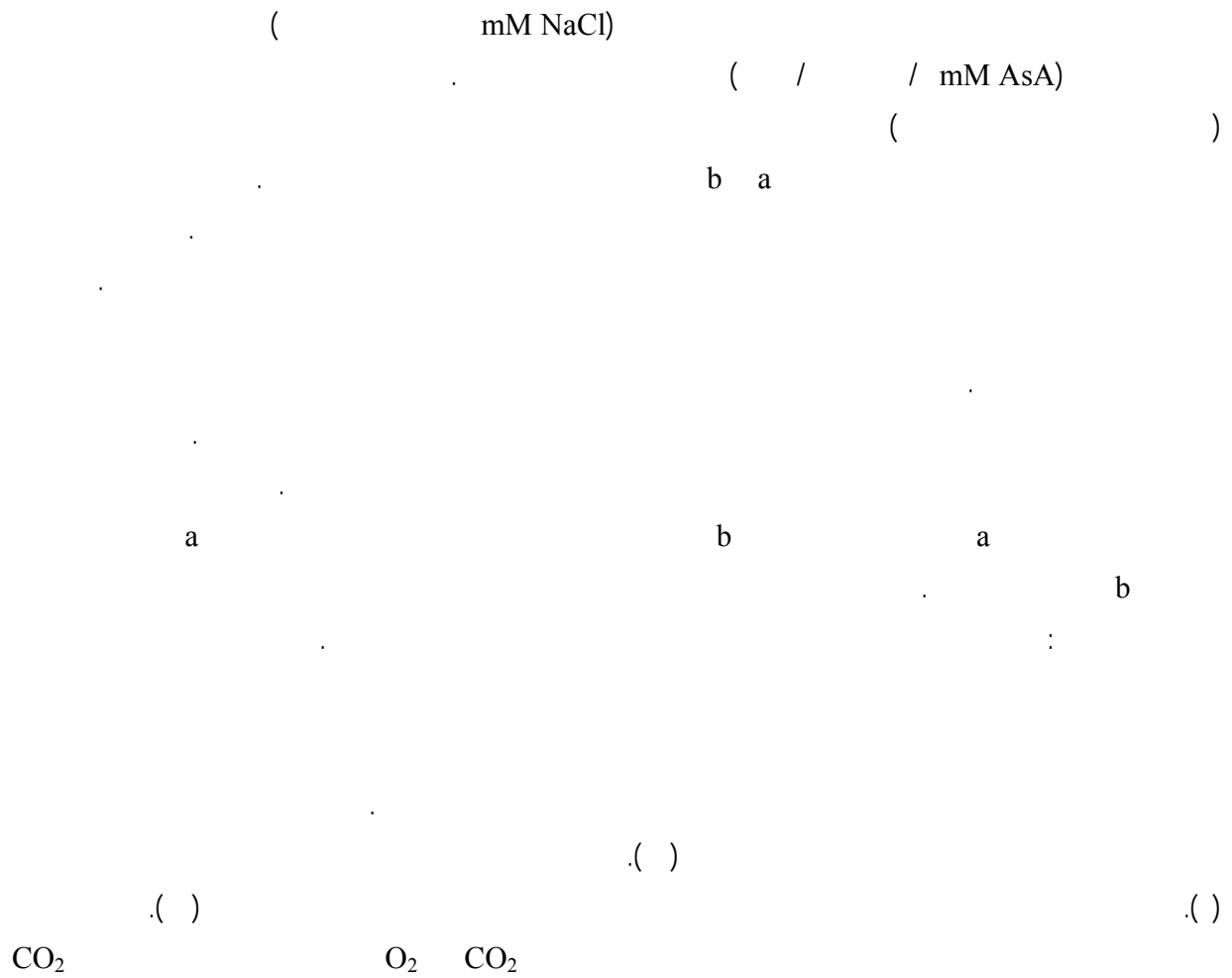


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RESPONSE OF MEXICAN LIME (*CITRUS AURANTIFOLIA* SWINGLE) SEEDLINGS TO ASCORBIC ACID UNDER SALINE CONDITION



(h.shahidi111@gmail.com)

(\cdot) (OH \cdot) (H₂O₂) (O₂ \cdot)
(ROS) DNA
ROS ROS
(\cdot)
(\cdot)
() E
()
(\cdot)
(\cdot) H₂O₂
(\cdot)
/

Reactive oxygen species

(/ / mM AsA)

(mM NaCl)

:

)

(% w/v PVPP / mM EDTA

pH =

()

.()

(SOD)

(NBT)

μM mM Methionine / mM EDTA (pH= /

)

/

.()

μM Riboflavin

NBT

(SOD)

SOD (1U)

NBT

%

SOD

()

.()

() SOD

:()

$$\frac{\text{OD560 Control} - \text{OD560 Sample}}{\frac{1}{2} \text{OD560 Control}}$$

