

.....

Mucor

.

Mucor

.

.

.

.

.

.

.

Mucor circinelloides f.janssenii

Mucor hiemalis f.silvaticus

Mucor plumbeus *Mucor circinelloides* f.lusitanicus

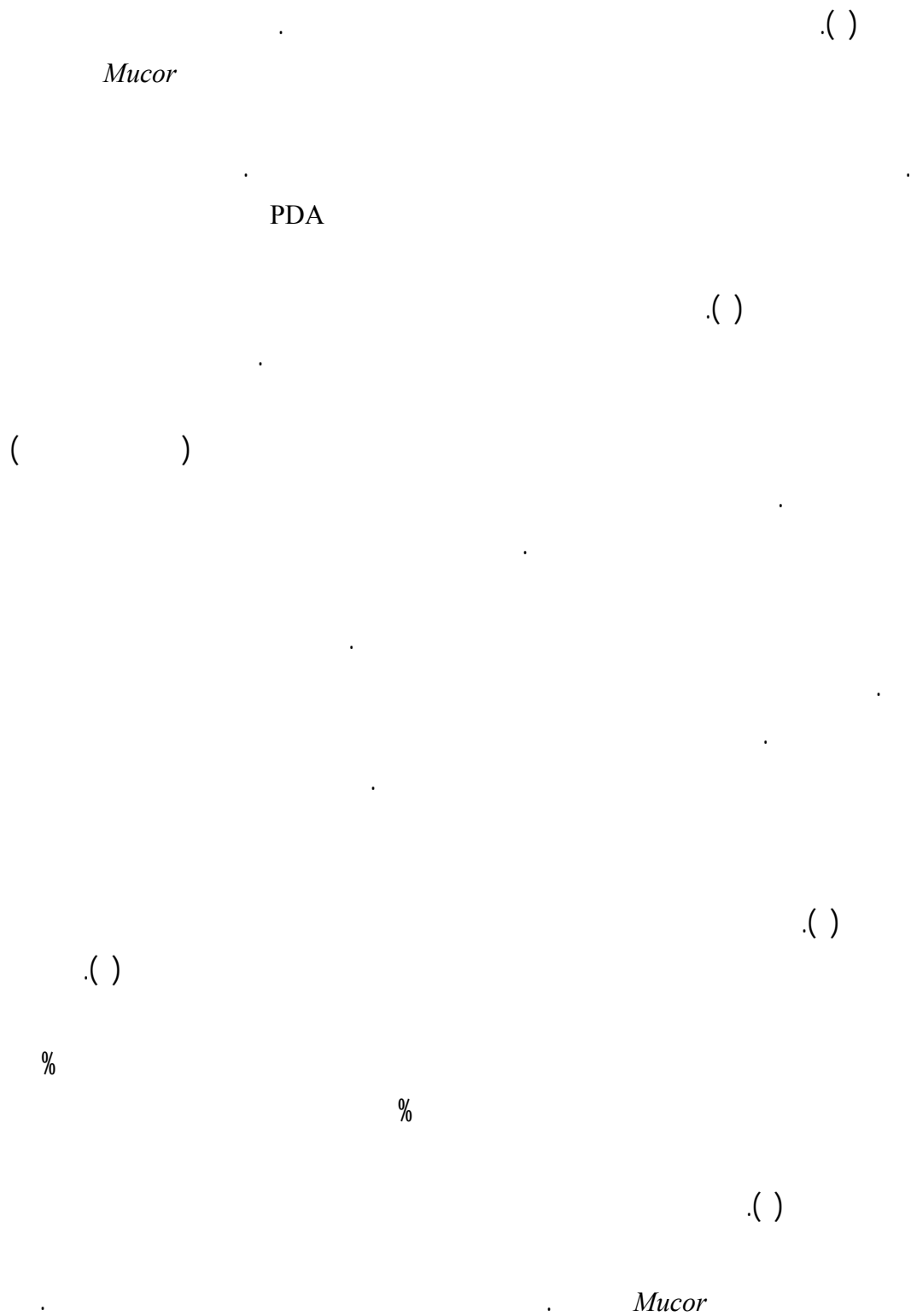
.

.

.

