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K (1)
(0.5)

(1)
K

()
100

1- .K 150 100 50 0
45

()
M CaCl₂ < NH₄OAc < NaOAc

k :

(1894) Dyer
%1

(1967) Cook

تاريخ استلام البحث 2012 / 3 / 4 .

تاريخ قبول النشر 2012 / 5 / 22 .

بحث مستل من رسالة الماجستير للباحث الأول .

(1980) Sparks

Soil test

(1979 Qumener)
 (1982 Page)
 (1994) Singh Mishva
 Suaraz Martini
 (1975) Grimme (1976)
 (1N)
 Dhillon
 (1989)
 . BaCl₂>NH₄Cl>CaCl₂>NaCl :

(1989 Saxons Mazumdar)
 1N NH₄OAc
 (1990 Goulding Johnson ; 1990 Haby)
 Mehlich₂ Mehlich₁ K
 (AB-DTPA) - Mehlich₃
 0.1 HCl 0.01 0.1 BaCl₂
 (1990 Jones)

(T₁) 2011 /
 (T₂) 30
 30 - - (T₃) 30
 (1)
 ()
 1:1 2
 : :
 (1982) Page pH-meter pH

(1982) Page Ec-meter : Ec

. 1

1-	2.3	2.9	2.5	1:1 Ec
	7.43	7.69	7.97	1:1 pH
1-	6.8	12.3	13.9	Ca²⁺
	5.5	11.3	8.9	Mg²⁺
	13.6	16.3	20.4	Na⁺
	0	0	0	CO₃²⁻
	5.0	6.8	7.3	HCO₃⁻
	15.3	26.5	28.4	SO₄^{2-*}
	5.6	6.6	7.5	Cl⁻
1-	28	29	31	
1-	6.9	12.6	14.2	
1-	20.2	23.4	27.9	
1-	246	282	110	
1-	3.2			
1-	231	211	512	
	274	313	422	
	495	476	66	

- SO₄^{2-*}

(1954) Richards Na₂EDTA :
 Flamephotometer :
 (1954) Richards
 (1954) Richards (0.01N) :
 (0.01M) :
 (1954) Richards
 (2M) :
 (1965) Black
 (1971 Hesse) (3M) HCl Calcimeter :

(Walkley-Black Method)

:
.(1958) Jackson

: CEC

.(2007)

() :
. (1965) Day

.(2007) :

.(1979) Jackson :

:

9.9 14.93 (1) X-ray 7.08 10.5
16.99 14.93 d-spacing

° 550

7.08 9.9

° 550

7.08

(2) X-ray
7.97 10.78 14.93
14.93

10.78

16.99
° 550

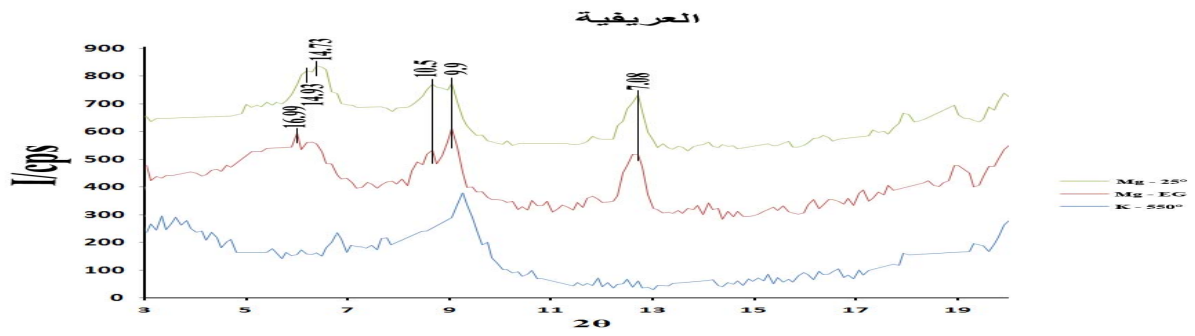
7.97

(3)

