

)
() : ()
(2000-2001)
(18) (8)
(10 20-10)
()
(....)

.....

Composting "

"

% 50-30

60)

(

.[2 1]

(Municipal Solid Waste MSW)

.[6 5 4 3]

5 -2.5

()

.[8 7]

.(1)

.[9 7]

.[10]

[9 7 6]

(Compost Plant)

:

100

1980

-
-

(2)

(/ 400)

(20-15)

:

-

.

-

Materials and Methods

-2

(Composition)

(Samples)

(200)

(Particle Size)

0.5

30

(80,20,10)

(Screens)

(Saturation) (Temperature)

"Oxygen-Temperature Hand-measuring System CM 36"

$$Density = \frac{P_1 - P_2}{v} \quad (14)$$

Kg : P₁
 Kg : P₂
 m³ : v

() : : □

)

1/2 :Air dried : □
-I

- .() 485.65 = -1
- .() 508.35 = -2
- .() 516.85 = -3

24 70 3 2 1 -II

105 : : □

()

105 70

: : □

% + % = %

Results and Discussion -3

Composition -1-3

Particle) (Composition) (Size

(200)

(80 20)

[6 5 4]

80 (1)

80 20 (2)

(%85.3)

(%20.55) 20

(3)

(%11.6) (%64)

(4)

Physical Analysis -2-3

(20 10)

(10)

(Final Product)

(9)

%30.2

(20-10)

%7.4

%11

%24.4

%2.5

%22.4

10

)

(

)

(10)

.(%97.7)

(..

-5-3

()

%30.2 (20 10

)

(10

)

%.%2.3

() :

()

(

)

.....

)

.(

Conclusion

-4

80 20

-1

(%6)

(%34.5)

. 80

)

-2

(%6.2)

(%19)

.(

.(%2.2)

(%2.3)

(%5.2)

20

()

-3

(%21)

³ /

(246) (%46)

-4

-5

. 42.5 ()

55

68

.(%30.2)

(20-10)

-6

%24.4

%7.3

-5

*

)

*

/ 400

)

(

()

(

.....

(80 < D)

.(1)

%	()	
18	14	
12.34	9.6	
4.4	3.4	
2.3	1.8	
12.34	9.6	
2.24	3.3	
3.73	2.9	
41.7	32.44	
1.8	1.4	
100	77.8	

.(200)

%39

(80 < D)

(80 ≥ D ≥ 20)

.(2)

%	()	
5.44	4.4	
0.86	0.7	
1.2	1	
0.5	0.4	
3.34	2.7	
1.61	1.3	
0.74	0.6	
0.5	0.4	
85.3	69	
0.5	0.4	
100	80.9	

%40.45 (80 ≥ D ≥ 20) -

.(200)

.(200) %20.55 (20) -

.(3)

%	
11.6	
6.5	
2.8	
1.4	
7.7	
2.9	
2.2	
0.25	
64.0	
1.0	

.....

(16 15 14 13 12 :)

.(4)

			1974	1976	1977	1972	1996		1996	
%	%	%	%	%	%	%	%	%	%	
42	32.5	25	14.7	23.4	16.7	16	16.14	15-10	15-7	
-	7.9	13	9.9	13.8	9.8	1.2	4.84	2-1	1.5-1	
11.3	7.1	5.2	5.3	5.2	4.1	2.5	2.63	3 -0.5	3 -1.5	
4.5	1.0	11	(*) 6.2	(*) 8.4	(*) 8.3	(*) 5.1	10.87	4 -2	10 -6	*
5.2	2.2	3.8	00	00	00	00	2.4	3 -1.5	15 -8	/
17.9	19.3	29	52.4	29.6	58.5	72	61	60 -50	60 -45	
4.5	-	-	4.1	10.4	2.6	2.4			1.5 -1	- - - -)
14.6	30.01	13	7.4	9.2	-	0.8	2.04	15 -13	15	()
27	12 -10						71.9	40 -30	60 -50	%

(*)

.(5)

3	2	1	
516.85	508.35	485.65	()
315.28	239.66	263.95	() 70
201.57	178.69	221.70	() ()
39	35.15	45.65	%
297.94	307.41	248.32	() . 105
17.34	22.25	15.63	70 () . () 105
5.5	6.75	5.92	%
44.5	41.8	51.59	%

.(6)

(³ /)	()	
0.464	6.5	1
0.1785	2.5	2
0.107	1.5	3
0.1785	2.5	4
0.214	3	5
0.357	5	6
0.1785	2.5	7
0.4285	6	8
0.1785	2.5	9
0.357	5	10

.....

