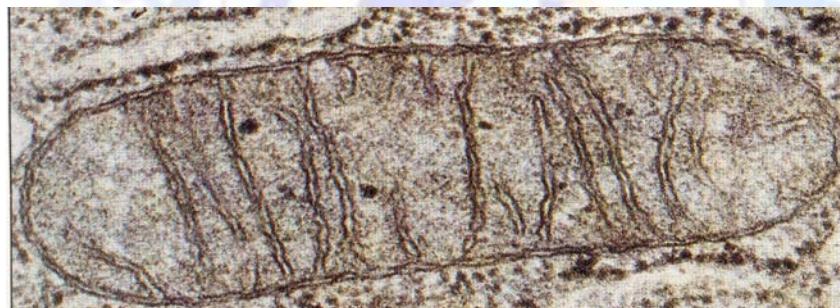


: 2

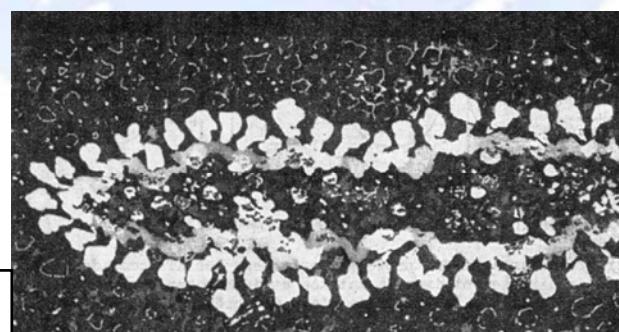
(5) *

(5)

(5)

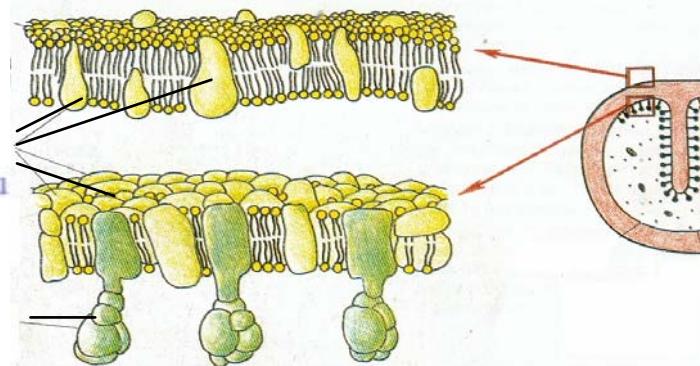


(5)



5

<http://www.onefd.edu>



5

. (6)

()

*

	% 50	% 40	■
	% 60	% 50	■
/ ATP		% 20	■
		% 80	■
			■
			■
			■

(6)

(5)

1

(5)

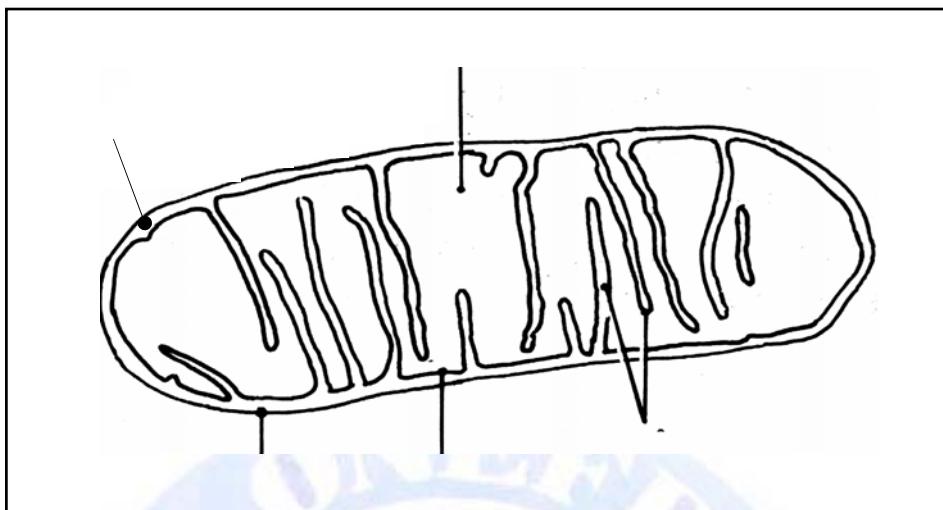
(6)

2

(5

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2



2



ATP

II

: 3

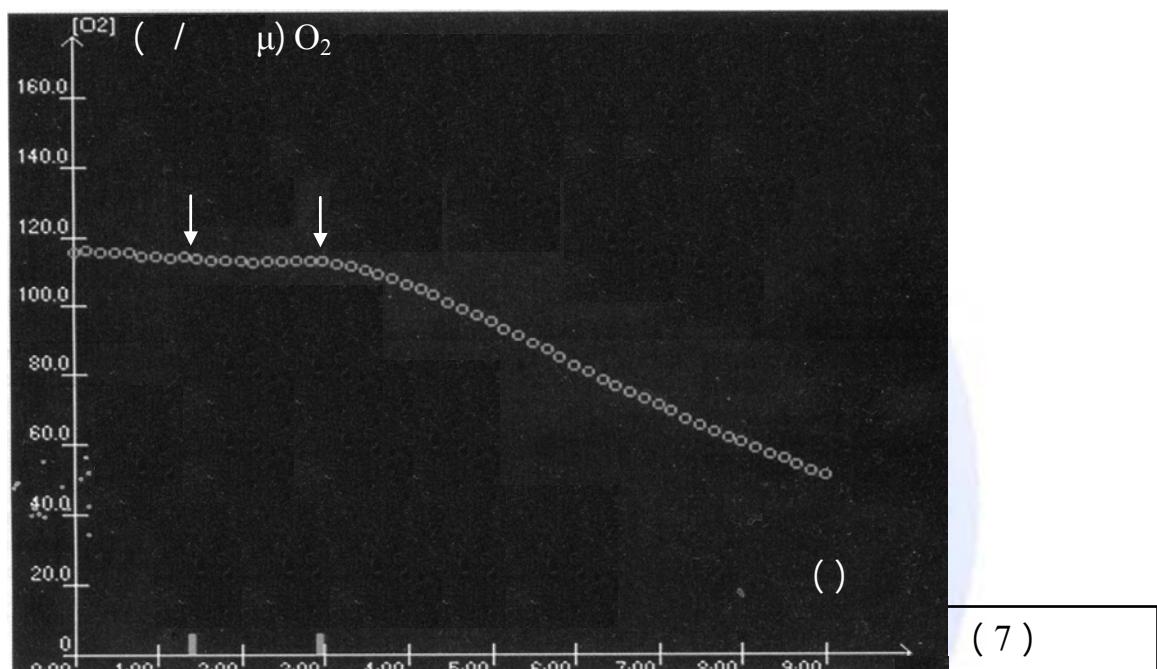
1

O₂

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. (7)



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(7)

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) / μ 115

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/ μ 115

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: 3

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(

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(8)



8

(2 1)

