

التغيرات الحاصلة في المؤشر الحيوي لمادة الخضاب الكلوروفيل (A.B) والحامض الأمين
(البرولين) في أوراق نبات الدودنيا *Dodonaea viscosa* تحت الظروف الملوثة.

Dodonaea viscosa

(A.B)

(2004)

Abstract

This research was concentrated to determine the biological indicator on *Dodonaea* plant leaves (*Dodonaea viscosa*) under polluted circumstances.

Chlorophyll (A; B) and Amino acid contents were estimated during the period from March to November (2004) for plant leaves under polluted effects on (Kerbala city) as compared with the same plant. (The same measured parameters) but far from polluted place, to show plant sensitivity; behavior against pollution and adaptation nature on these environments. From the analysis of result, in both locations, it was found a clear difference between them, which insure the fact this plant, has no use to be cultivated as anti-polluted plants.

(A.B)

()

(A.B)

()

(1989) (1986) (1981) (1980) (1973)

(1980)

(1987)

(stress) (1987)

(stress)

1978)

. (1979

() (%50) (1980) (1981) . ()

. (1981)

()

(1989)

(A.B)

(Sapindaceae)

Dodonaea viscosa

(Hunter, 1998)

(5-4)

: () (A.B)

. (1949) (A.B) .1

(150) (10)

(%80) (10)

(Na₂SO₄)

(CaCO₃)

Karl) ()

(/) (645 665) (Zeiss Jenal

(Bates, 1973) .2

(C₇H₆O₆S.2H₂O) (10) (0.5)

(2) (2) (2) .

(6) $(C_9H_4O_3.H_2O)$

(2) $(C_7H_6O_6S.2H_2O)$ (2)

. (2)

(C_7H_8) (4)

() (520)

:

$(\quad) \times (\quad / \quad) =$

()

(%100)

.

:

(A.B)

.

()

()

(2) (1)

(1) (A.B)

()

(1981) (1980)

() .

(stress)

()

()

115)

()

(% 84)

(% 175)

(%)

(4) (3)

(% 112)

. (2)

0

(/) (A.B)

(1)

.(2004)

()		()		
A	B	A	B	
0/55	0/45	0/77	0/56	
0/63	0/52	0/85	0/62	
0/88	0/62	1/27	0/83	
1/25	1/05	1/94	1/60	
1/76	1/25	2/12	1/55	
1/09	0/95	1/85	1/25	
0/75	0/54	1/25	0/98	
0/53	0/25	1/12	0/73	

(2) (A.B) (/)

.(2004)

()		()		
A	B	A	B	
55	45	77	56	
63	52	85	62	
88	62	127	83	
125	105	194	160	
176	125	212	155	
109	95	185	125	
75	54	125	98	
53	25	112	73	

(3) (/)

.(2004)

1/15	0/84	
1/35	0/99	
0/97	0/63	
1/0	0/65	
1/05	0/70	
1/45	0/95	
1/49	0/97	
1/75	1/12	

(4)

.(2004)

115	84	
135	99	
97	63	
100	65	
105	70	
145	95	
149	97	
175	112	

()

(A.B)

.

.

:

193-181 (6)

1974 . 1

.

(4,2)

(SO₂)

1981 . 2

.73-71

-205 (39)

1973 . . 3

. 207

1978 4

.561-557 (27 5)