.(7)

(°C)	%		
49.5	59	1/11/2000	1
61.9	54.5	2/11/2000	2
62.67	50	3/11/2000	3
64.17	55	4/11/2000	4
67.2	52	5/11/2000	5
65	50	6/11/2000	6
60.6	48	7/11/2000	7
61.53	43	8/11/2000	8
64.57	41	9/11/2000	9
67.57	39	10/11/2000	10
65.17	43	11/11/2000	11
64.57	50	12/11/2000	12
62	35	13/11/2000	13
61.3	34.6	14/11/2000	14
58.2	45	15/11/2000	15
57	40	16/11/2000	16
56	27.3	17/11/2000	17
55.17	42.4	18/11/2000	18

.(8)

(°C)	%		
31	24	1/2/2001	1
30	18	2/2/2001	2
33.8	16	3/2/2001	3
35.2	14	4/2/2001	4
39.7	13	5/2/2001	5
42.5	14	6/2/2001	6
41.2	11	7/2/2001	7

.(9)

%		()		
10-20 mm	> 20 mm	10-20 mm	> 20 mm	
100	100	2365.2	1798	
7.357	9.344	174	168	
24.395	40.567	577	729.4	
0.465	1.535	11	27.6	
22.417	6.107	530.2	109.8	
2.486	6.174	58.8	111	
0.71	1.212	16.8	21.8	
0.913	1.424	21.6	25.6	
11.069	13.159	261.8	236.6	
-	1.034	-	18.6	
30.188	19.422	714	349.2	

58%

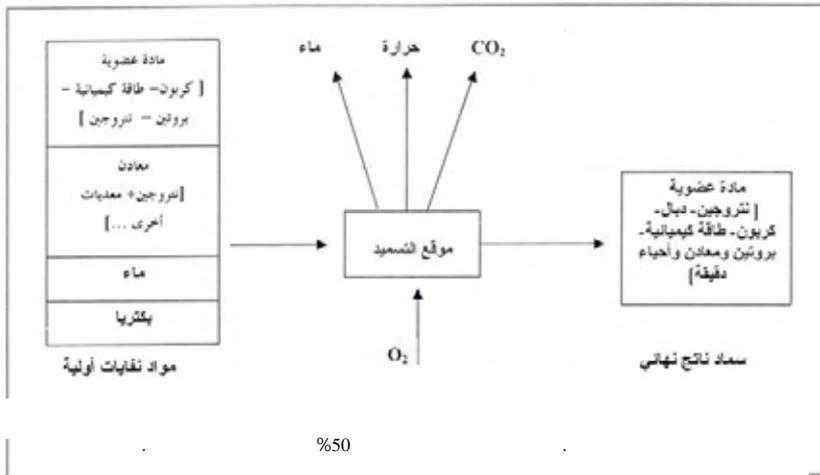
10

.....

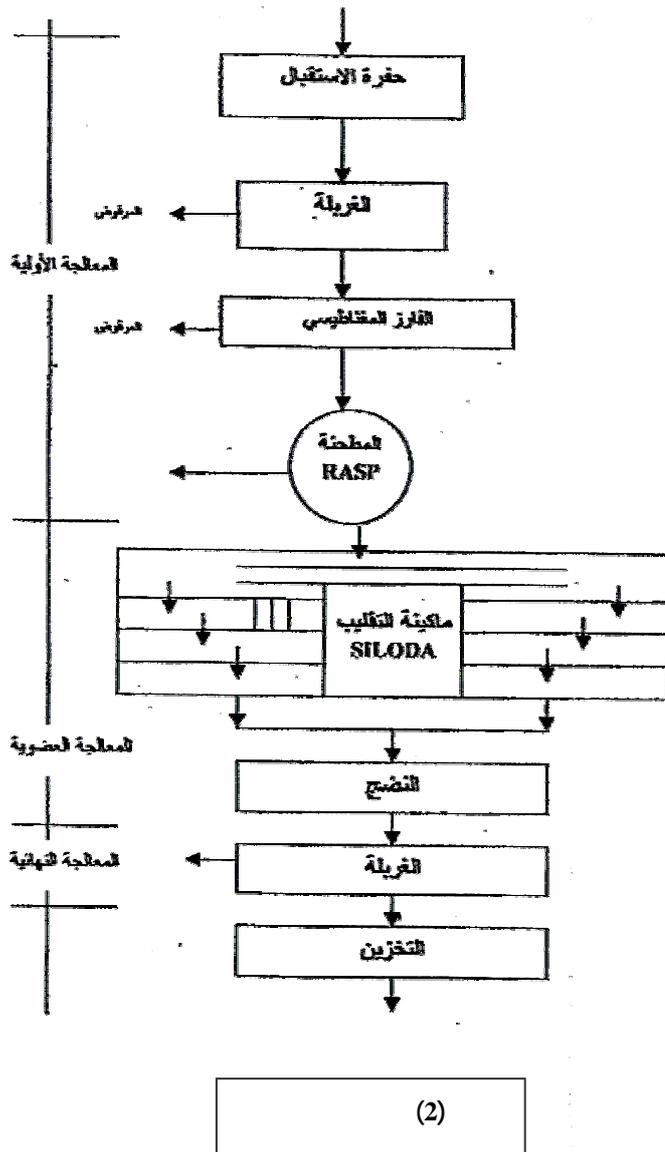
(10 >D)