Mucor :

-
-
-
-



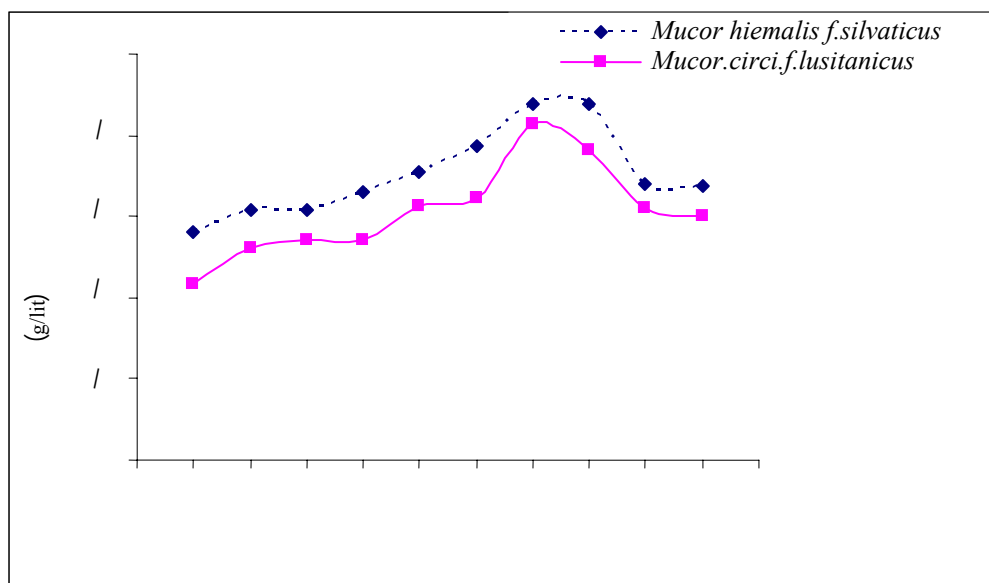
.....

.
Mucor hiemalis f.*silvaticus*
/ BSA .()
Mucor circinelloides f.*janssenii* .
/
.
SAS (V.9.1)
.
Mucor circinelloides f.*lusitanicus*
/
/
Mucor plumbeus
.
()

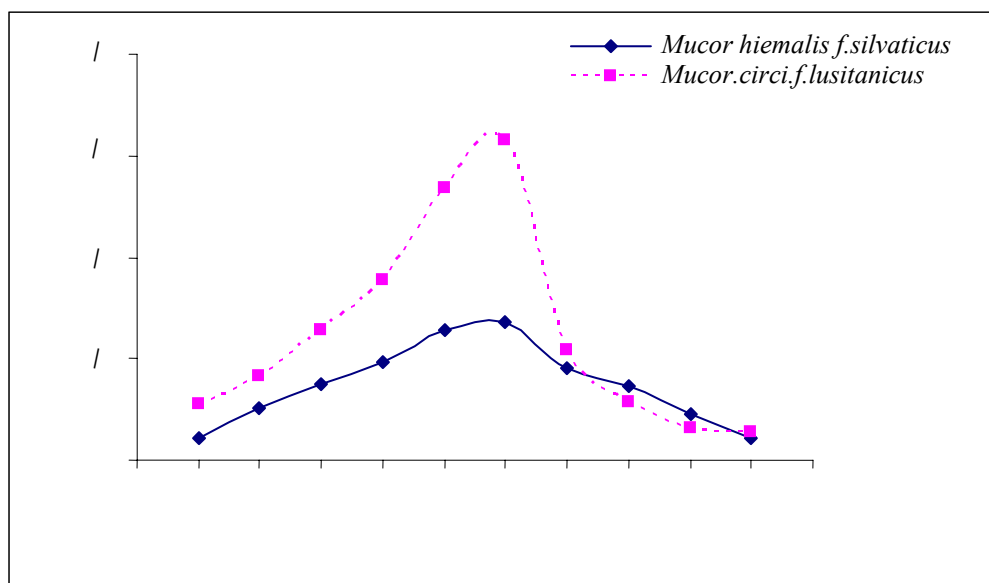
	(g/lit)		(mg/lit)	
<i>Mucor circinelloides</i> f. <i>circinelloides</i>	/	AB	/	E
<i>Mucor circinelloides</i> f. <i>janssenii</i>	/	EF	/	AB
<i>Mucor circinelloides</i> f. <i>lusitanicus</i>	/	CD	/	A
<i>Mucor hiemalis</i> f. <i>corticola</i>	/	B	/	EF
<i>Mucor hiemalis</i> f. <i>silvaticus</i>	/	A	/	CD
<i>Mucor plumbeus</i>	/	C	/	F
<i>Mucor racemosus</i> f. <i>chibinensis</i>	/	E	/	C
<i>Mucor strictus</i>	/	BC	/	CD

.()

.()



Mucor circinelloides f. lusitanicus *Mucor hiemalis f. silvaticus*



Mucor circinelloides f. lusitanicus *Mucor hiemalis f. silvaticus*

.

