

## *Mycobacterium*

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g-ebrahimi@sbu.ac.ir

// : // :

PG02 PG01

( ) ( )

PG01 / / PG02 / /

/ / PG02 / / / / PG01

/ / / / PG02 PG01

/ / / / PG02 PG01

DNA +

Mycobacterium obuense

Atlas and (Antić, et al., 2006)

Martinková, et al., Harayama, et al., 2004 :Bartha 1998

(al., 2009)

% %



DNA  
(Kowalchuk, et al., 2004)

/ mg/ml      K      , DNA  
rpm      °C

pH  
( × )

DNA      )

n      (

(Tamaoka, & Komagata,      +      n      (

DNA      1984)      )      n

P1      n      (

High-performance liquid ) HPLC      n

+      (chromatography      n

(1986)      Kaneko      ( ) G-60

DNA      P1

DNA      .      ( / )      ( / )

( )

DNA      S :

) P1      A

°C      (ZnCl<sub>2</sub> / (pH / )      R

.(Thouand, et al.,1999)

dTMP    dGMP    dAMP    dCMP

HPLC      HPLC

:

Column:      C18, MCH 10

Mobile phase:      10 mM phosphate buffer (pH 7)      (OF)

Flow rate:      0.5 ml/min

Detector:      UV 260 nm

.(Sueszmuth, et al. 1987)

(G+C mol%)      +

TS    CS    GS    AS

dTMP    dCMP    dGMP    dAMP

TX    CX    GX    AX

HPLC      -

PG02    PG01

(mol% G + C)      DNA

:(Tamaoka & Komagata, 1984)

$$G+C \text{ mol}\% = (GX/GS + CX/CS)/(AX/AS + GX/GS + CX/CS + TX/TS)$$

SPSS 11

MS Excel 2007

/ /

NH<sub>4</sub>Cl /

/ / (p< / )

NH<sub>4</sub>Cl

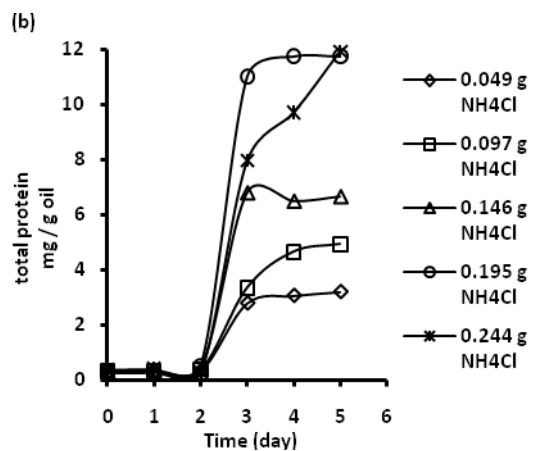
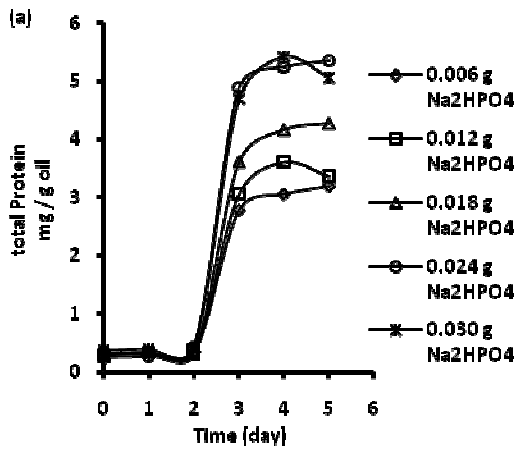
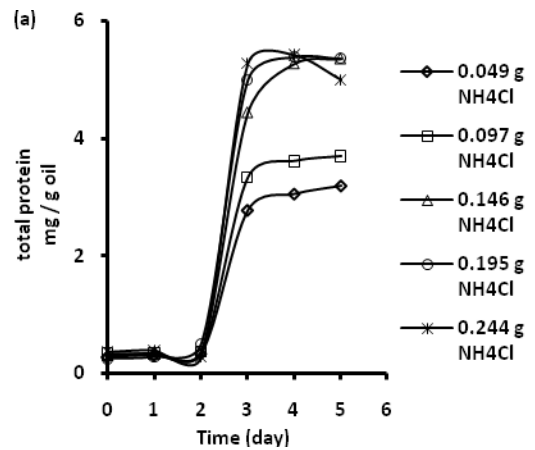
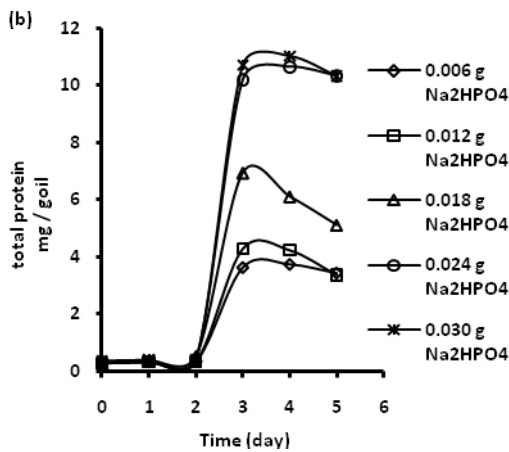
/ PG01