Units / mg : _____
mg Protein / ml Reaction Mix

Poly vinyl polypyrrolidone

Ethylenediamin tetraacetate

Ascorbic acid

Sodium chloride

Formazan

Enzyme extract

Nitro blue tetrazolium

Superoxide dismutase

Bradford

()			
		/ mM ⁻¹ cm ⁻¹	(OD/min)
			unit/mg
	()		
Units / mg :	$\frac{\text{OD 290 / min}}{2.8 \times \text{mg protein / ml reaction Mix}}$		
(MDA)			
(MDA-TBA)		(TBA)	
MDA			mM ⁻¹ cm ⁻¹
	()		
	b a		
()		b a	
		()	
	()		
)		()	
()		(/ /)	
		()	(/)
Thiobarbituric acid	Malondialdehyde	Lipid peroxidation Leaf relative water content	Ascorbate peroxidase Electrolyte leakage

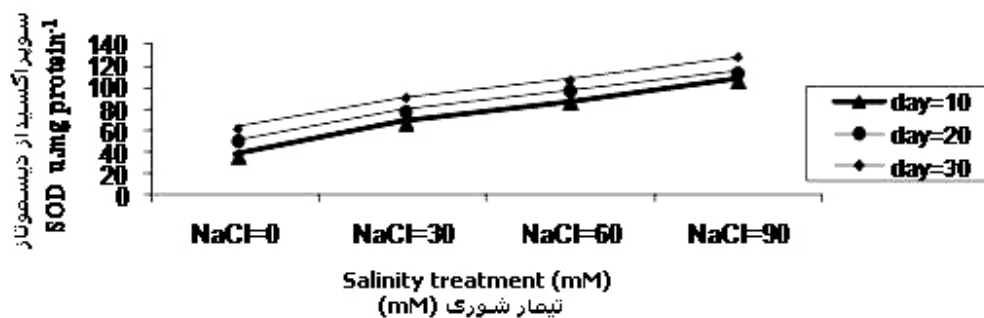


Fig. 1. Effect of salt stress treatment on superoxide dismutase activity in Mexican lime leaf at various times.

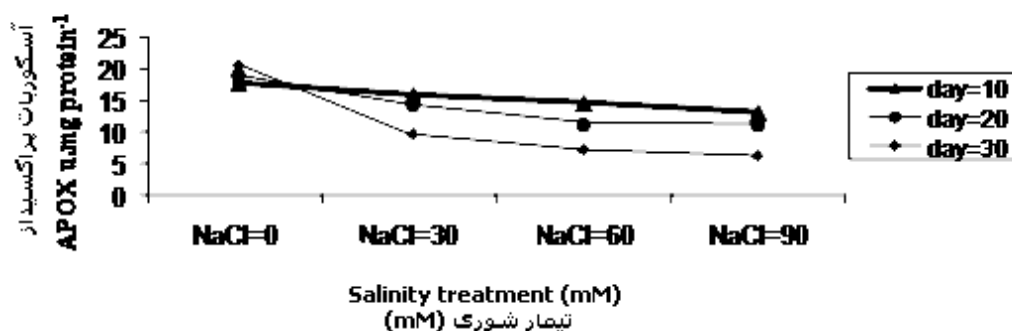


Fig. 2. Effect of salt stress treatment on ascorbate peroxidase activity in Mexican lime leaf at various times.

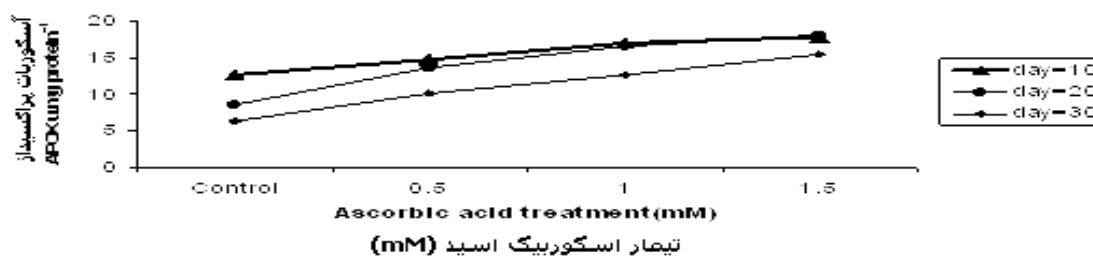


Fig. 3. Effect of ascorbic acid treatment on ascorbate peroxidase activity in Mexican lime leaf at various times.

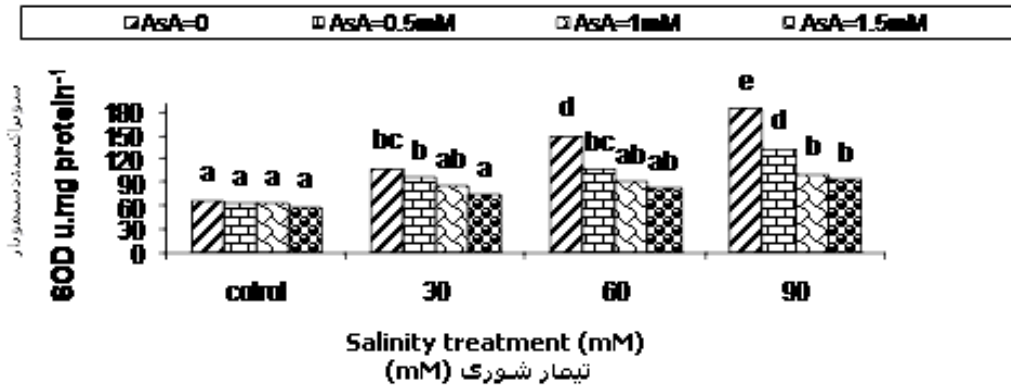


Fig. 4. Interaction of ascorbic acid and salt stress treatment on superoxide dismutase activity by day 30.