.....

Mucor hiemalis f.*silvaticus*

pH

. ()

Mucor circinelloides

. ()

f.*lusitanicus*

. ()

()

. ()

pH)

. ()

(

-
1. Bradford, M.M. 1976. A rapid and sensitive method for quantification of microgram quantities of protein of utilizing the principle dye binding. *Anal. Biochemistry*. 72: 680-685.
 2. Gupta, S., M. Kapoor, K. Kant Sharma, L.M. Nair and R. Chander Kuhad. 2008. Production and recovery of an alkaline exo-polygalacturonase from *Bacillus subtilis* RCK under solid-state fermentation using statistical approach. *Bioresource Technology*. 99: 937-945.
 3. Hadj-Taieb, N., M. Ayadi, M. Khelif, K. Mrad and I. Hassairi. 2006. Fermentor production of pectinases on gruel, a local by-product and their use in olive oil extraction. *Enzyme and Microbial Technology*. 39: 1072-1076.
 4. Jayani, R.S., S. Saxena and R. Gupta. 2005. Microbial pectinolytic enzymes: A review. *Process Biochemistry*. 40: 2931-2944.
 5. Kossem, A. and P. Nannipieri. 1995. Soil cellulase activity methods. In: Kossem A, Nannipieri P (eds) *Applied Soil Microbial and Biochnology*. Academic Press: San Diego, pp: 345-350.
 6. Patil, S.R. and A. Dayanand. 2006. Exploration of Regional Agrowastes for the Production of Pectinase by *Aspergillus niger*. *Food Technology. Biotechnology*. 44(2): 289-292.
 7. Silva, D., E.M. Martin, R. Silva and E. Gomes. 2002. Pectinase production by *penicillium viridicatum* RFC3 by solid state fermentation using agricultural wastes and agro-industrial by-products. *Brazil Journal of Microbiology*. 33: 318-324.
 8. Soares. M., R. Silva and E. Gomes. 1999. Screening of bacterial strains for pectinolytic activity: characterization of the polygalacturonase produced by *bacillus* sp. *Revista de Microbiology*. 30: 299-303.
 9. Souza, J., E. Silva, M. Maia and M. Teixeira. 2003. Screening of fungal strains for pectinolytic activity: endopolygalacturonase production by *Peacilomyces clav isporus* 2A.UMIDA.1. *Process Biochemistry*. 39: 455-458.
 10. Tari. C., N. Dogan and N. Gogus. 2008. Biochemical and thermal characterization of crude exo-polygalacturonase produced by *Aspergillus sojae*. *Food Chemistry*. 111: 824-829.

.....

A Study on Released Sugars From Pectin and Related Proteins By Several *Mocur*

M.H. Maleki¹, G.A. Ranjbar², M.A. Tajick², A. Asgharzadeh³ and A. Lotfi⁴

Abstract

The present study was aimed to screen the pectinase activity from some genera of *Mocur* in laboratory conditions. Pectin was used as the only carbon source in a minimal culture medium. Tow days after inoculation released proteins and sugars were assayed with related reagents and repeated each 2 days up to 21th day. Statistical analysis showed significant variation in released sugars and released proteins among tested genera. *Mucor hiemalis silvaticus* had highest and *Mucor circinelloides janssenii* had lowest sugar levels. Also *Mucor circinelloides* f. *lusitanicus* had highest and *Mucor plumbeus* had lowest protein levels. Glucose and protein levels for superior Species have increased until 15 and 13 days, respectively for glucose and protein after inoculation, then decreased until 25th day, but had no variation until 30th day. These results showed that isolates belong to the same forms had no significance difference in pectinase activity.

Keywords: *Mocur*, Pectin, Spectrophotometer, Pectinase activity

1- Former M. Sc. Student, Sari Agricultural Sciences and Natural Resources University
2- Assistant Professor, Sari Agricultural Sciences and Natural Resources University
3- Associate Professor, Soil and Water Research Institute, Tehran
4- Instructor, Sari Agricultural Sciences and Natural Resources University