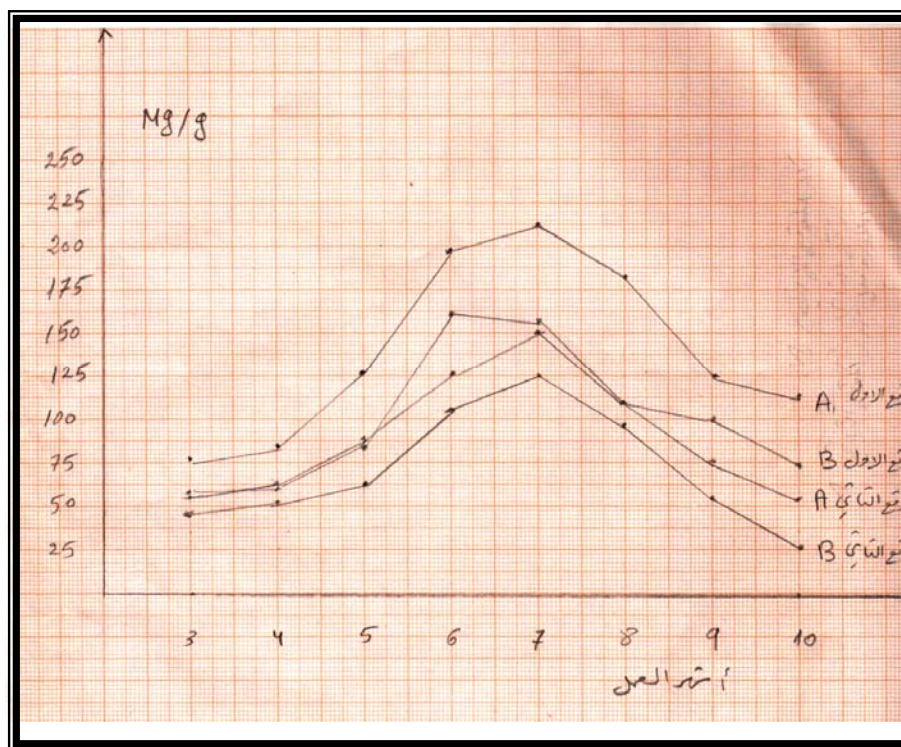
1976 . 5

(SO₂)

1980 . . 6

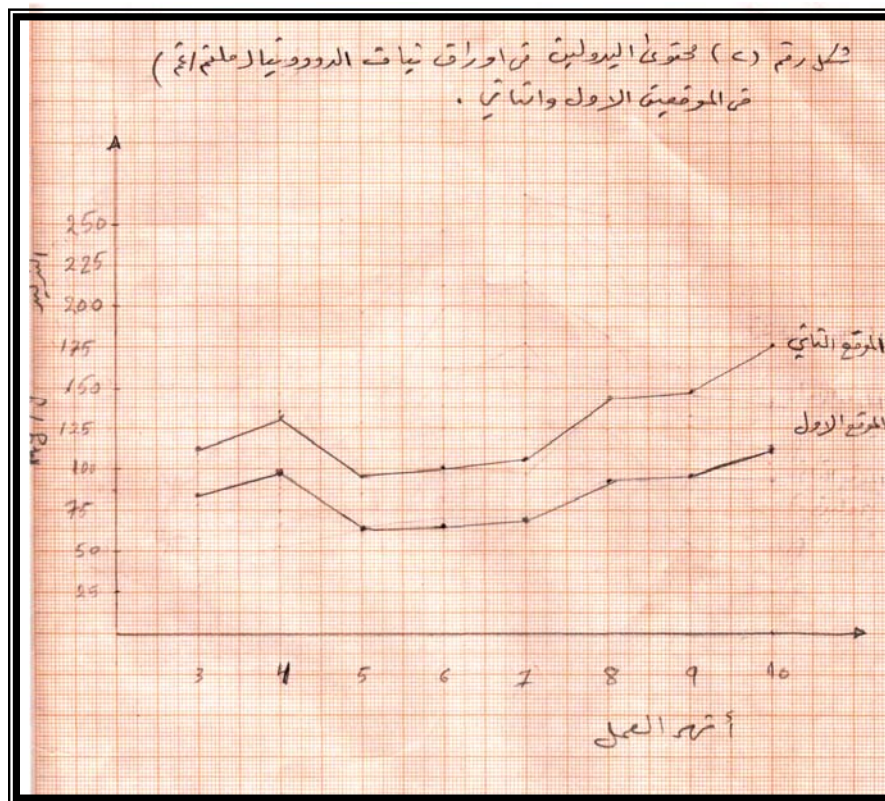
.226-215 (97)

7. 1978 . (45)
8. 1986 . (27) (78)
9. 1999 .
10. 1980 . (2) ()
61-51
11. 1980 . (18)
278-261
12. 1980 (H₂S)
23-5



(A, B)

(1)



(1)

(1)