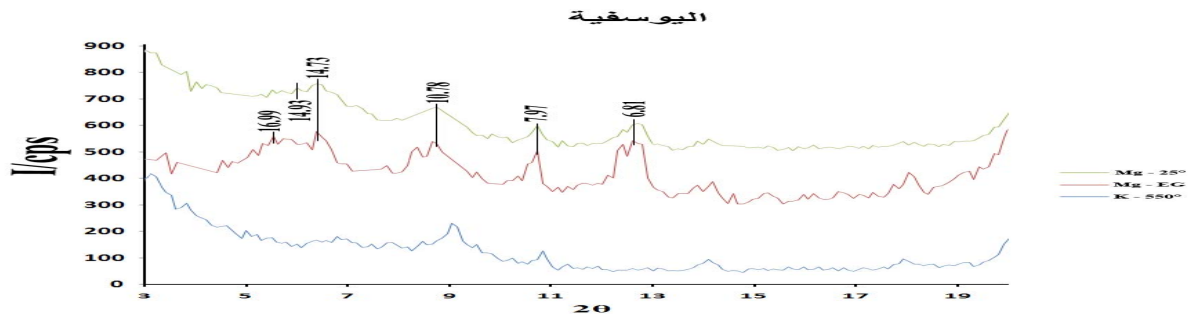
7.08

7.08 9.93 14.73

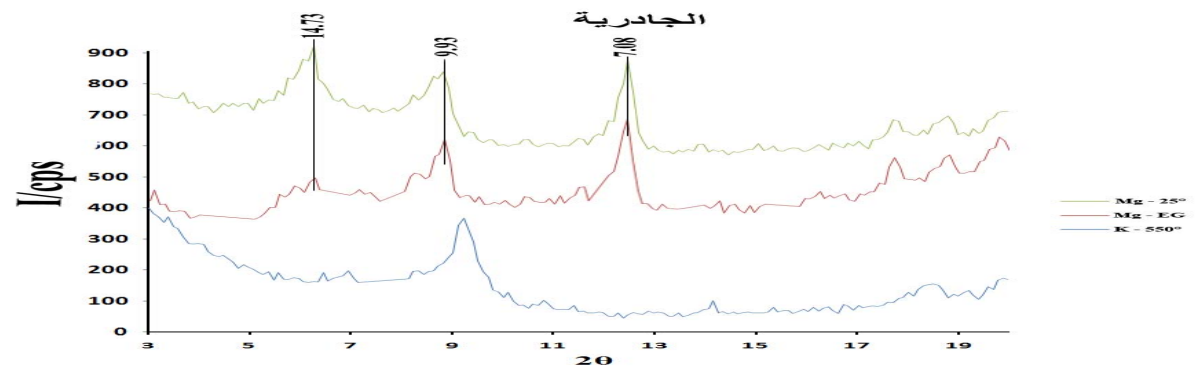
° 550



1



2



3

150 100

1- .K 150 100 50 0

36 12

()

