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**(*P. avium* L.)**

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**(*P. avium* L.)**

**(PVPP)**

**(Dice)**

**(*Prunus avium* L.) :**

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e-mail:bouzari1111@yahoo.com

:

(Citrate phosphate)

(Phosphate Buffer)

(Isoelectro focusing)

(Borax-Boric Acid)

pH

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( )

( )

( pH

(EDTA)

(Ascorbic Acid)

(β-mercaptoethanol)

(Dithioerythritol)

(Sodium disulfit)

( )

(Phenyl methyl sulfonyl fluoride)

(Triton X100)

)

(

( )

pH	/	/
(pH=)	( / )	( )
pH	/	( / )
(pH=)	( / )	( )
/ NaH <sub>2</sub> PO <sub>4</sub>	/	
pH Na <sub>2</sub> HPO <sub>4</sub>	(pH=)	( / )
/ NaH <sub>2</sub> PO <sub>4</sub>	/	
(pH=)	pH	( / )
pH	/	
(pH=)	( / )	( )

(Tris-HCl)

(Tris-Glycin)

... :

(RPM)

(Beckman)

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EPS-7601

( )

(Polyacrylamide Gel Electrophoresis)

(P.mahaleb)

pH ( )

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																PH	
( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
B	ABC	BC	AB	E	BC	ABC	ABC	C	CDEF	GF	BC	AB	C	B	CD	DE	
B	BC	A	A	ABC	D	D	D	A	A	BCD	AB	DE	AB	C	AB	EF	
B	ABC	AB	A	D	CD	BCD	CD	D	BC	ABC	A	E	AB	E	CD	EF	
B	ABC	BC	AB	ABCD	BC	ABC	BC	B	B	AB	BC	A	A	CD	AB	CD	
B	ABC	BC	AB	ABCD	BC	AB	ABC	DEF	EF	G	BC	DE	AB	C	AB	C	
A	ABC	BC	AB	BCD	AB	AB	AB	DE	EF	BCDE	CD	ED	AB	CD	AB	BC	
B	ABC	AB	AB	A	BC	ABC	CD	A	A	A	AB	CDE	A	CD	AB	EF	
B	AB	C	B	ABC	BC	AB	BCD	DE	DEF	CDEF	CD	BCD	AB	CD	AB	DE	
B	AB	AB	AB	D	BC	ABC	BC	G	G	H	D	BCD	AB	CD	AB	AB	
B	C	AB	AB	BCD	CD	CD	CD	F	F	EFG	CD	ABC	A	DE	AB	AD	
B	ABC	BC	AB	AB	BC	ABC	ABC	C	BCD	CDEFG	BC	BCD	AB	CD	ABC	F	
B	ABC	BC	AB	ABCD	CD	BCD	BCD	DE	EF	CDEF	CD	BCD	AB	CD	D	EF	
B	ABC	AB	AB	CD	BC	BCD	ABC	C	CDE	CDEF	BCD	A	C	A	A	A	
B	A	BC	AB	AB	A	A	AB	EF	F	DEFG	CD	DE	B	DE	AB	C	



(Ward)

(Dice)

(spss)

( ) ( )  
 ( ) ( ) HCL  
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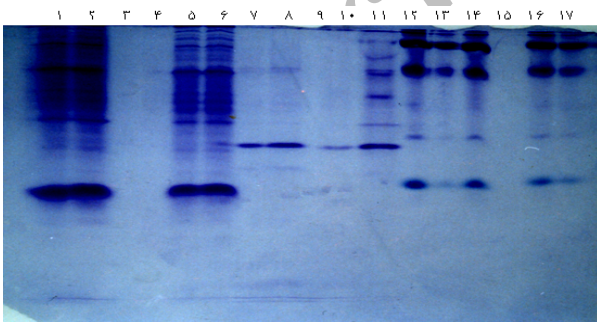
(Polyvinyl pyrrolidone)

(B-mercaptoethanol)

(Triton X100)

