

**	*			
Aly_okasha2002@yahoo.com	-	-		*
aaak2008@yahoo.com		-	-	**

/

(/ 0.55 - 0.2) (/ 14.14 - 0.34)

.....

)

(

()

/ -1

74

(/ 0.55 - 0.2) (/ 14.14 - 0.34)

.

[1.2.3]

[4.5]

/ 60 / 6

[6]

[7.8]

[9.10]

/ -2

2.87

(1____) / 0.33 /

Perkin Elmer 2380

(1)

Mn ⁺² mg/l	Fe ⁺² mg/l	Cl ⁻ mg/l	NO ₃ ⁻ mg/l	SO ₄ ⁻² mg/l	K ⁺ mg/l	Na ⁺ mg/l	T.D.S mg/l	mg/l as CaCO ₃	pH	
0.33	2.87	155	2.1	17.5	34	180	446	89.2	6.8	

: -1-2

/ -1-1-2

1.5 1 0.5

30 (3 2 1) / -2-1-2

/ -3-1-2

/ 400 ,300, 200

Janke and Kankel-IKA-werk

/ 2-2

III %91

/ -3-2

)

5

(CaO

(/ 3.0 2.5 2.0 1.5 1.0 0.5)

/ -4-2

/ -5-2

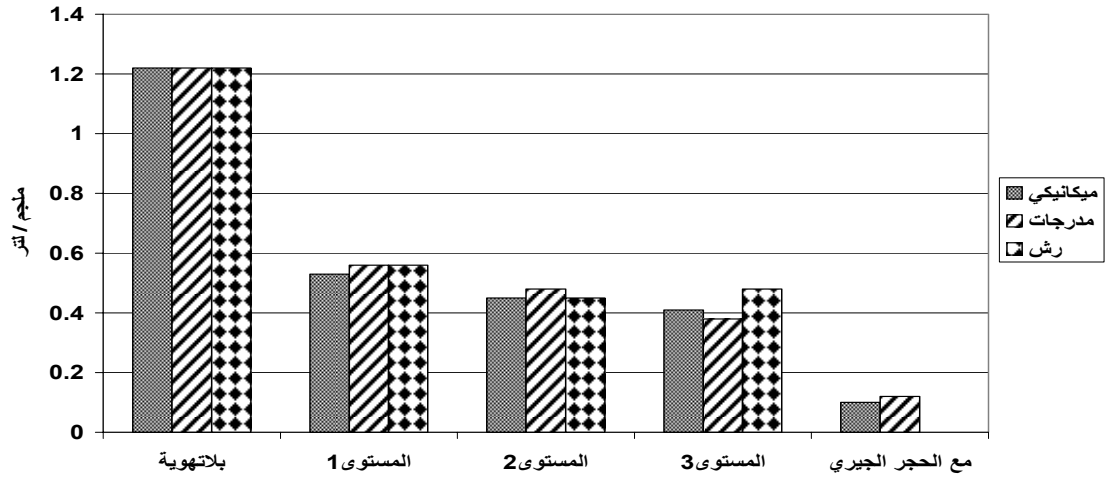
70 30 10 150
%30 / 0.25-0.15
. 1 %5 1- 0.5 %65 0.5

/ -3

1)