%75 %100

95

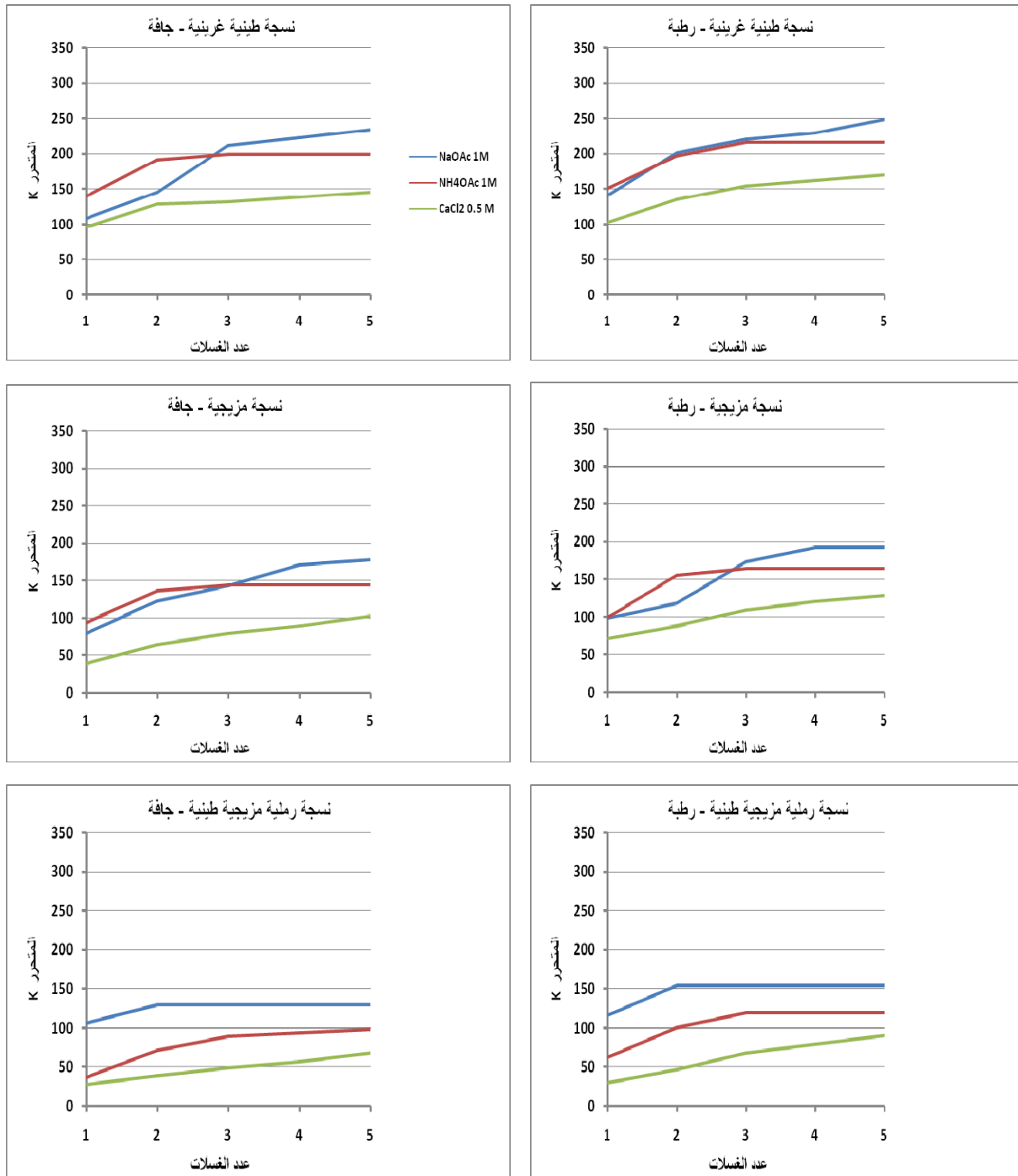
:
 ()
 .1
) 5
 (24 ° 105
 33 50
 :
 .() 1 .A
 .(1982 Page) 1 .B
 .(1965 Pratt) 0.5 .C
 30
 / 2000 5
 () 33
 .2

.()