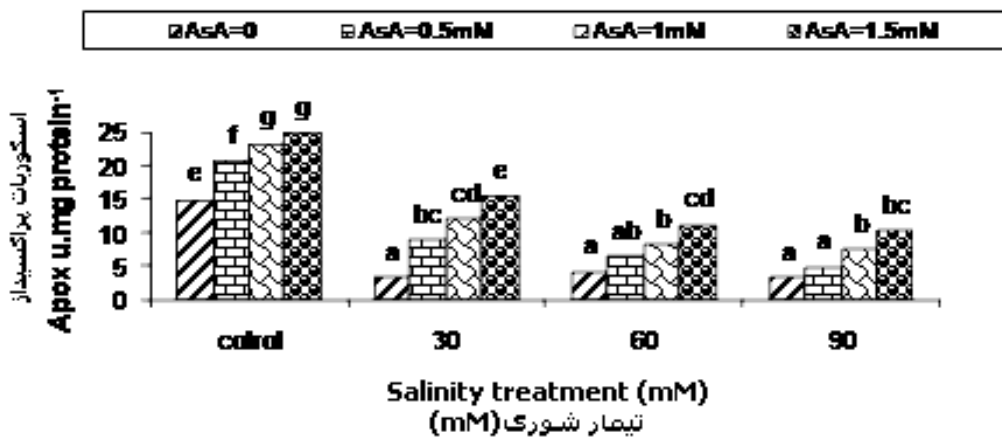


Fig. 5. Interaction of ascorbic acid and salt stress treatment on ascorbate peroxidase activity by day 30.

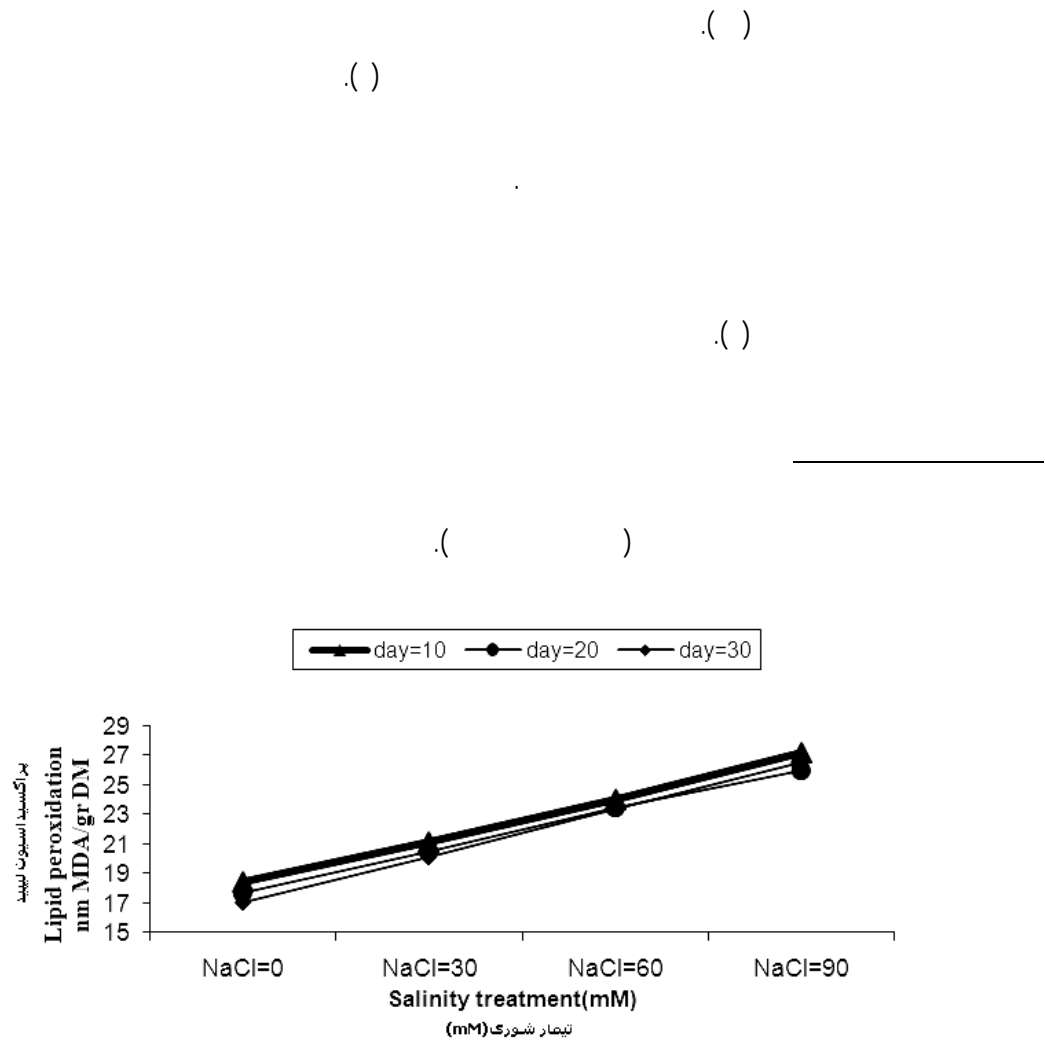


Fig. 6. Effect of salt stress treatment on lipid peroxidation activity in Mexican lime leaf at various times.