: 1

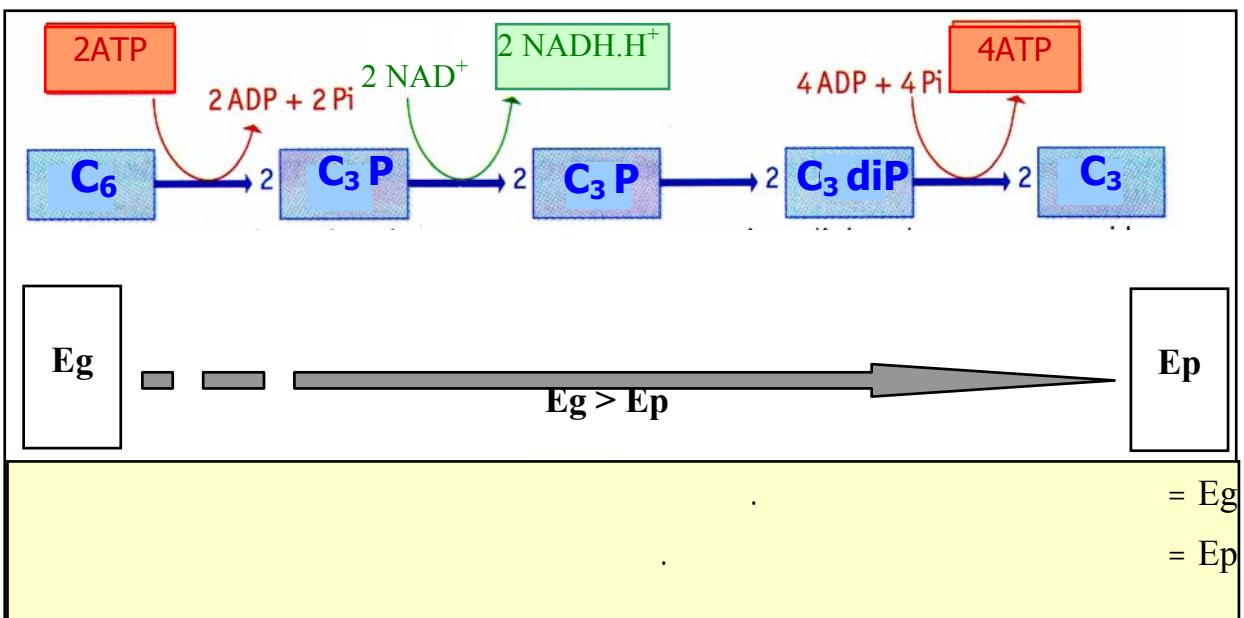
: 2



: 1

: 2

* (9)



9

(9)

1

2

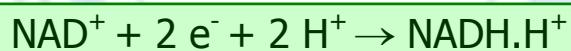
◀

1

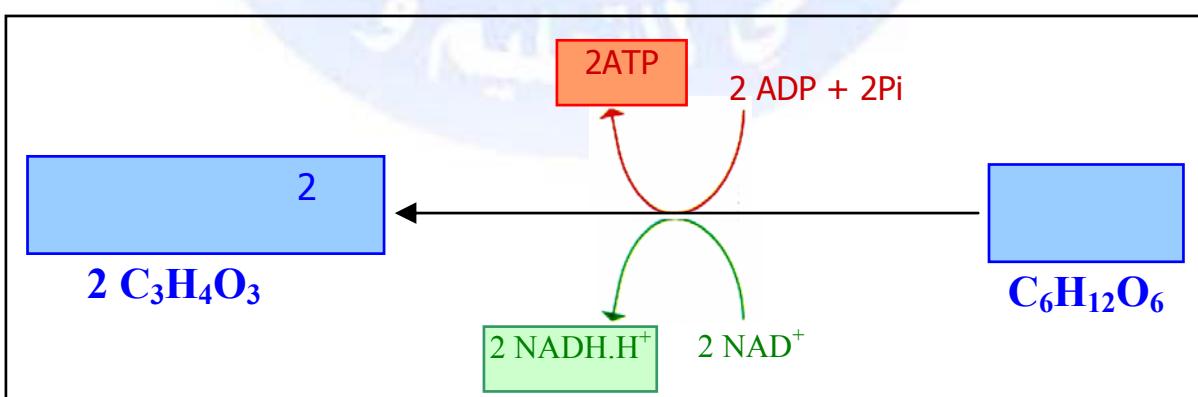
NAD^+

$\text{NADH.H}^+ \quad \text{NAD}^+$

()



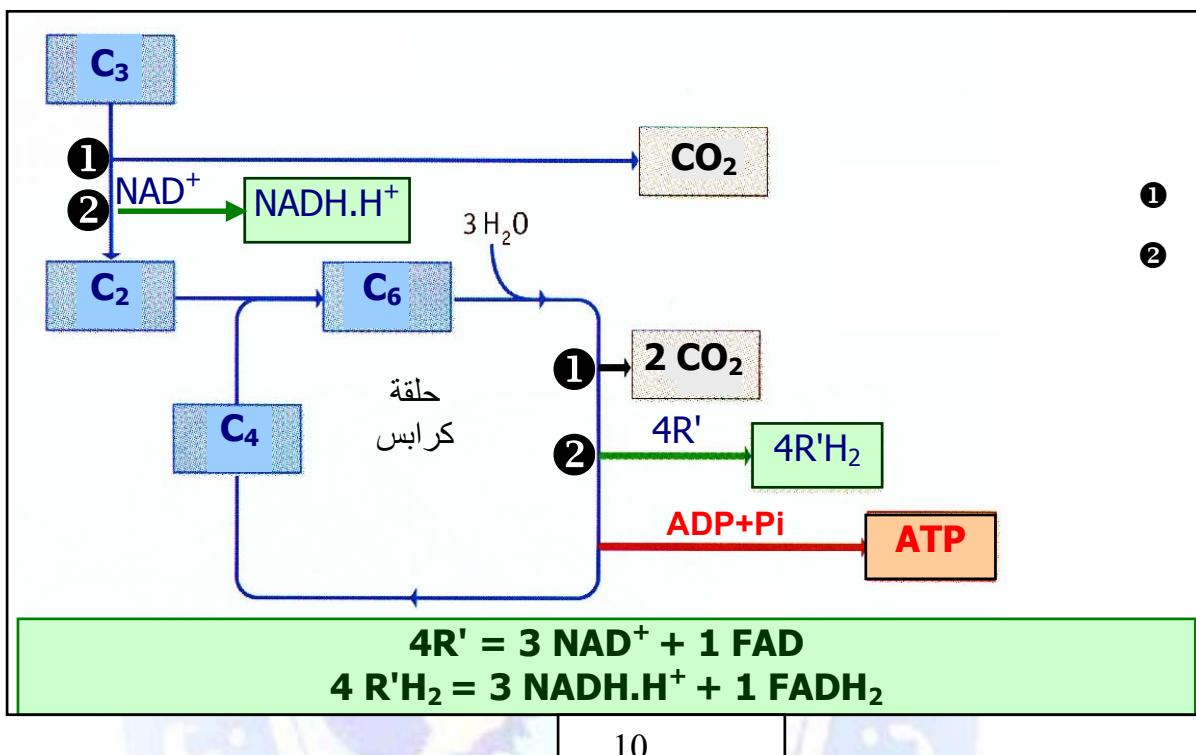
2



: 4

(10)

()



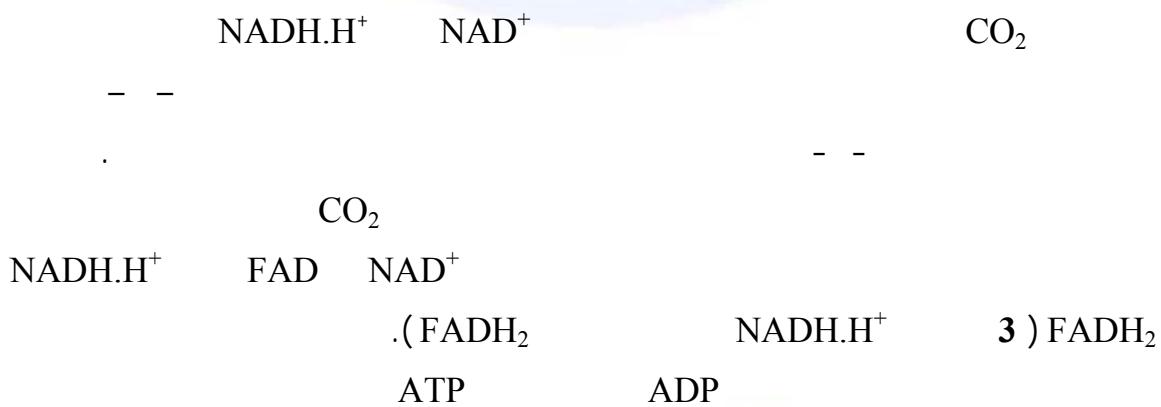
حلقة "كرابس".