2

.2) %80 %57.5
%41.4 %63.6



شكل (1) تركيزات الحديد المتبقية في المياه بعد المعالجة بطرق التهوية المختلفة

%80.5

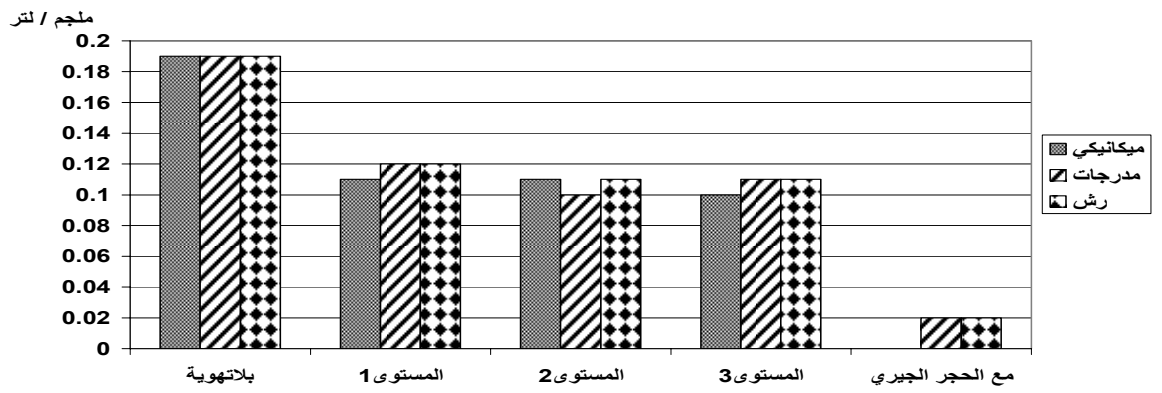
(1)

%86.8 %84.3

%67.7

%68.7

[8.1]



شكل (2) تركيزات المنجنيز المتبقية في المياه بعد المعالجة بطرق التهوية المختلفة

%95

%86.8

%67.7

([6.5])

%93.9

[11]

(2)

	3	2	1			
	%96.6	%85.8	%84.3	%81.5	%57.5	
	%95.6	%86.8	%83.3	%80.5	%57.5	
	%100	%86.8	%84.3	%80.5	%57.5	
	%100	%68.7	%67.7	%67.7	%41.4	
	%93.9	%67.7	%67.7	%63.7	%41.4	
	%93.9	%67.7	%67.7	%63.7	%41.4	

(4 3)

/ 2

[8] (/ 5.2)

(/ 0.057 / 0.12 >)

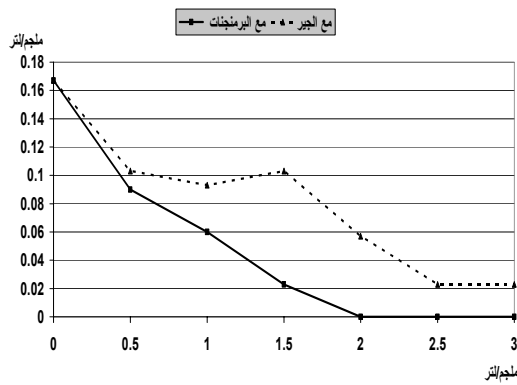
[10.9] 200

/ 2

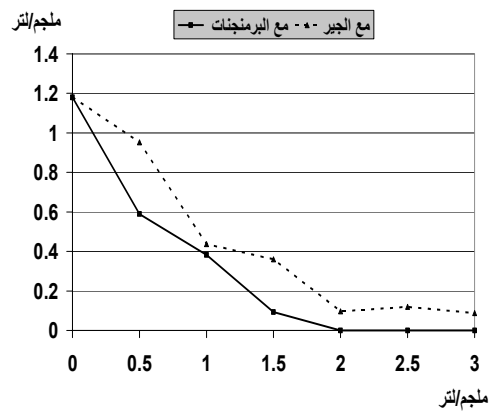
/ 1.5

Fe <0.3, Mn < 0.1) [12]

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شكل (4) / العلاقة بين تركيز المنجنيز الذائب وتركيز الحديد المستخدم من المواد المؤكسدة



شكل (3) / العلاقة بين تركيز الحديد الذائب وتركيز الحديد المستخدم من المواد المؤكسدة

(3)

/(3)

Mn⁺² mg/l	Fe⁺² mg/l	Cl⁻ mg/l	NO₃⁻ mg/l	SO₄⁻² mg/l	K⁺ mg/l	Na⁺ mg/l	T.D.S mg/l	mg/l as CaCO₃	pH	
0.33	2.87	155	2.1	17.5	34	180	446	89.22	6.85	
0.12	0.31	156	2.4	18.0	35	180	436	20.00	6.76	
0.02	0.06	156	2.4	18.0	35	180	440	22.00	7.26	

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