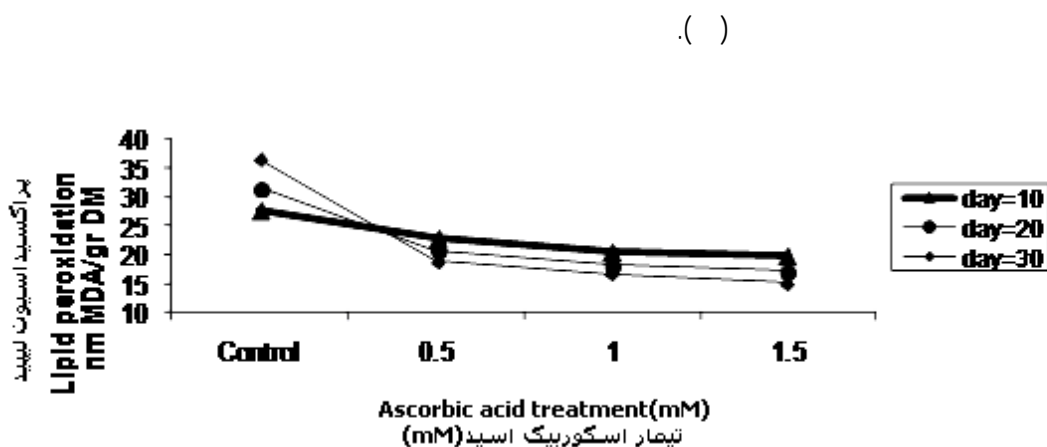


Fig. 7. Effect of ascorbic acid treatment on lipid peroxidation activity in Mexican lime leaf at various times.

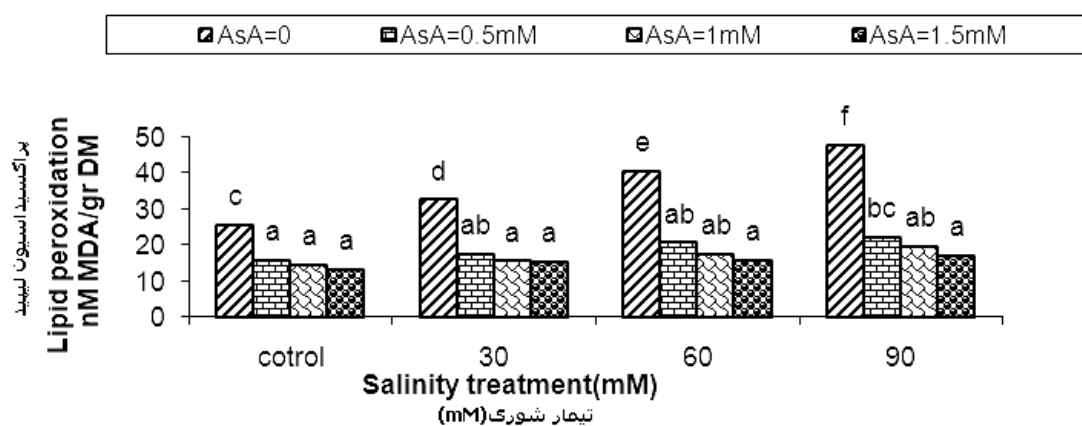


Fig. 8. Interaction of ascorbic acid and salt stress treatment on lipid peroxidation activity by day 30.

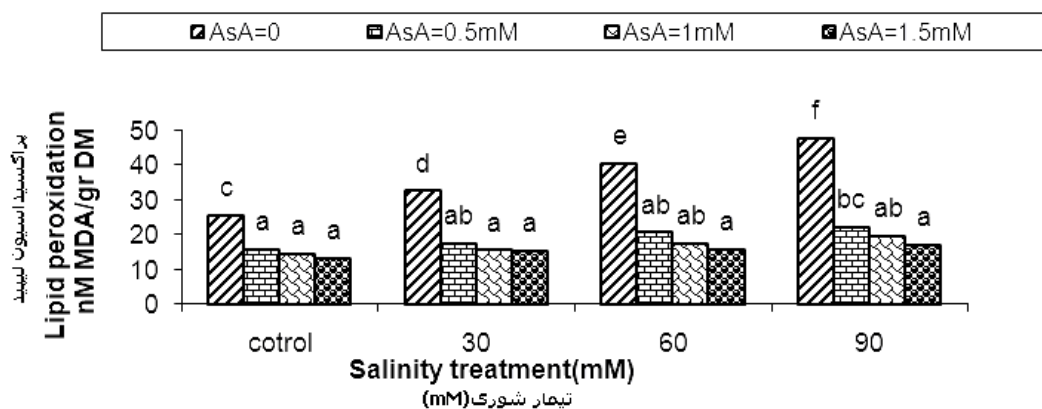


Fig. 9. Effect of salt stress treatment on total protein in Mexican lime leaf at various times.