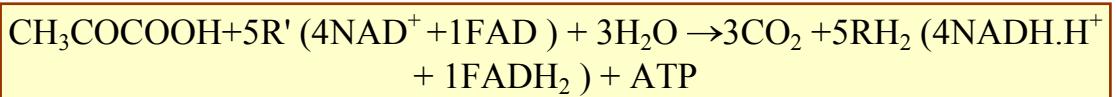
(10)

1

2

1



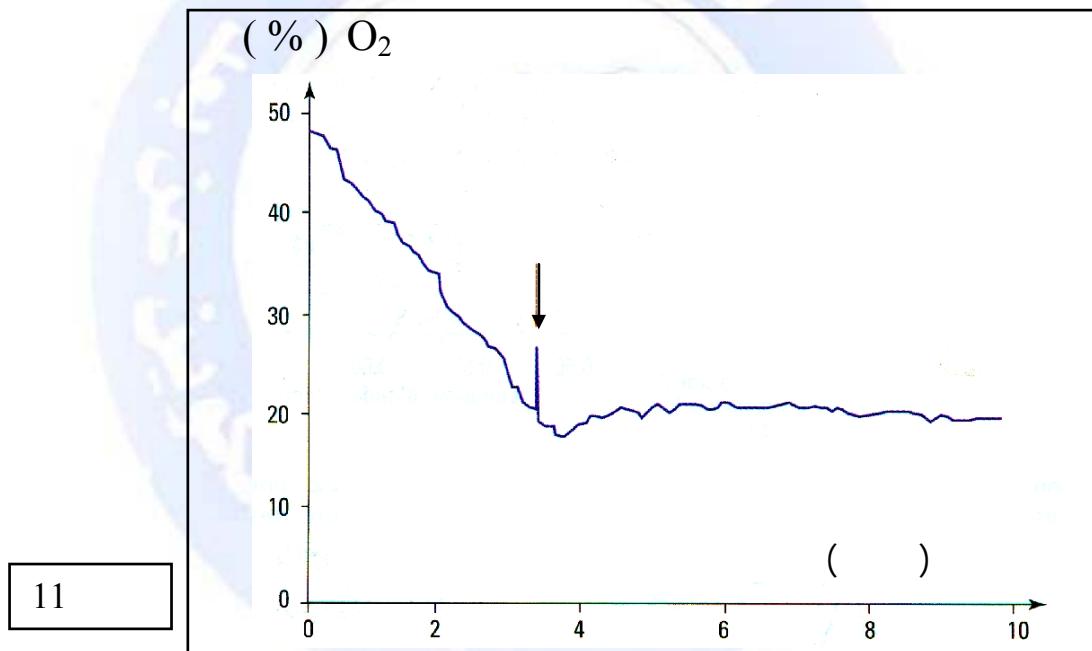


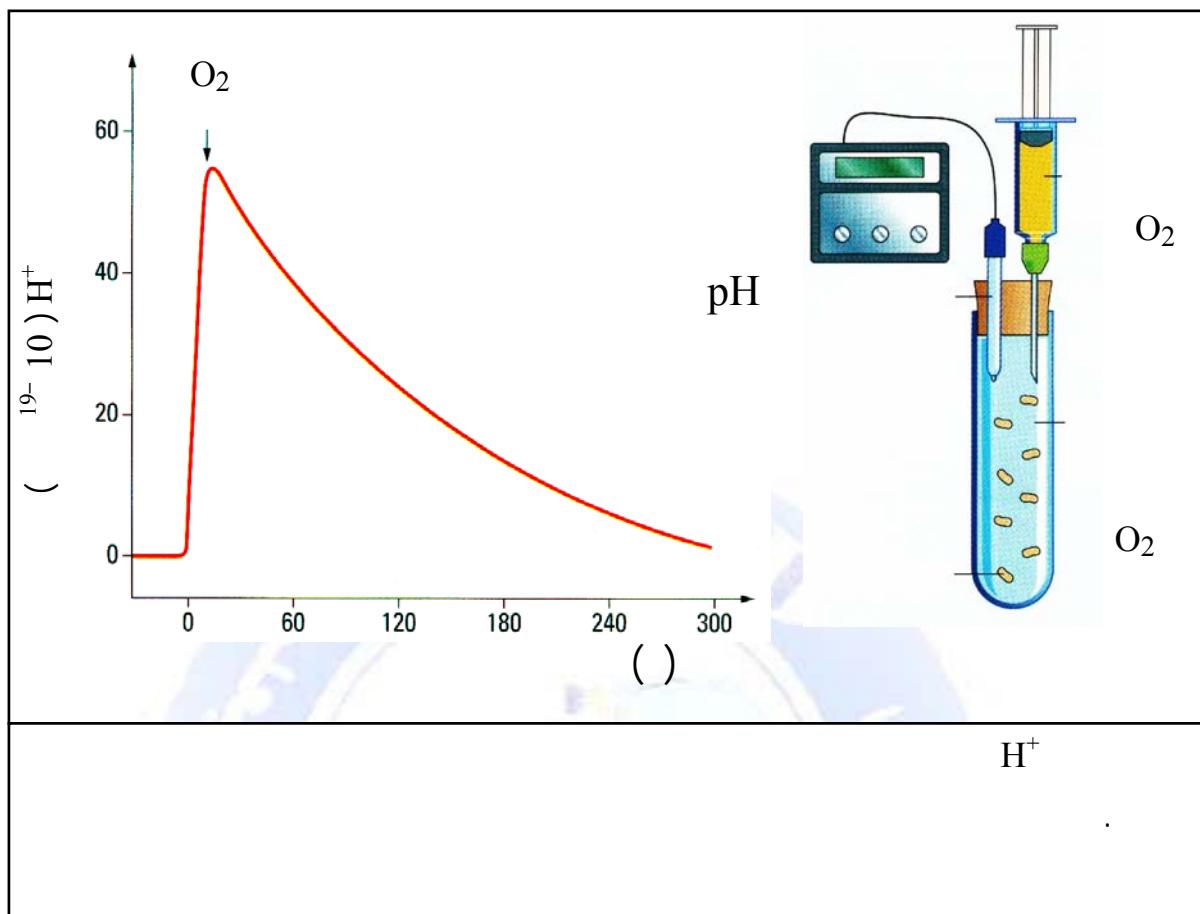
[NADH.H⁺ FADH₂]
ATP O₂

: 5

: 1

O₂ (11)





12

H^+

(${}^9-10 \times 60$ 0)