PG02 ( a ) NH<sub>4</sub>Cl

) NH<sub>4</sub>Cl / ( b )  
(NH<sub>4</sub>Cl / )  
(p< / )

PG02 PG01

( )



( )

( )

(b) PG02 (a) PG01

(b) PG02 (a) PG01

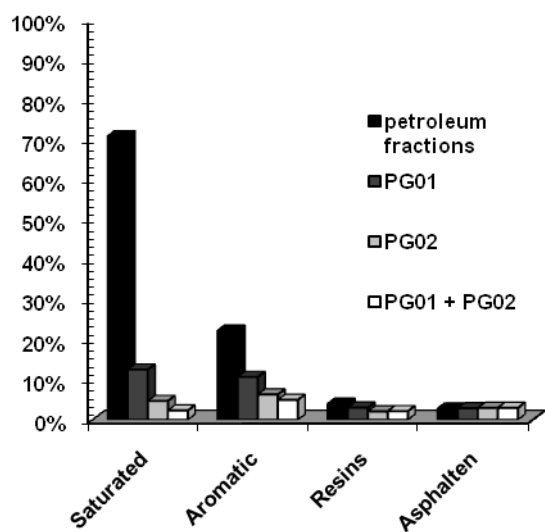
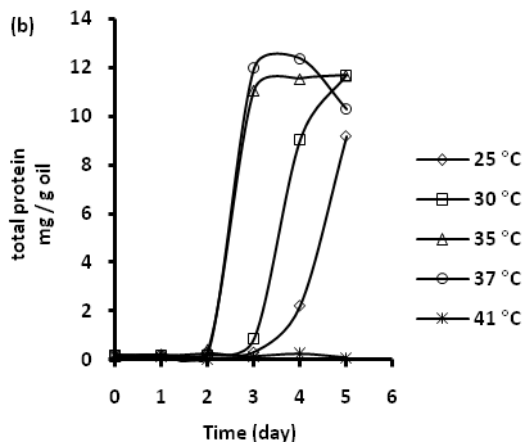
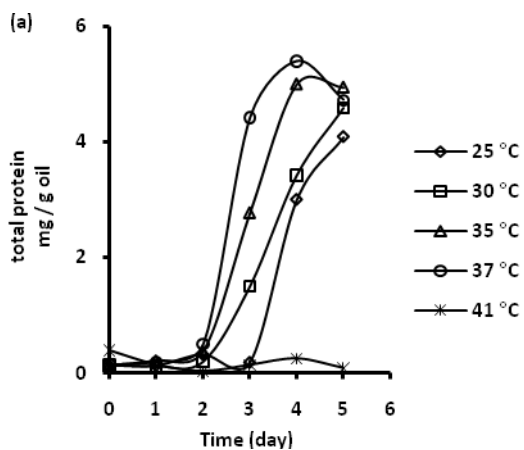
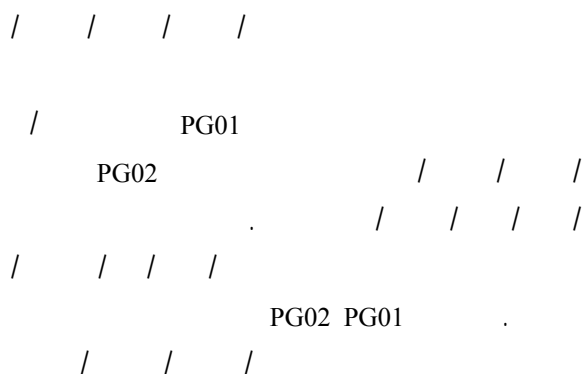
(-a,b) Na<sub>2</sub>HPO<sub>4</sub> /

C /

(p</) Na<sub>2</sub>HPO<sub>4</sub>

Na<sub>2</sub>HPO<sub>4</sub> /

( )