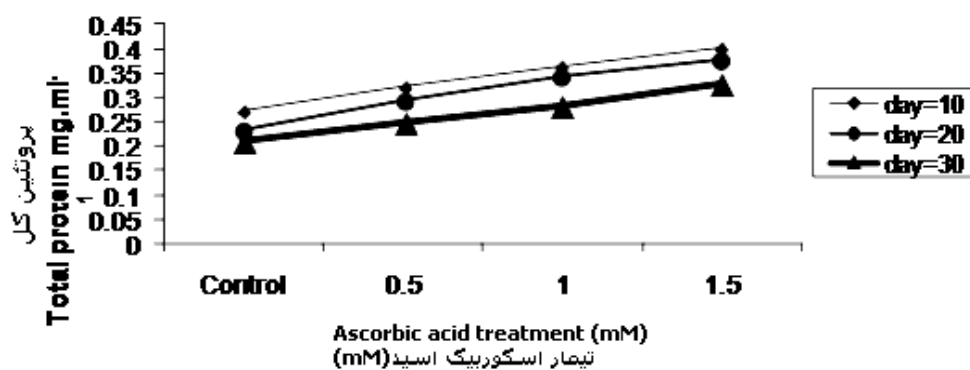


Fig. 10. Effect of ascorbic acid treatment on total protein in Mexican lime leaf at various times.

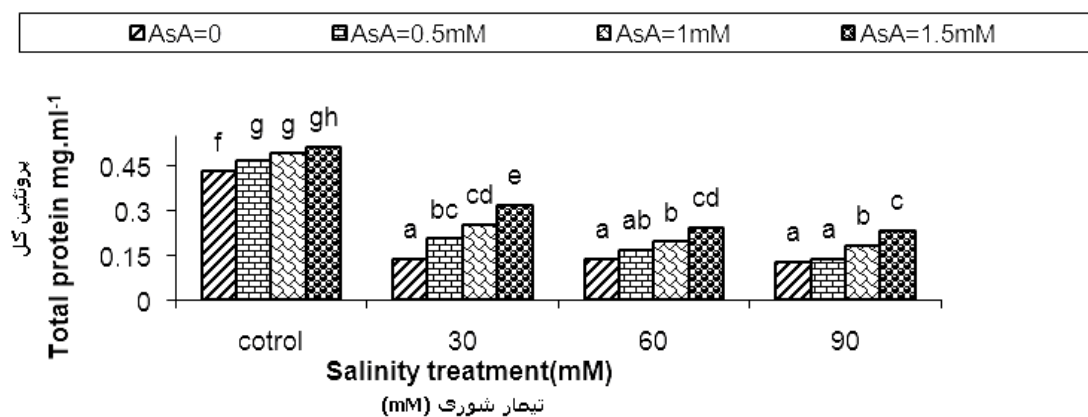


Fig. 11. Interaction of ascorbic acid and salt stress treatment on total protein activity by day 30.

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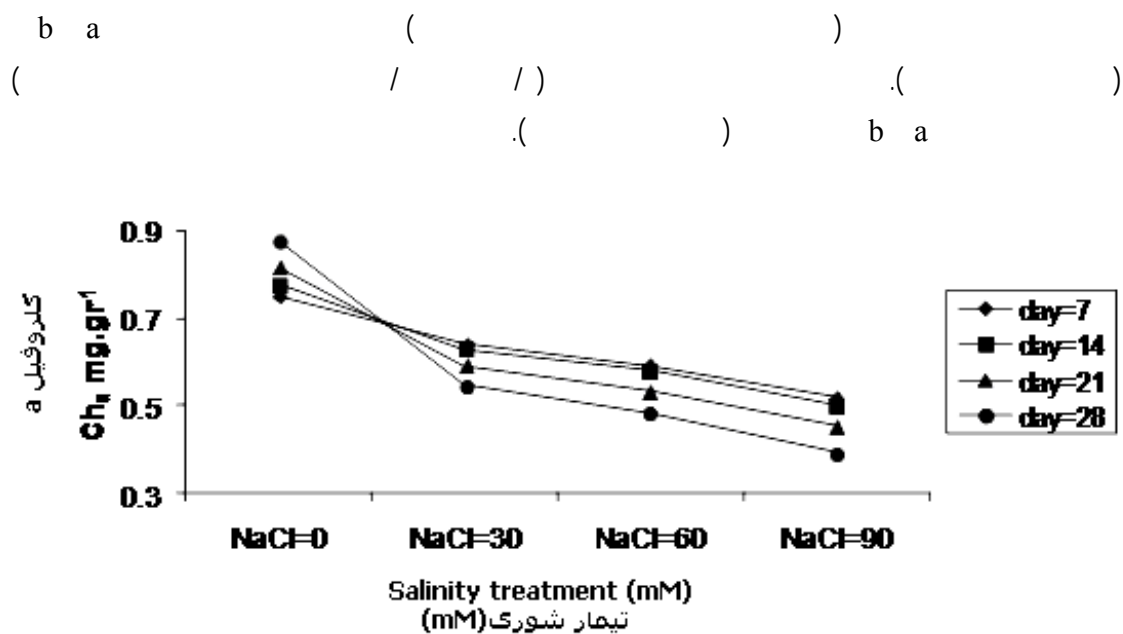