300

H^+

2 - الاستنتاج : إن زيادة تركيز H^+

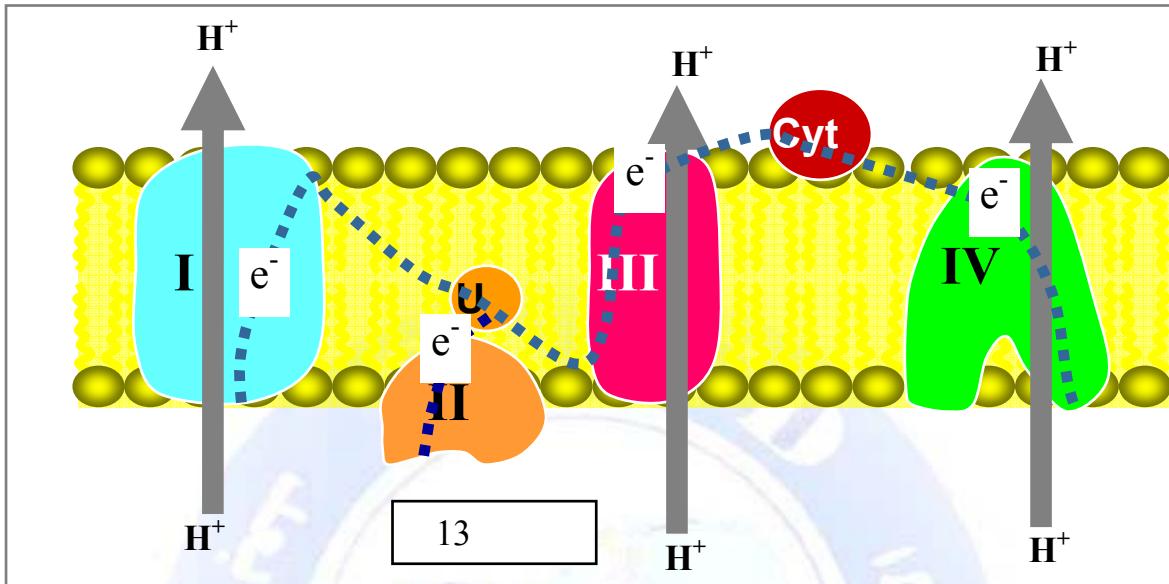
H^+

O_2

: 6

(13)

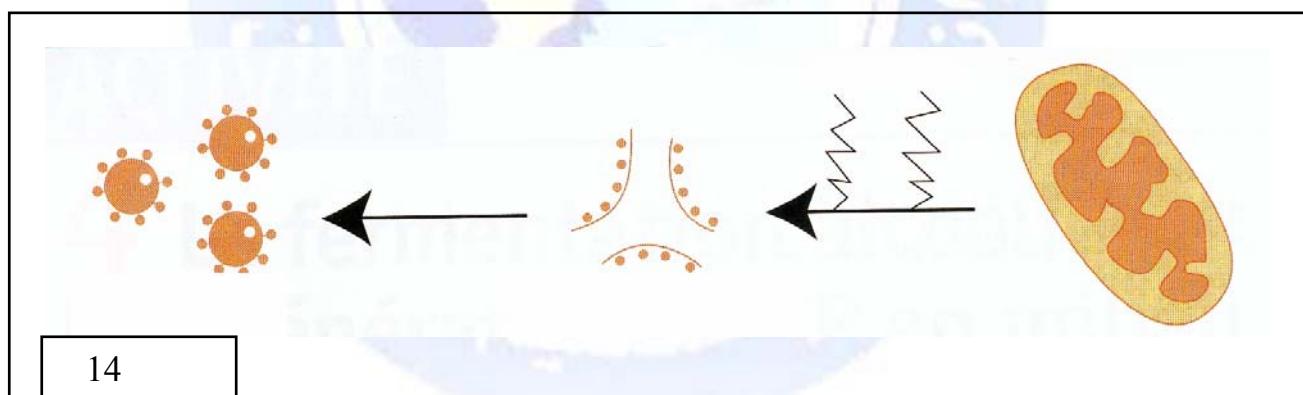
*



13

() : . (14)

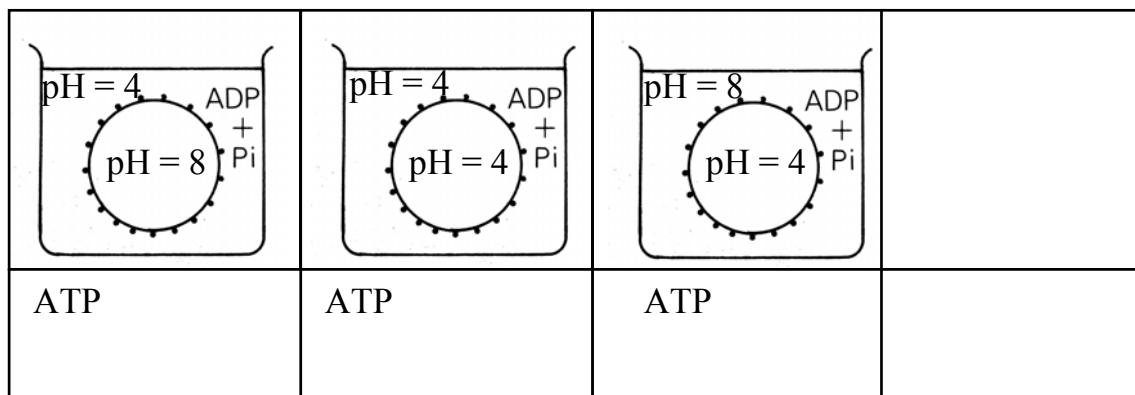
*



14

Pi ADP

. (15)



15

O_2

Pi

ADP

($R'H_2$)

(16)

R'	$R'H_2$
R'	$R'H_2$
R'	$R'H_2$
ATP	

16

1

(IV Cyt III U II I)

13

ATP

(16 15)

2

1

.....

.....

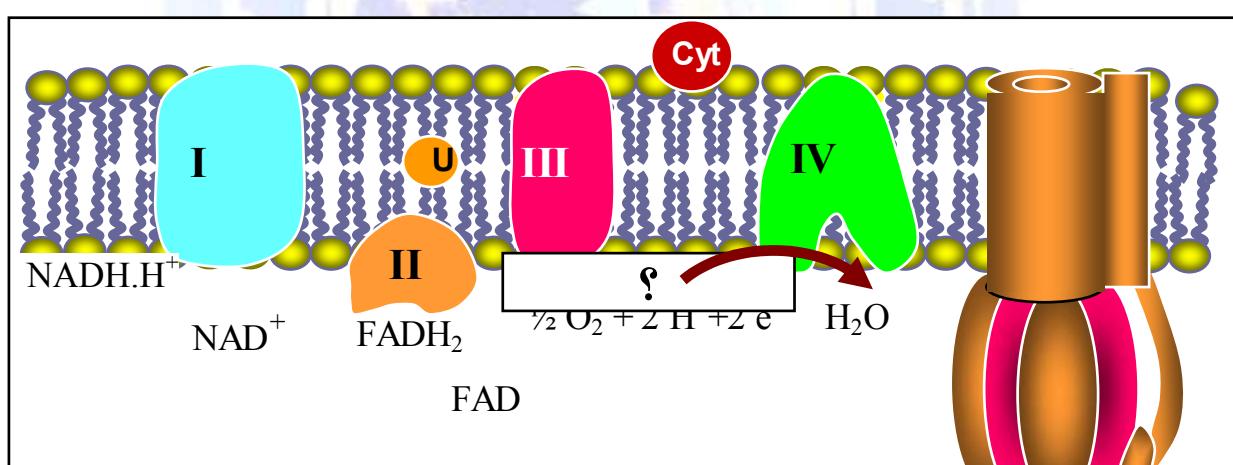
.....