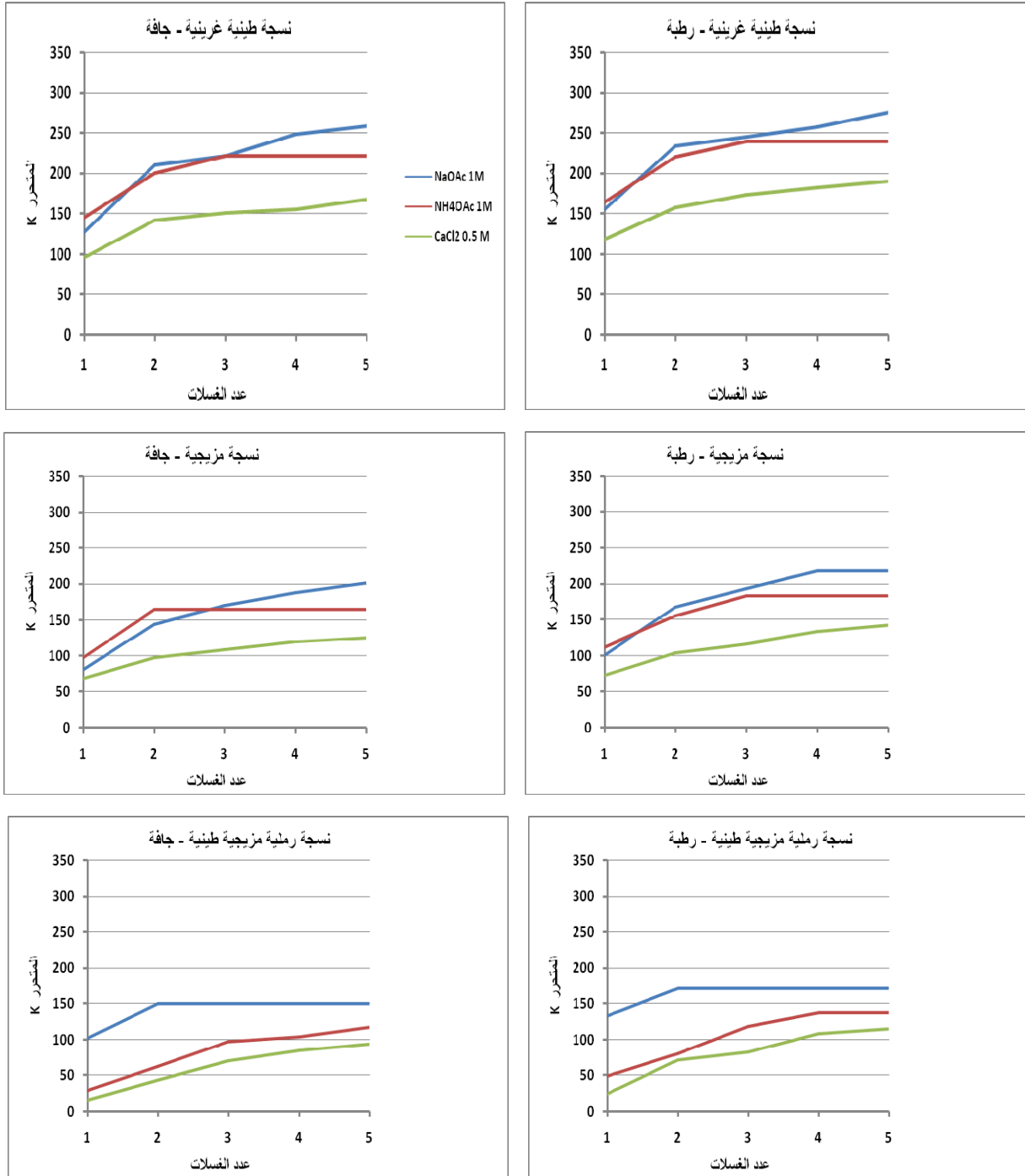
K . (7 6 5 4)

(CaCl₂ NH₄OAc NaOAc)