Fig. 12. Effect of salt stress treatment on chlorophyll_a in Mexican lime leaf at various times.

a

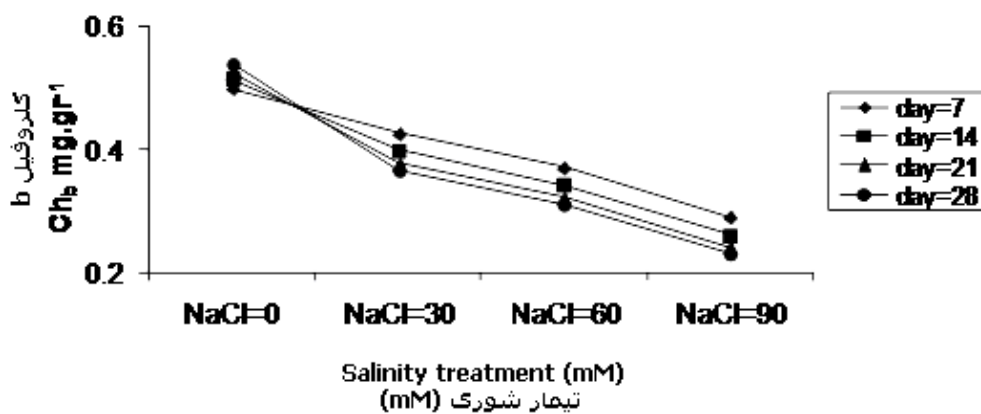


Fig. 13. Effect of salt stress treatment on chlorophyll_b in Mexican lime leaf at various times.

b

()
 () b a
 ()
 ()
 ()
 ()

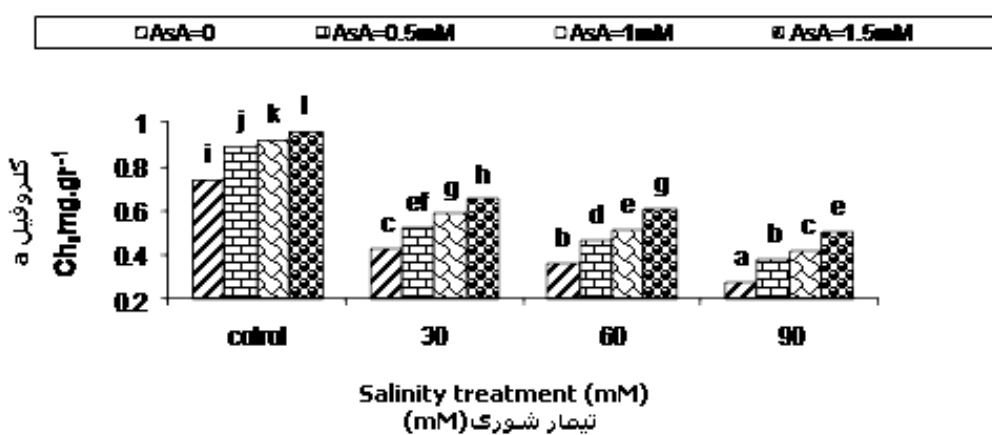


Fig. 16. Interaction of ascorbic acid and salt stress treatment on chlorophyll_a by day 30.

a

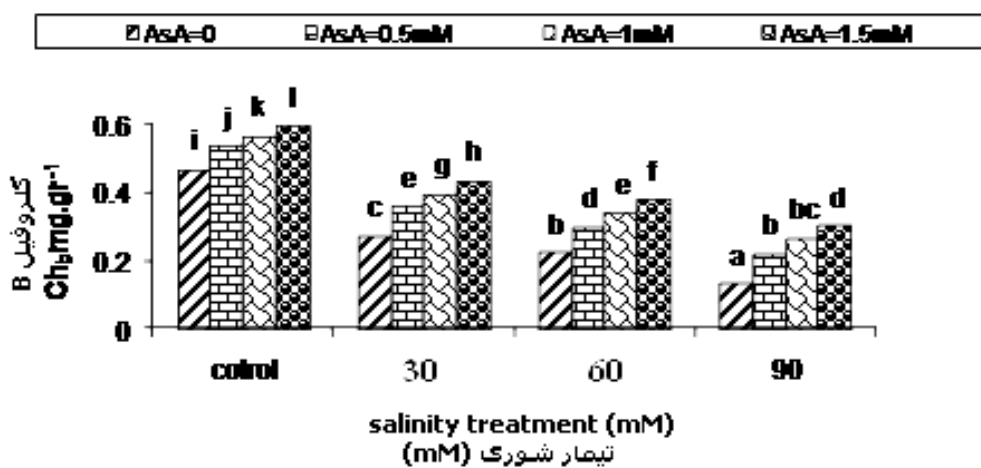


Fig. 17. Interaction of ascorbic acid and salt stress treatment on chlorophyll_b by day 30.