(b) PG02 (a) PG01

:( )

:( )

PG02 PG01

PG02 PG01

( )

/  
 dGMP dTMP dCMP / / /  
 .( a ) dAMP

( ) PG02 PG01  
 PG01

PG02 PG01

PG02	PG01	
/ × /	/ / × /	(µm)
+	+	
+	+	
		(OF)
		(OF)
		(OF)
+	+	
		)
+	+	(NaCl Mg <sup>2+</sup> )
+	+	NaCl %
+	+	
		*
		*
		*
*		

PG01 PG02

PG02 PG01  
 / × / / / × /

(µm)

(OF)  
 (OF)  
 (OF)

DNA +  
 DNA OD

( : ) PG01

/ . / / ,  
 DNA / nm  
 DNA

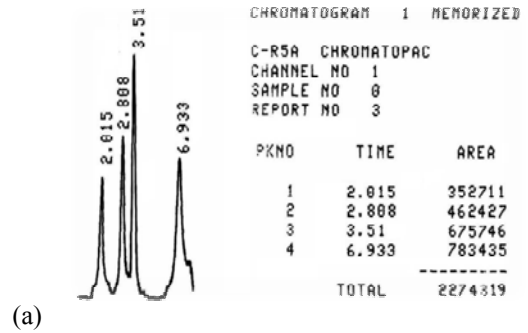
( : ) PG02 DNA

/ / , /  
 / DNA

DNA

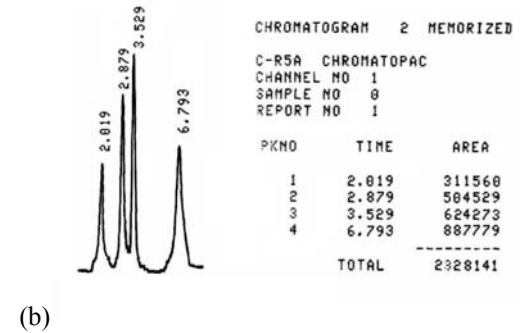
Sueszmuth, et al., ) / / DNA  
 ( ) (1987

DNA  
 PG02 PG01  
 ( d c b )  
 / PG01 +  
 ( DNA) / PG02



Van Hamme, et al. Prince, 1993)

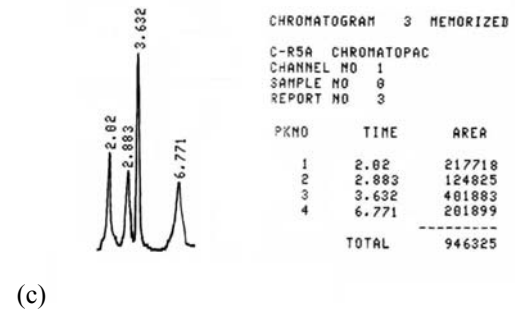
(2003



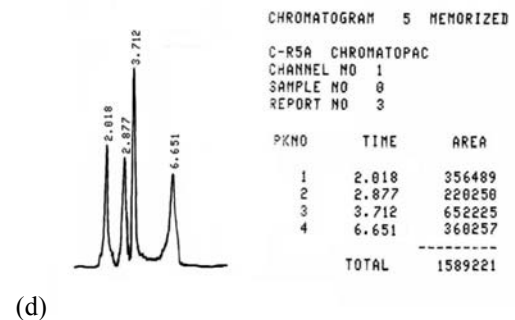
(Atlas, & Bartha, 1998; Yakimov, et al.,2007)

NH<sub>4</sub>Cl /

(Gibbs, 1975) Na<sub>2</sub>HPO<sub>4</sub> /



/ / PG02 PG01



(d)  
 :(b) :(a) HPLC : ( )  
 :(d) PG01 DNA :(c) DNA  
 PG02 DNA  
 dAMP dGMP TMP dCMP

PG01

)

PG02 PG01

PG02

(

/

/

PG02 PG01

(1999)

Thouand

PG02

/

PG02 PG01

: ( )

Solano-Serena, et al., 2000	%			<i>Mycobacterium</i> sp. strain IFP 2173
Thouand, et al., 1999	/ %			Natural Inocula
Thouand, et al., 1999	%			Commercial Inocula
	/ %			PG01
	/ %			PG02
	/ %			

%

%

)

PG02 PG01

G+C

(

Brenner, et )

*Mycobacterium*

)

(al., 2005

(

:

*M. obuense*

(

)

16S rRNA

)

(

- ) G+C

(

1-Peak area

(PG02 PG01

)



pH

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