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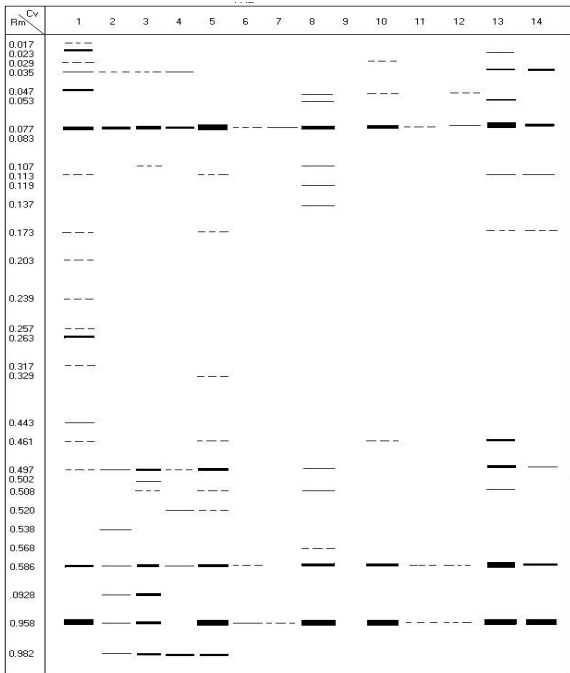
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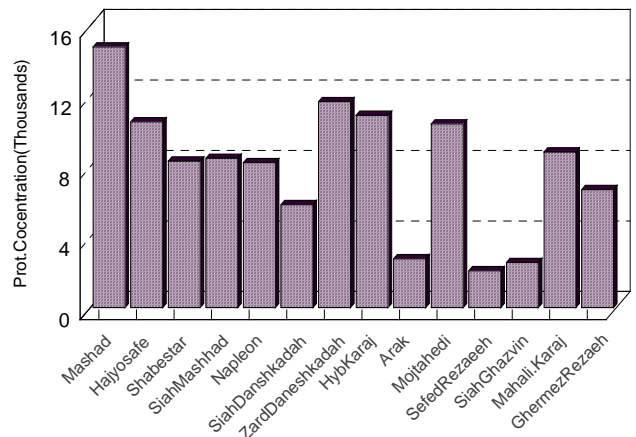
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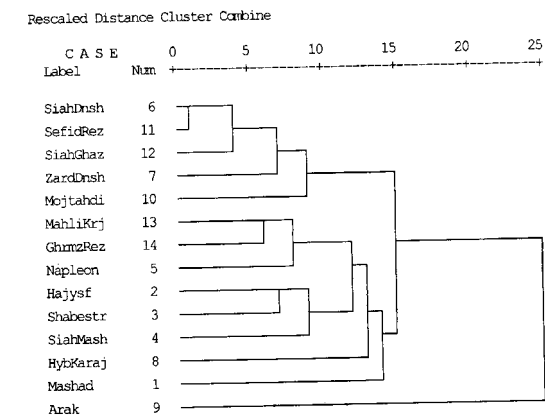
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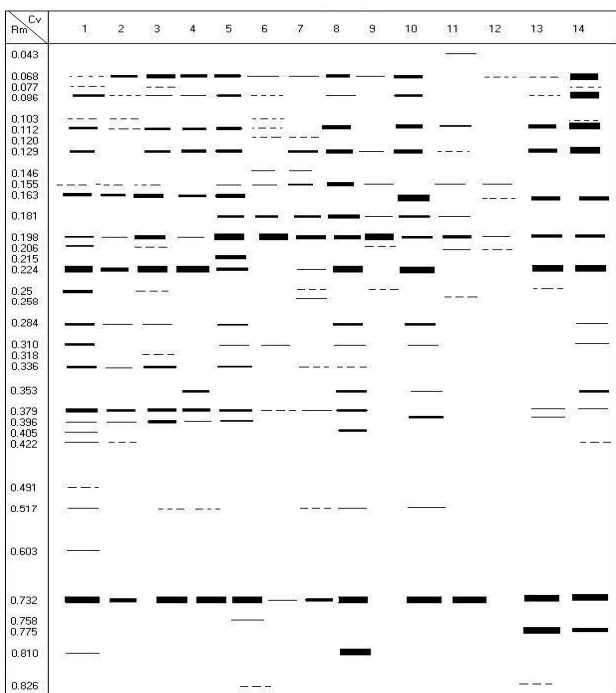