: ATP 2

O₂

H⁺

(17) : 7

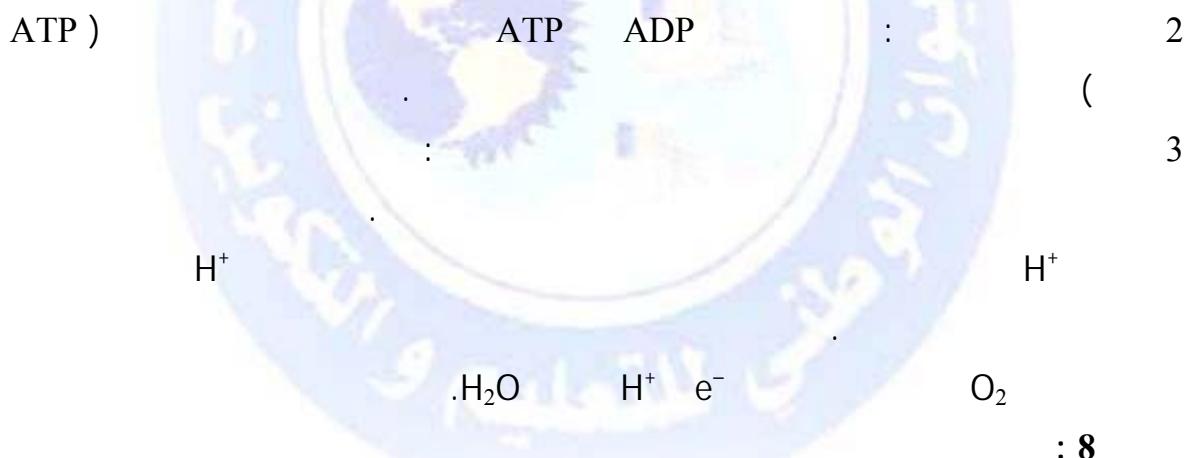
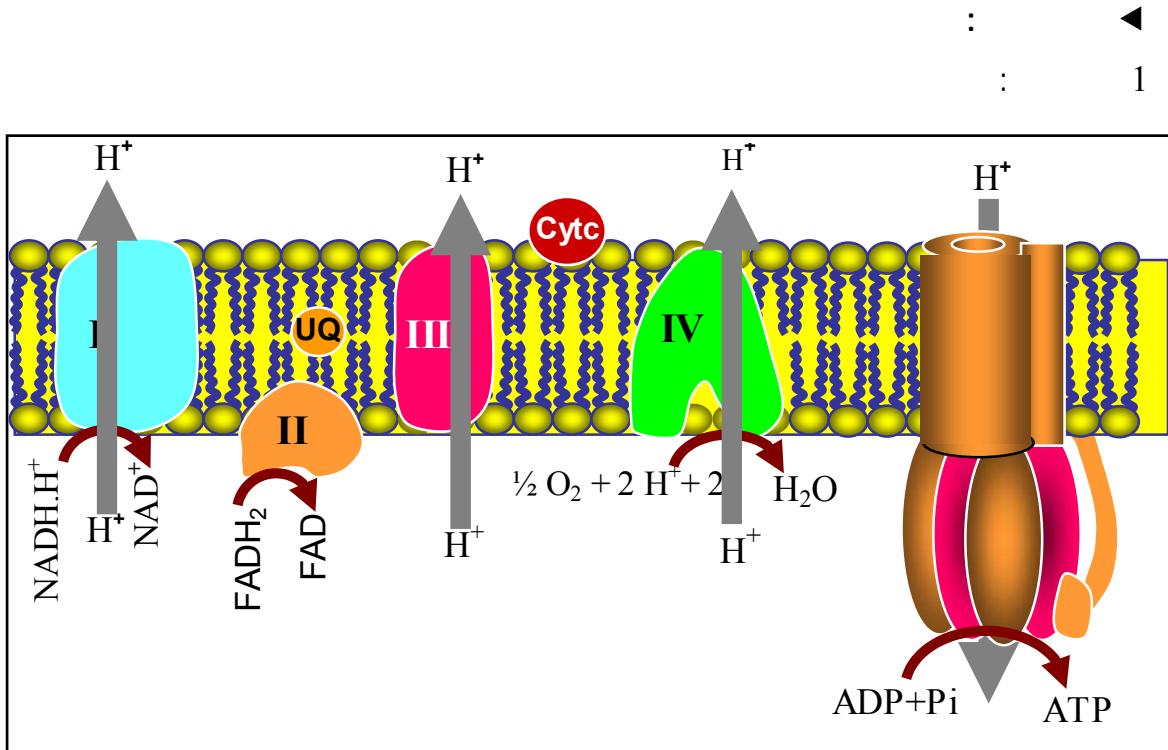


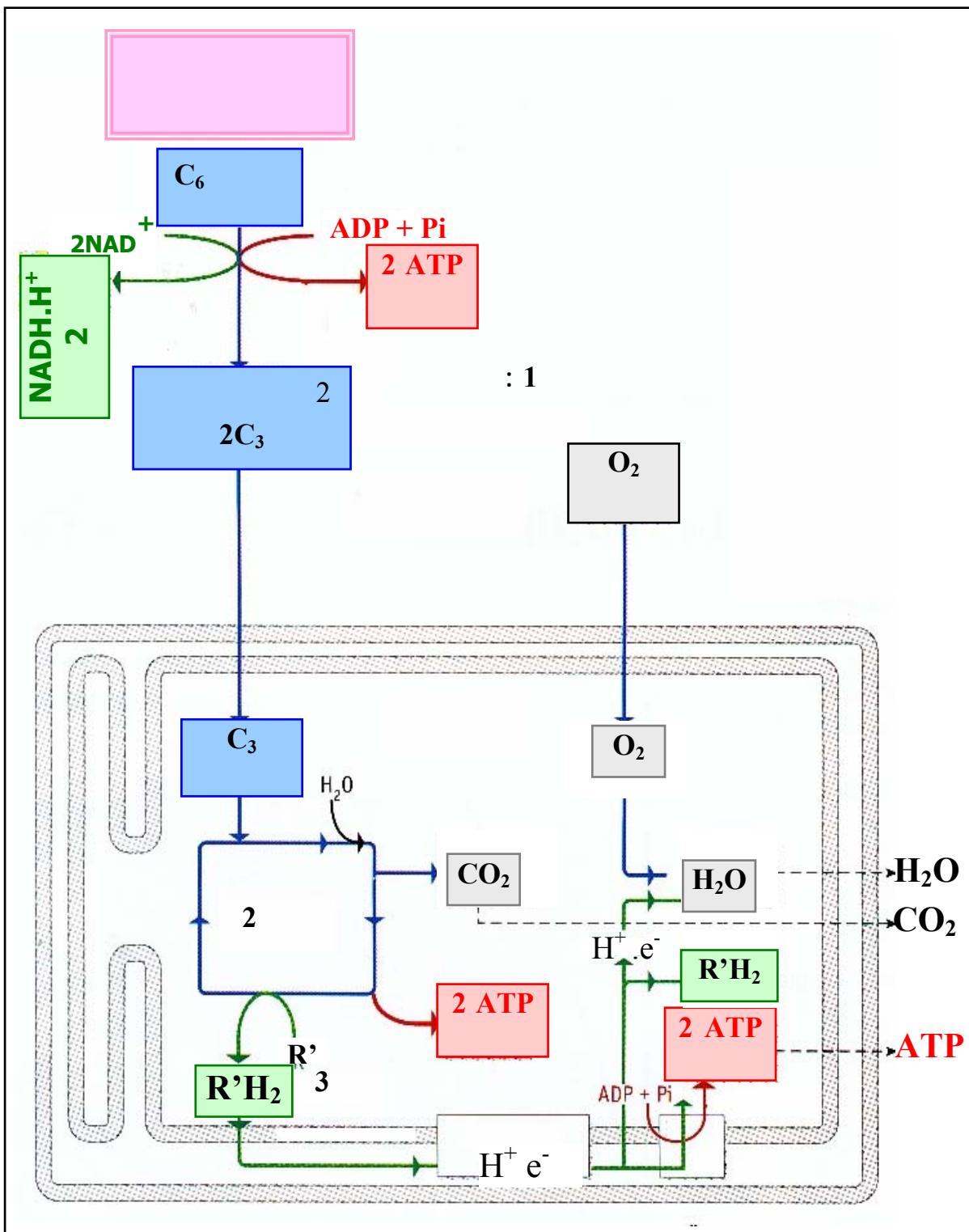
17

1

2

O₂ 3





ATP

ATP

:

ATP

: 1

(1)

*: 1

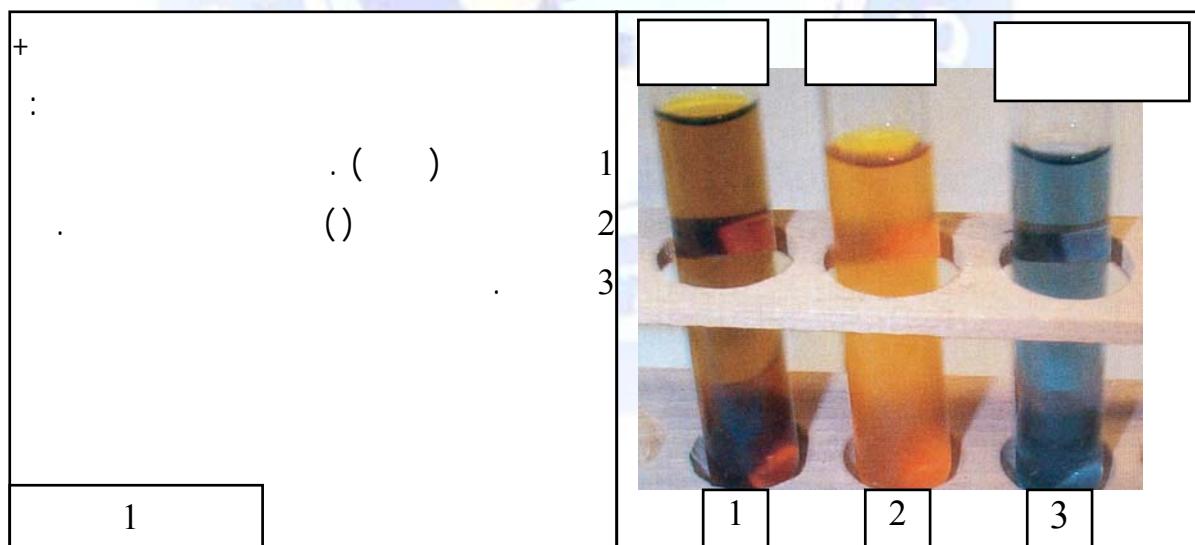


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.(1)

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1

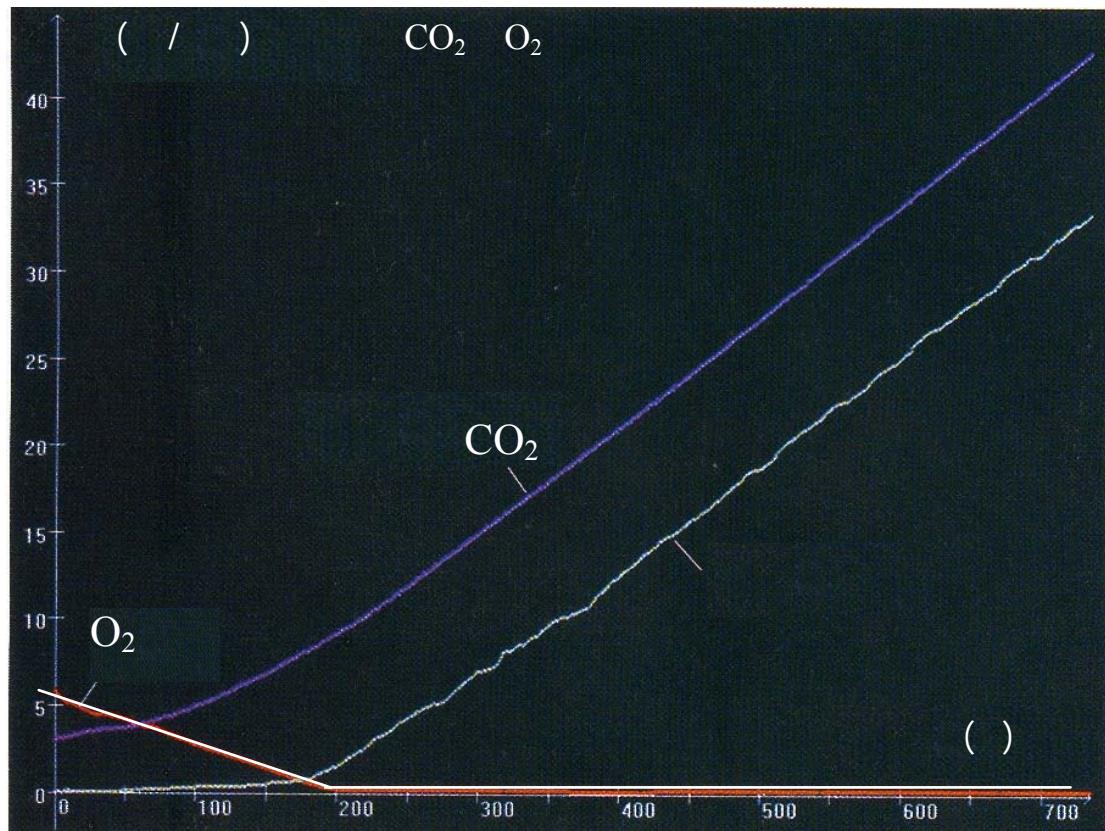
2

3

: 2

(2)

CO₂ O₂



2



1

(1)

(2)

2

(2 1)

3

*_2

(/ 0.2)

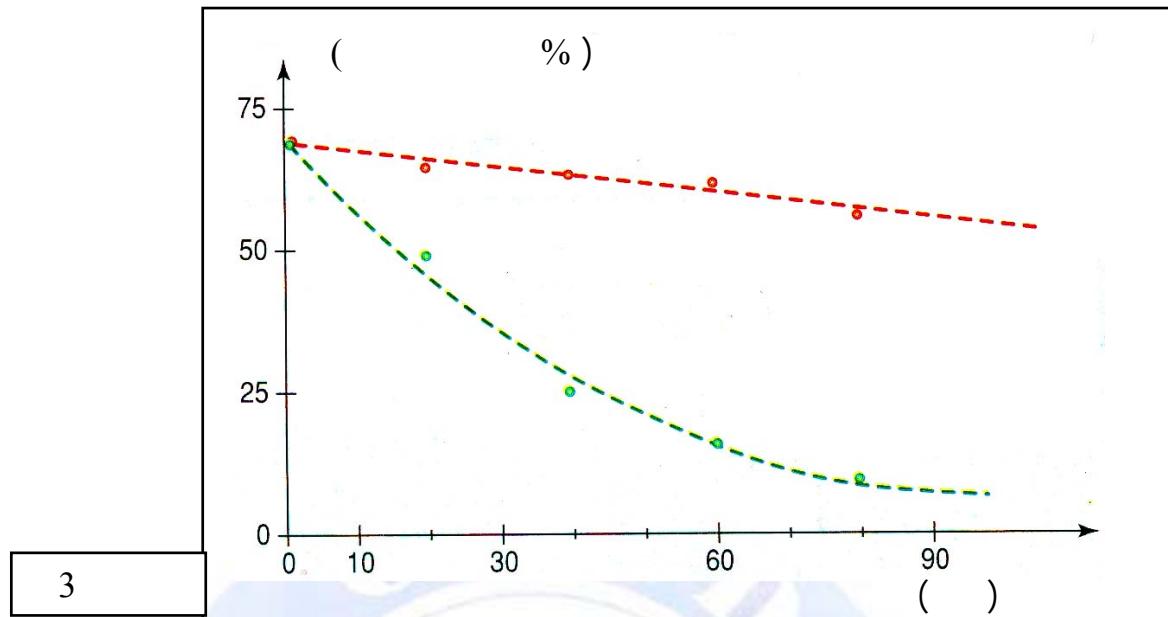
(/ 5)