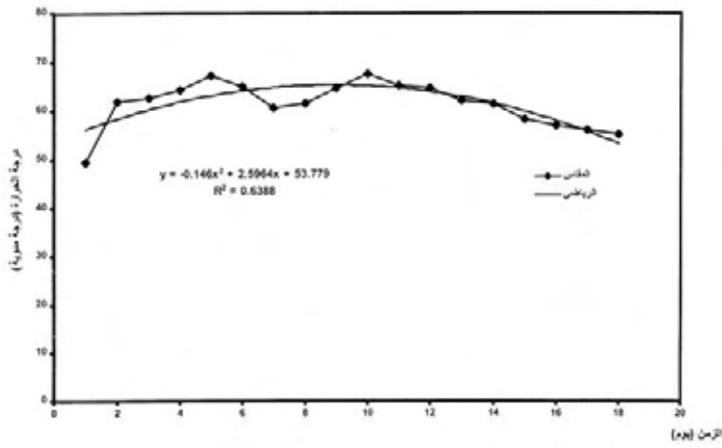
.(10)

%	()	
0.27	15.66	
1.25	72.50	
0.34	19.72	
0.44	25.52	
97.7	5666.6	

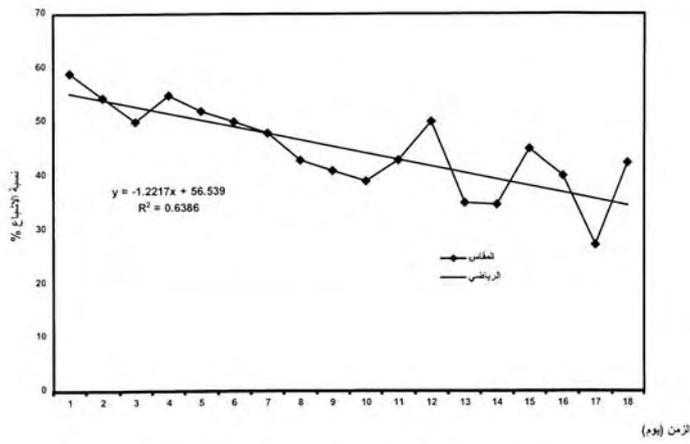


(1)