b

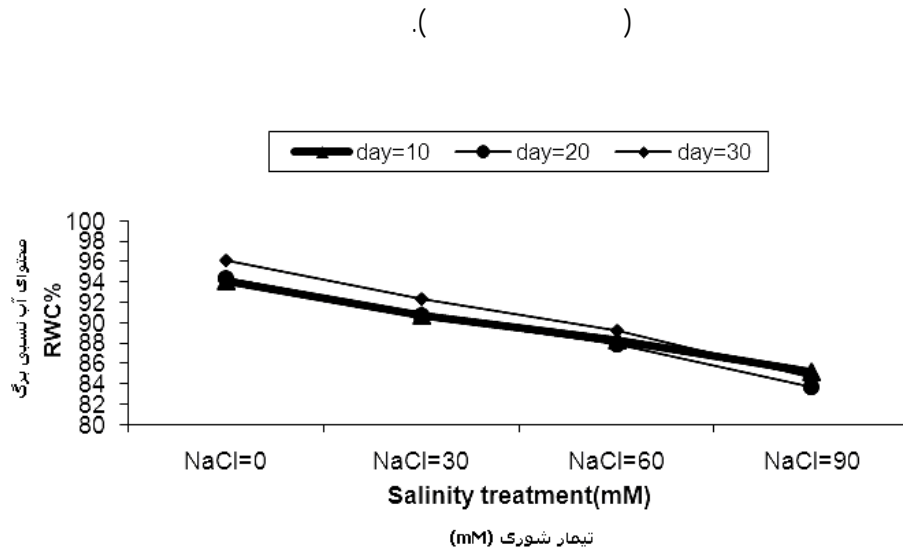


Fig. 18. Effect of salt stress treatment on RWC% in Mexican lime leaf at various times.

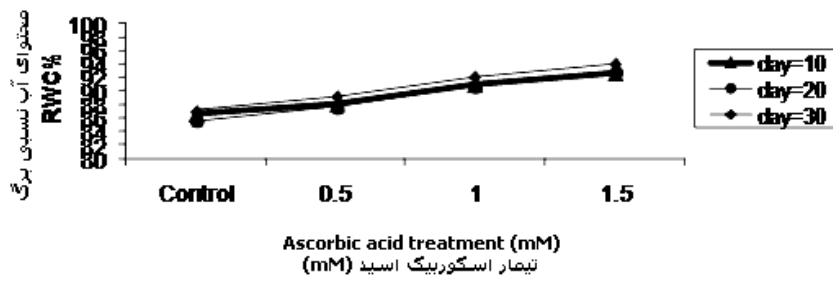


Fig. 19. Effect of ascorbic acid treatment on RWC% in Mexican lime leaf at various times.

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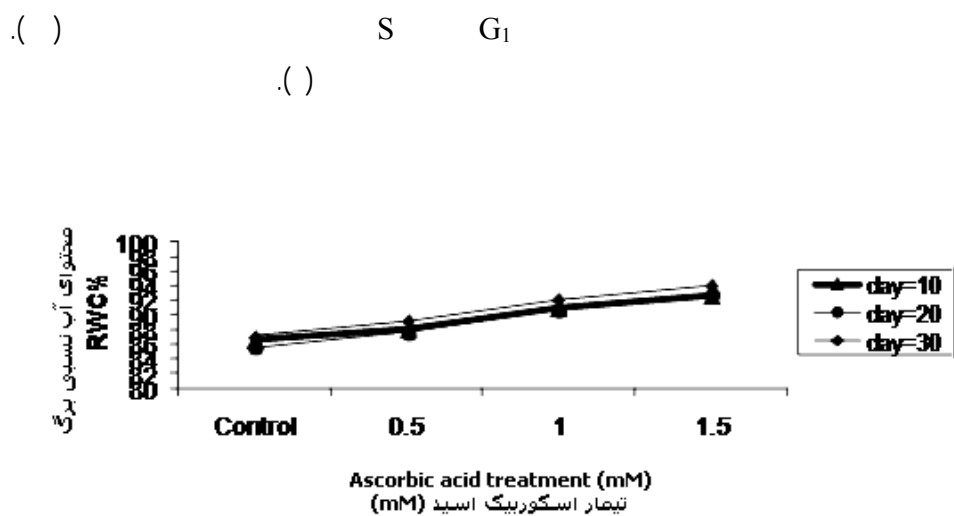


Fig. 20. Interaction of ascorbic acid and salt stress treatments on RWC% by day 30.