(O₂

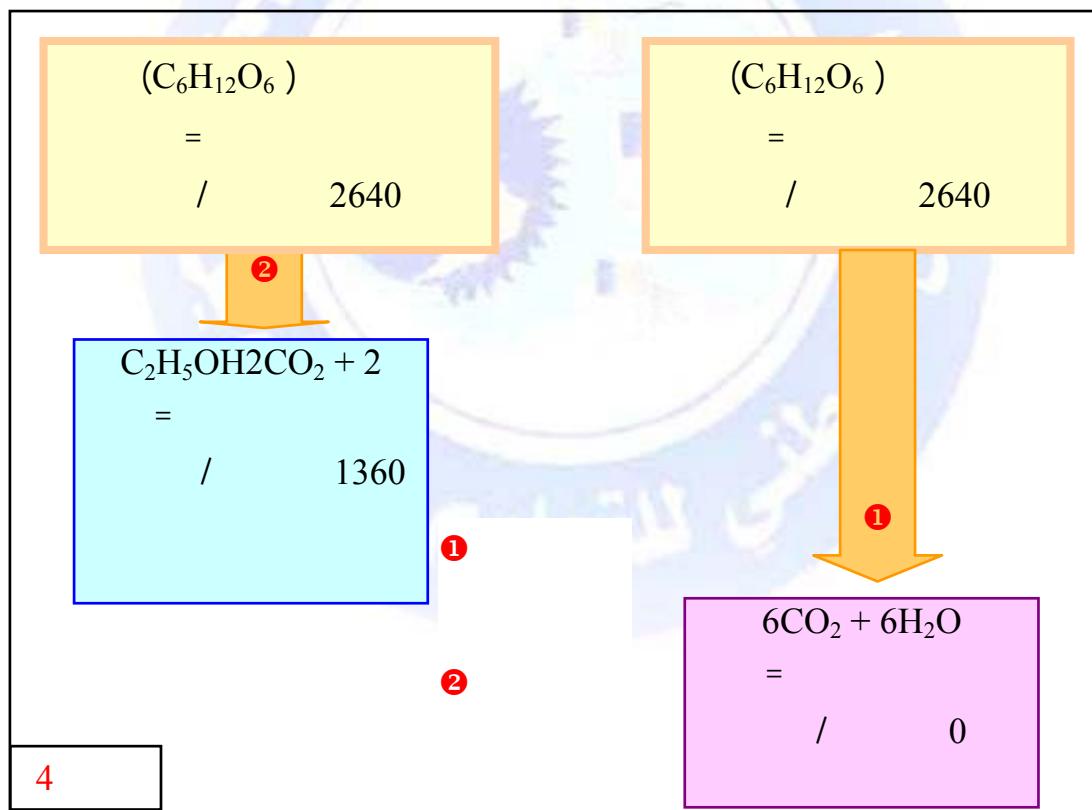
(10)

)

(3)

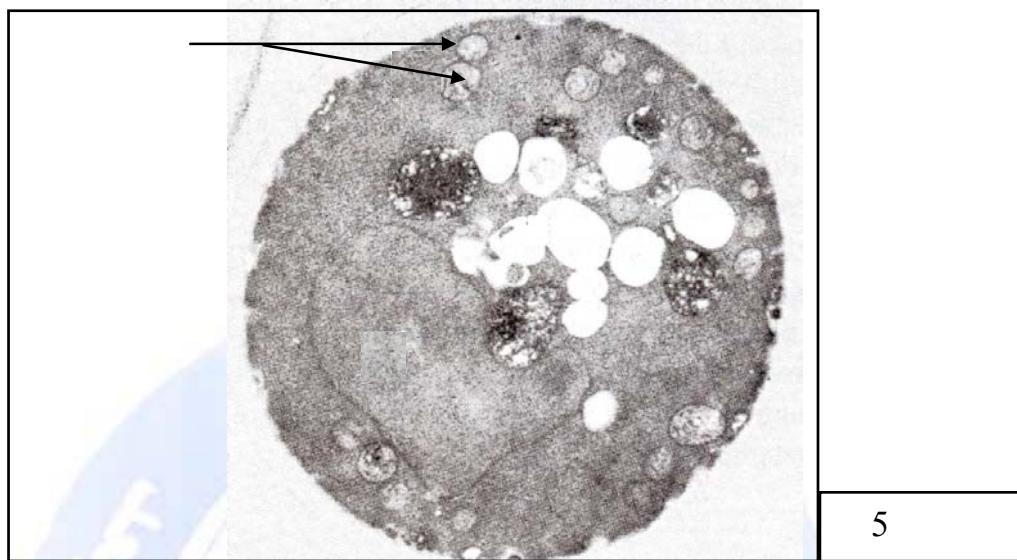


(4) *



(5)

*



5

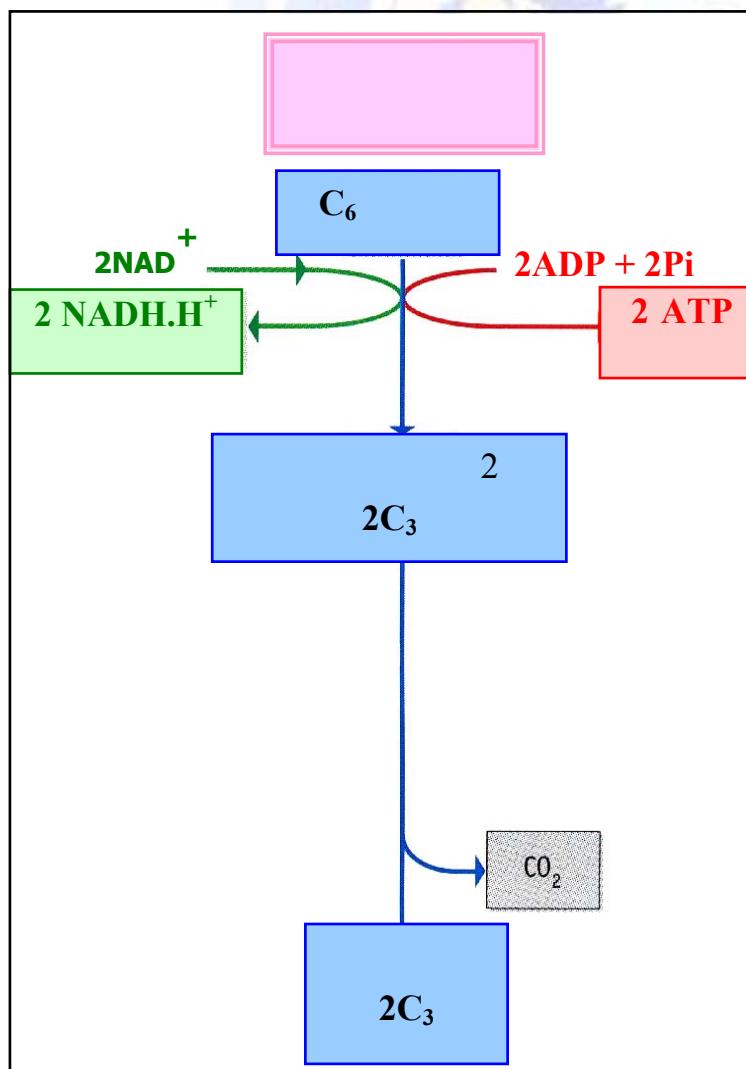
(6)