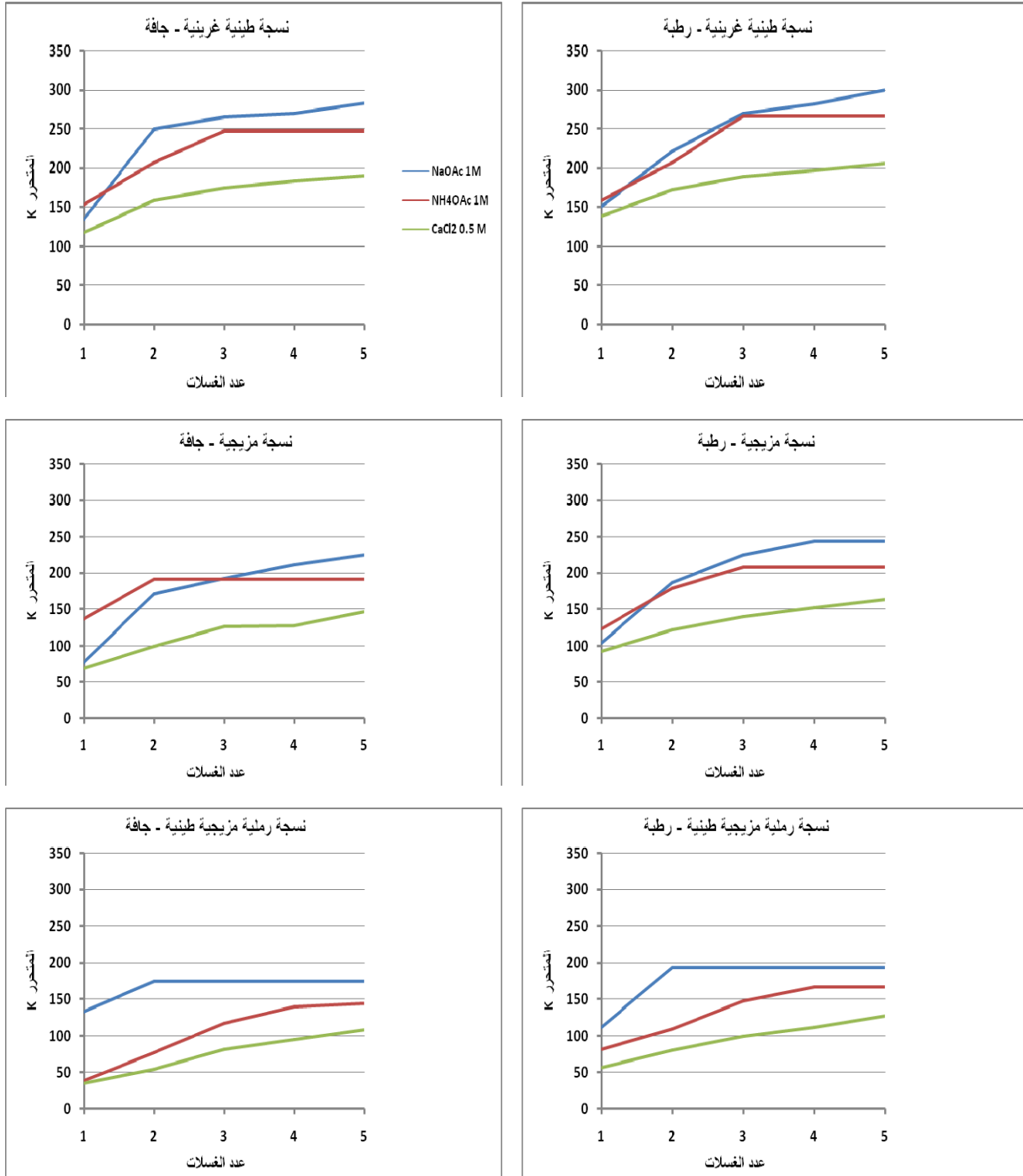
	(Internal - K)	(Surface-K)	()
		-	
(3 2 1)	.(1989)	Dhillon	
	(CaCl ₂ NH ₄ OAc NaOAc)		
	(¹⁻ K 150 100 50 0)		
6 5 4)			(7
Simard	.(2000) IPI (1998)	Mengel (1992)	(
)			
(7 6 5 4)			
2:1			
2.8A°		2.6A°	
.(1985) Beringer	. (1990)	
:			
	0.5M	1M	1M
	<	<	:



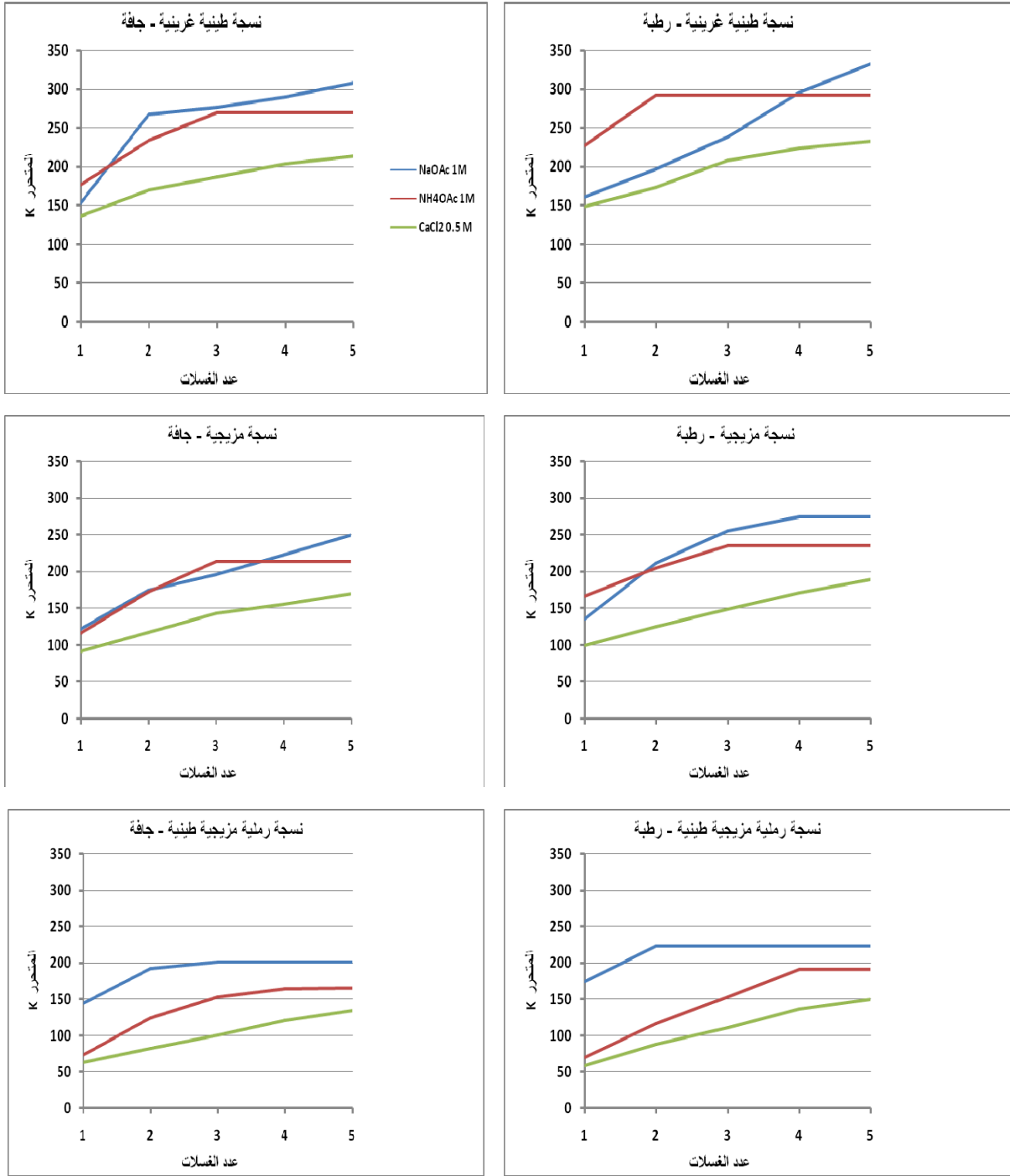
(1- .) .4



5. K انقصور K (1-)



6. (1-) .K 100 .1-



7. (1-) . K 150 . 1-

- .2007.
.(FAO)
- .1990.
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EVALUATION OF AVAILABLE POTASSIUM DETERMINATION METHODS FOR DIFFERENT TEXTURE SOILS

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ABSTRACT

Determination of available K conducted by different methods. In Iraq; ammonium acetate (1M) consider the most widely used methods while few others prefer 0.5M CaCl₂ method. Implementations of suitable assessment for available K consider an important task to evaluate the amount of K fertilizer that should apply to soil. Therefore both methods (NH₄OAc and CaCl₂) were investigated and compared with third suggested method (1M NaOAc) which considers a suitable technique to evaluate the available K in some investigation.

Capacity of soils to release K was investigated in laboratory experiment. characterized by different texture class collected from Aurafia , Yousifiya and Jaderia. 100g of the same soils used in experiment were treated with different concentration of K (0 ,50 ,100 and 150 Kg.h⁻¹) and subject to wetting – drying cycles 45 days. Available K was extracted and determined for five successive treatments using wet and dry soils by NH₄OAc , CaCl₂ and NaOAc methods. Data obtained indicate a significant correlation between extractable amount of K and the levels of applied K to soils. The extractable amount of K for different treatment increased in the following sequence : NaOAc > NH₄OAc > CaCl₂ .

Key words: K extraction methods, available K, K – release