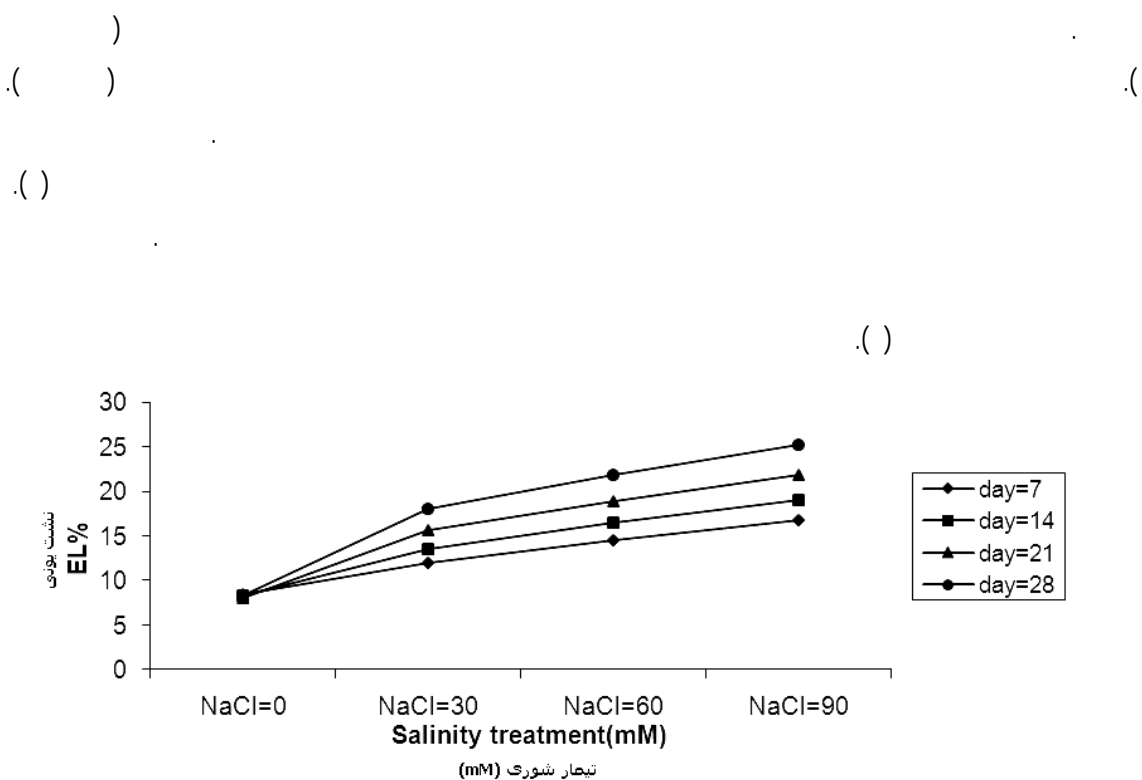


Fig. 21. Effect of salt stress treatment on EL% in Mexican lime leaf at various times.

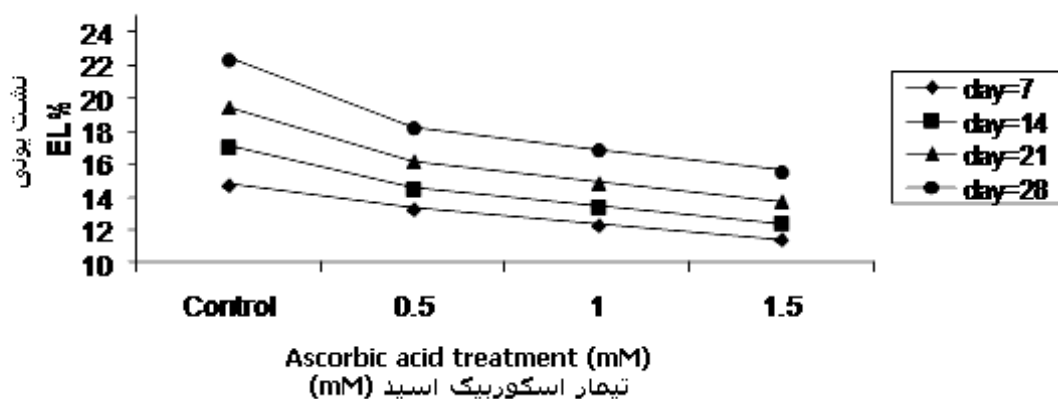


Fig. 22. Effect of ascorbic acid treatment on EL% in Mexican lime leaf at various times.

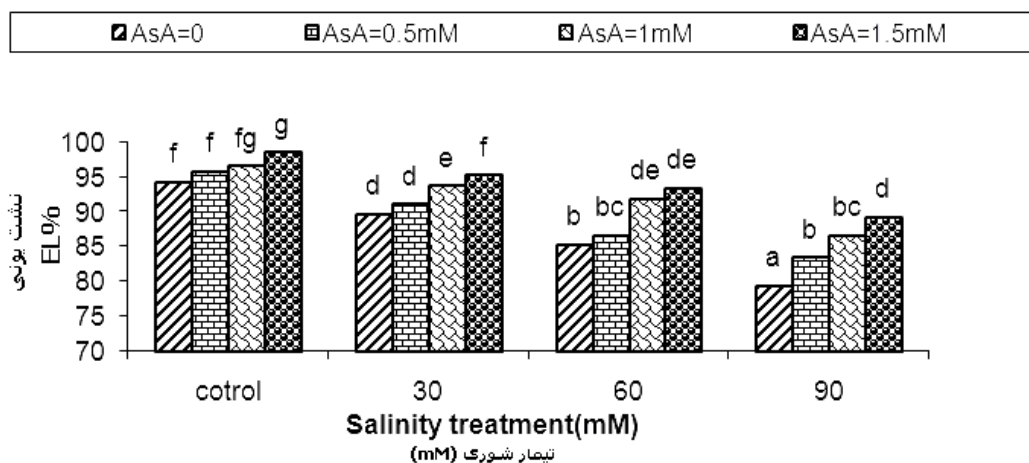


Fig. 23. Interaction of ascorbic acid and salt stress treatments on E% by day 30.

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