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(7)

: (6)

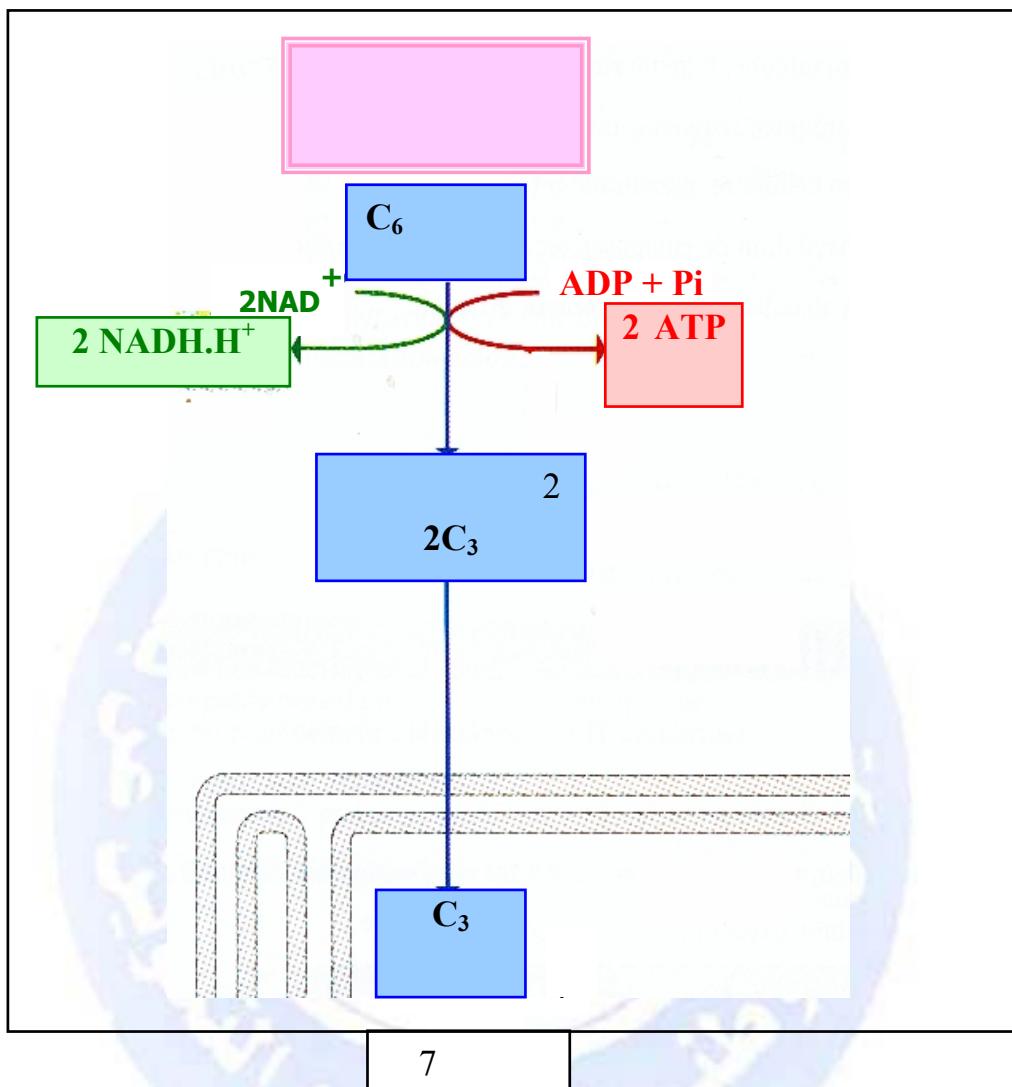
-



جميع الحقوق محفوظة ©

6

: (7)



7

(3)

1

2

(5)

3

4

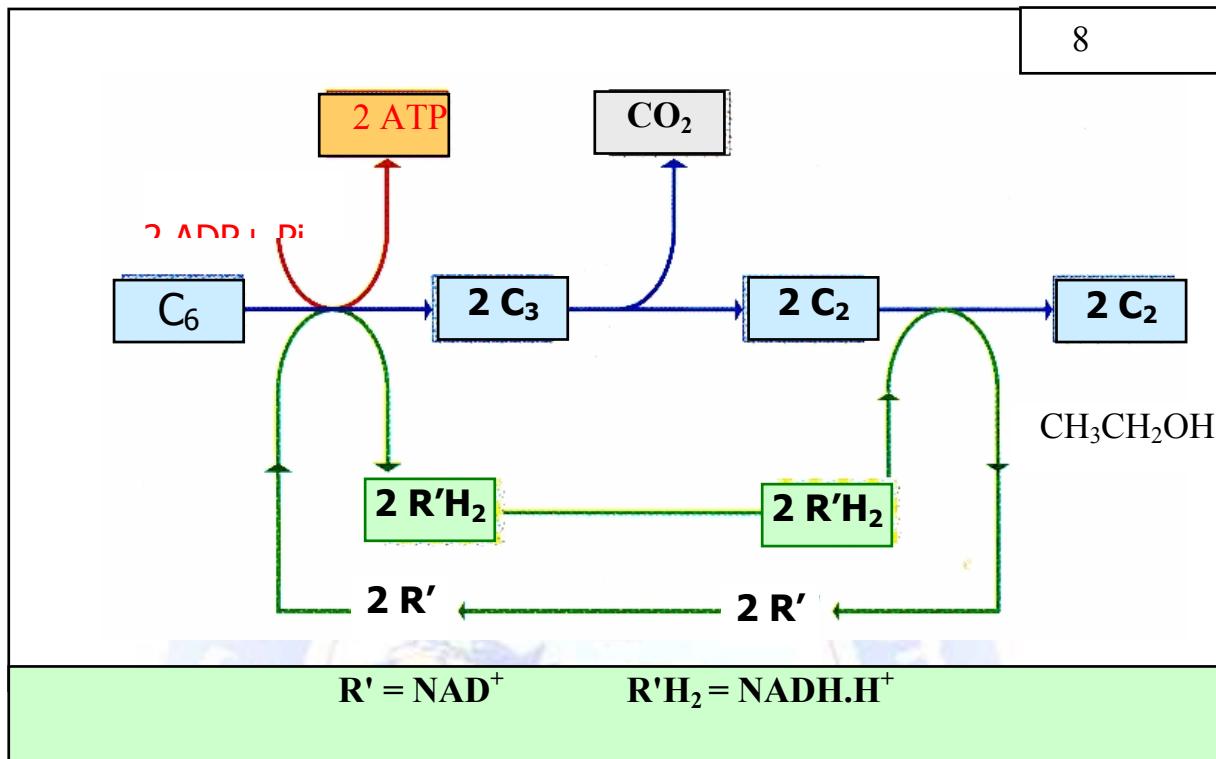


: 3

(8)

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8



(8)

1

2

: 1

1

(2)

:

()

: 2

CO_2

(2)

CO_2

CO_2

3

: 2

(3) : 1

. ()

2

()

3

()

4

ATP

(NADH.H⁺)

: 3

1

CO₂ () : 2

