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				*	
				**	
-					
	<i>Citrus sinensis. L.</i>			2004	
				15	
	<i>Anethum graveolens L.</i>				
	<i>Mentha longifolia L.</i>	%4	2	<i>Allium sativum L.</i>	%,%40
				/ 0.5 Topsin	%,%40 20
-80		1 ± 4			
	5		C.R.D.		%,%85
%,%5		L.S.D.			
				%5	%4
				%20	%4 %40
%40	%2	%4			
	%40			%5	%4
		%,%20	%4	%40	
(1995	)				
	12				
El-Hilali)					
					.(2003
.(2000	Wild)				





**. Flavedo**

**.1**

	/		
0 ,852	0,701	1.002	T1
0,803	0,602	1.003	T2
0, 800	0 ,633	0.967	T3
0,902	0.733	1.071	T4
0,850	0.767	0.933	T5
0,861	0.641	1.080	T6
0,893	0.719	1.067	T7
0,815	0.614	1.015	T8
0,986	0.903	1.069	T9
.			L.S.D. 0.05
	0.701	1.023	
	0.1543		L.S.D. 0.05

**. Albedo**

**.2**

	/		
1.442	1.217	1.667	T1
1.384	0.867	1.900	T2
1.517	1.333	1.700	T3
1.450	1.400	1.500	T4
1.317	1.000	1.633	T5
1.567	1.333	1.800	T6
1.644	1.367	1.921	T7
1.217	1.167	1.267	T8
1.884	1.800	1.967	T9
.			L.S.D. 0.05
	1.276	1.706	
	0.2415		L.S.D. 0.05

( 3 )

T3

T5

1.58

% 1.47

%(0.56 )

.(2.15)



.4  
100/

71.2	95.2	47.1	T1
62.1	87.5	36.7	T2
71.8	96.2	47.3	T3
68.9	91.3	46.5	T4
63.4	86.7	40.1	T5
64.2	87.5	42.9	T6
67.4	93.6	41.2	T7
68.3	90.2	46.4	T8
66.8	91.4	42.2	T9
4.59			LSD5%
	91.07	43.38	
	1.96		LSD5%

.2005.

.*Citrus sinensis* L.

.1987 .

. 71-61 : (3)6

*Citrus sinensis* L.

.1995.

*Citrus sinensis* L.

.118-109 : (2) 36 ,

.1993 .

.1995.

-92:(2)26.

. *Citrus limon*

.100

. 2004.

.1987 .

*Citrus*

. 105-103: (3) 6 .

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## CHEMICAL STUDY OF THE PHYSIOLOGICAL EFFECTS OF COLD DAMAGE AND PLANTS EXTRACT ON THE FRUITS SURFACE LOCAL ORANGES .

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Sabah Mohammad Jamil al-Hity\*\*

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### ABSTRACT

The study was conducted in the cold storage unit of the Department of Horticulture College of Agriculture - University of Baghdad for two seasons 2003 and 2004 local orange *Citrus sinensis*. L. Obtained from trees 15 years old inlaid on the origin of Bitter Orange, near the city of Baquba, the manual harvesting using scissors to cut the holder of the fruit with the level of the crust when the stage of full coloring on the first of January. fruit dipped in extract from the plant dill , *Anethum graveolens* L. Concentration of 40%, the seeds dill 5%, garlic *Alliam sativum* L. 2 and 4%, mint, *Mentha longifolia* L 20 and 40%, fungal pesticide Toposin 0.5 g / liter and the treatment of individual packaging of fruits as well as treatment of comparison, the fruit stored in a cold store mechanical refrigeration at a temperature of  $4 \pm 1$  m and a relative humidity 80-85%. Factorial experiments were carried out in the design of CRD Three replicates and the weight of 5 kg per duplicate, and averages were compared on the basis of less significant difference LSD The level of risk 5%.

The results showed that damage to cold led to the reduction of the thickness of layers Flavedo and albedo and the proportion of the reduced sugars in fruits of orange rind and led to increase the content of the crust affected by phenols. Maintained transactions Dill seed 5%, Garlic 4% at the highest rate in the proportion of sugars and reduced transaction Dill 40% Garlic 4% and Mints 20% of the content of the crust from phenols. In the affected parts of the crust of transactions maintained Cling film ,Garlic 2% and 4% and Mints 40% at the highest thickness of Flavido less transactions miaintained cling film and Mints 40% at the highest thickness of the albedo and transactions Garlic4% and Dill seeds 5% at the highest rate of reductive sugars, and less content of phenols in transactions Mints 20%, Dill 40% and Garlic 4% .