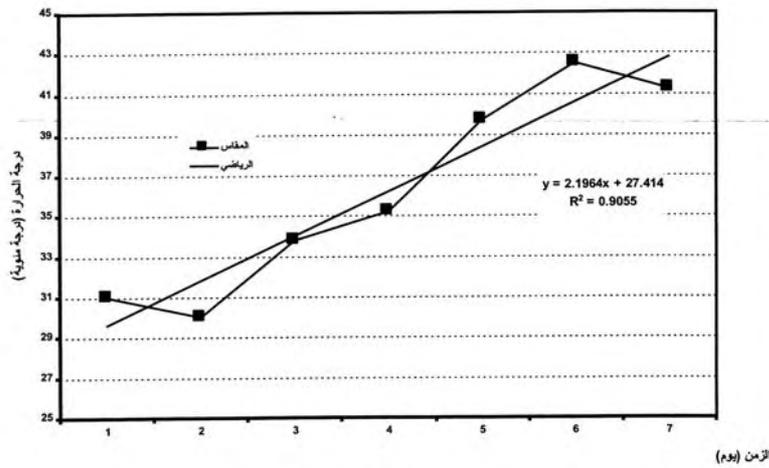




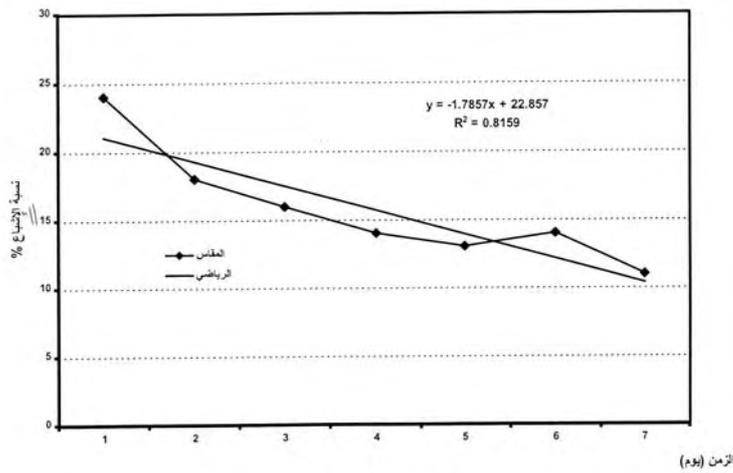
الشكل (3). العلاقة بين درجة الحرارة و زمن التخمر الهوائي في وحدة المعالجة البيولوجية للفضالة - معمل السماد/البيضة - اللاذقية (الفترة من 1-18 تشرين الثاني 2009)



الشكل (4). العلاقة بين نسبة الإنبعاث و زمن التخمر الهوائي في وحدة المعالجة البيولوجية للفضالة - معمل السماد/البيضة - اللاذقية (الفترة بين 1-18 تشرين الثاني 2009)



الشكل (5). العلاقة بين درجة الحرارة وزمن التخمر الهوائي في وحدة المعالجة البيولوجية للقمامة - معمل السماد/البصّة - اللاقية (الفترة بين 7-1 شباط 2001)



الشكل (6). العلاقة بين نسبة الإنبعاغ وزمن التخمر الهوائي في وحدة المعالجة البيولوجية للقمامة - معمل السماد/البصّة - اللاقية (الفترة بين 7-1 شباط 2001)

- (1) Rhyner R. et al. (1995). "Waste Management and Resource Recovery", CRC press, Inc. pp. 228-230.
- (2) USA-EPA (1995). "Decision Maker's Guide to Solid Waste Management", EPA 530-R-95-023, Washington D.C., pp. 708-717.
- (3) Tchabanoglous, G. et al. (1993). "Integrated Solid Waste Management", McGraw-Hill Inc., pp. 684-697.
- (4) MED-URBS (1995). "Solid Waste Management in Lattakia", DOMODOR Network, Lattakia.
- (5) CEHA (1995). "Solid Waste Management in Some Countries of Eastern Mediterranean Region", Technical Document: Special Studies, SS-4, Amman, Jordan.
- (6) Chahin, H. (1996). "Solid Waste Treatment", Tishreen University Publications, Lattakia.
- (7) Chahin, H. and Wazan, A.A. (1997). "Solid Waste Treatment in Lattakia City", Higher Education Journal for Engineering Sciences, N^o.7, pp. 145-182.
- (8) Awad, A. (1996). "A pilot Machine for Municipal Solid Waste Separation", Patent Registered in Syria (Patent Office) N^o.4590, May 21, 1996 (International Filed).
- (9) World Health Organization (1988). "Solid Waste Treatment in Developing Countries", WHO, Regional Office Publication, Alexandria, Egypt.
- (10) Awad, A. and Dagher, G. (1987). "Solid Waste Environment / Hygienic Relationship in the S.A.R.", Seminar on Solid Waste in Urban Areas of West Asia, Kuwait, 20-22 April 1987, -37 p.
- (11) Awad, A. and Chahin, H. (2001). " Ecological Assessment of Solid Waste Treatment System at Lattakia City ", 11th EURO-ARAB Conference for the Environment, Rostock, Germany, 24-26 April 2001, PP. 33-41.

-
- (12) *Consortium Kittelberger INCO: "Sanierung der Abwasserhaeltnisse in Algier", Ludwigshafen 1974\75.
- (13) Landesanstalt fur Umweltschutz Baden-Wuerttemberg: "Umweltqualitaetsbericht", Baden-Wuerttemberg, Karlsruhe, 1979.
- ," " " (14)
- .1996 / 9 -8
- " " (15)
- .() , ,
- (16) Safa, A. and Mroueh, M.: "Municipal Solid Waste Management in Lebanon-Problems and Solutions", UNESCO Chair for Environmental Protection, Homs, Syria, Sept. 20, 1998.