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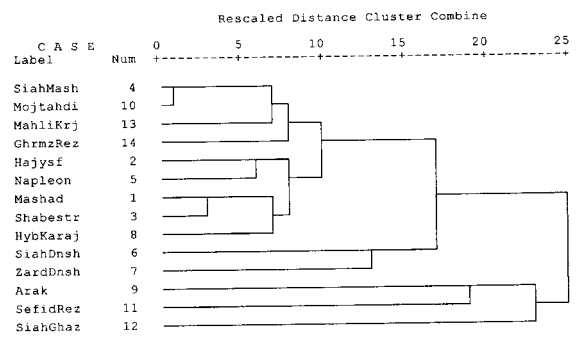
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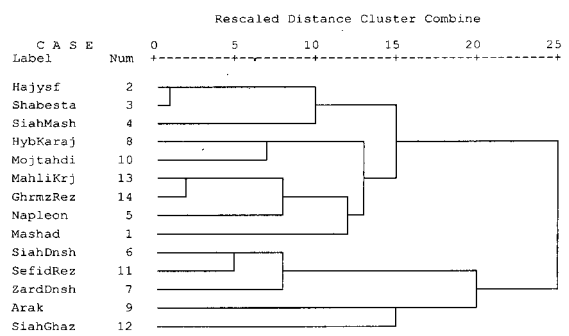
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REFERENCES

5. Arzani, K. 1998. The position of cherry culture and breeding in IRAN. Proceeding of International cherry breeding anniversary conference, Budapest, Hungary. Page: 55-69.
6. Arzani, K., & A. Khalighi 1998. Pre-season pollen collection and outdoor hybridization for polinizar determination in sweet cherry *cv* SiahMashhad. *Acta Hort.* 468(1): 575-582.
7. Bradford, M.M. 1976. A rapid and sensitive method for quantitaion of microgram quantities of protein utilizing the principle of protein dye binding. *Anal Biochem.* 72:248-254.
8. Carter, G.E. Jr., & M.M.Brock. 1980. Identification of of peach cultivars through protein analysis. *HortScience.* 15: 292-293.
9. Cerezo, M. & P.Arus.1989. Identification of almond cultivars by pollen isoenzymes. *J.Amer. Soc. Hort. Sci.* 114: 164-169.
10. Granger, A. R., G.R.Clarke, & J.F.Jackson. 1993. Sweet cherry cultivar identification by leaf isozyme polymorphism. *Theor. Appl. Genet.* 86:458-464.
11. Hames, B.D. & Rickwood, D. 1990. *Gel Electrophoresis of proteins. A practical approach*, Second edition, Oxford university press, NewYork,PP:290.
12. Hammerschlag, F.A. & R.E. Litz. 1992. *Biotechnology of perennial fruit crops.* C.A.B. International. 105-141 and 277-303.
13. Hancock, A.M. & A.F. Iezzoni. 1988. Malate dehydrogenase isozyme patterns in seven *prunus* species. *Hort Science.* 23:381-383.
14. Mazzola, M. & G.E.Carter. 1988. Peach Rootstock characterization by protein analysis. *Hort Science* 23:119-120.
15. Menendez, R.A., F.E. Larsen, & R. Fritts. 1986. Identification of apple rootstock cultivars by isozyme analysis. *J. Amer. Soc. Hort. Sci.* 111(6):933-937.
16. Mikolos, F. 1996. Origin and dessemination of cherry. *Hort. Rev.* 19: 263-317
17. Schmidt, H., J.V. Christensen, R. Watkins, & R.A. Smith. 1985. *Cherry descriptor list.* CEC Secretariat, Brussels.
18. Tanksley , S.D. & T.J. Orton. 1989. *Isozymes in plant genetics and breeding.* Elsevier Science publishing company Inc.1:401-417.
19. Weeden, N.F. & R.C.Lamb. 1985. Identification of apple cultivars by Isozyme phenotypes. *J. Amer. Soc. Hort. Sci.* 110: 509-515.