

Escherichia coli i *Klebsiella pneumoniae* produc toare de beta-lactamaze cu spectru extins (BLSE), izolate din infec ii urinare. // Clujul Medical, 2011, vol., 84, nr.3, p.37.

18.

I.B. //

2005, .3-10.

19.

UTIAP-I UTIAP-II.// , 2004, .13-17.

expansum CNMN FD 05 C

Penicillium

A. ,, . ,, . 1,, . ,, . ,, . 1.

, D 2028 . , 1

, D 2028 . , 3

Rezumat

A fost studiat influen a unor compu i coordinativi ai molibdenului i vanadiului asupra biosintezei complexului celulazic (endoglucanaze, celobiohidrolaze, -glucozidaze) la tulpina de fungi *Penicillium expansum* CNMN FD 05 C. S-a stabilit c compu ii molibdenului, care con in n componen a sa aminoacizi, nu influen eaz activitatea endoglucanazelor, inhib considerabil celobiohidrolazele (80-90%) i stimuleaz activitatea -glucozidazelor. n calitate de eficient stimulator ai biosintezei -glucozidazelor poate fi raportat complexul MoO₂ (ac.ac.)Gly, care a sporit activitatea enzimelor cu 47.8-67.0%. Acest complex poate fi utilizat pentru ob inerea preparatelor enzimatice cu con inut sporit de -glucozidaze. Metalocomplexul (NH₄)₂VO₃Gly stimuleaz activitatea a toate trei componente a complexului celulozolic sintetizat de micromiceta *Penicillium expansum* CNMN FD 05 C, asigurând cre terea activit ii endoglucanazelor cu 45%, celobiohidrolazelor cu 32% i -glucozidazelor cu 40%.
Cuvinte-cheie: *Penicillium expansum* – metalocomplexe – endoglucanaze – celobiohidrolaze - -glucozidaze.

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(4, 12), (2,
6, 7, 9, 11).

(14, 15, 16).

(Mo) (V)
Penicillium expansum CNMN FD 05 C.

CNMN FD 05 C –

Penicillium expansum

[1].

0,75 , 0,2 (/):
 KH_2PO_4 – 1, CaCl_2 – 0,1, $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ – 0,3, KCl – 0,1, NH_4NO_3 – 1,0, FeCl_3 – 0,01,
 – 15, – 40, pH – 5,0.

/ . 28-30 , 180-200
 4 10

14-
 - 10%
 1-3x10⁶ / .

Mo (ac.ac.)
 : $\text{MoO}_2(\text{ac.ac.})_2$, $\text{MoO}_2(\text{ac.ac.})$ Gly, $\text{MoO}_2(\text{ac.ac.})$ Ala,
 $\text{MoO}_2(\text{ac.ac.})$ Val, (VO_3) - $(\text{NH}_4)_2\text{VO}_3$ Gly.

(10, 13). Na- n- -D- Somogy-Nelson [3, 5].

[8, 12].

(VO₃)

MeO₂L₁L₂nH₂O, L₁- (.), L₂
 2(ac.ac.) 1, 2(ac.ac.)Val : 2(ac.ac.)₂, 2(ac.ac.) Gly,
 - (NH₄)₂VO₃Gly

Penicillium expansum CNMN FD 05 C,

(1) .

MoO₂(ac. c.)₂,

(2,38 - 2,52 /).

(1 /),

24,9 - 69,4 %

MoO₂(ac.ac.) Val 10 / MoO₂(ac.
 4,15 / , 1,7 ac.) Gly

(24,9-35,9%)

80-90% ,

MoO₂(ac.ac.) Gly, MoO₂(ac.ac.)Ala, MoO₂(ac.ac.) Val

Penicillium

expansum CNMN FD 05

(NH₄)₂VO₃Gly,

10 /

40,86 %,

- 39,16 -

: - 49,79%.

1.

Penicillium expansum

CNMNF 05 C

| (. .) | Конц. К. С., мг/л | | | | | | |
|---|----------------------|-------|--------|-------|--------|------|--------|
| | | / | % | / | % | / | % |
| | | | | | | | |
| $\text{MoO}_2(\text{ac.ac.})_2$ | 1 | 18,35 | 121,52 | 1,09 | 87,2 | 2,85 | 106,6 |
| | 5 | 7,36 | 48,74 | 0,16 | 12,8 | 2,52 | 102,9 |
| | 10 | 10,34 | 68,48 | 0,34 | 27,2 | 2,38 | 97,1 |
| $\text{MoO}_2(\text{ac.ac.})\text{Gly}$ | 1 | 9,52 | 63,05 | 0,57 | 45,6 | 3,06 | 124,9 |
| | 5 | 15,78 | 104,50 | 1,09 | 87,2 | 3,33 | 135,9 |
| | 10 | 15,78 | 104,50 | 0,24 | 19,2 | 3,20 | 130,6 |
| $\text{MoO}_2(\text{ac.ac.})\text{Ala}$ | 1 | 17,84 | 118,15 | 0,90 | 72,0 | 3,13 | 127,75 |
| | 5 | 15,77 | 104,43 | 0,57 | 45,6 | 3,40 | 138,8 |
| | 10 | 14,14 | 93,64 | 0,49 | 39,24 | 2,85 | 116,6 |
| $\text{MoO}_2(\text{ac.ac.})\text{Val}$ | 1 | 5,71 | 37,81 | 0,08 | 6,40 | 2,45 | 100,0 |
| | 5 | 14,14 | 93,64 | 0,44 | 34,80 | 3,40 | 138,8 |
| | 10 | 14,14 | 93,64 | 0,95 | 76,60 | 4,15 | 169,4 |
| $(\text{NH}_4)_2\text{VO}_3\text{Gly}$ | 1 | 12,5 | 82,84 | 0,677 | 54,16 | 2,09 | 85,30 |
| | 5 | 12,24 | 81,06 | 1,27 | 101,60 | 3,52 | 143,87 |
| | 10 | 21,26 | 140,86 | 1,74 | 139,16 | 3,67 | 149,79 |
| | | 15,10 | 100,0 | 1,25 | 100,0 | 2,45 | 100,0 |

3d

Penicillium expansum CNMNF 05 C

5-20 / (2).

2.
CNMN FD 05 C
(

Penicillium expansum
(NH₄)₂VO₃Gly

- 4)

| | / | % | / | % | / | % |
|----|-------|--------|------|-------|------|-------|
| 1 | 12,84 | 115,70 | 0,73 | 102,8 | 2,74 | 117,6 |
| 5 | 14,36 | 129,40 | 0,80 | 112,7 | 2,69 | 115,6 |
| 10 | 14,36 | 129,40 | 0,85 | 119,7 | 3,21 | 137,7 |
| 15 | 16,10 | 145,04 | 0,94 | 132,4 | 3,72 | 140,3 |
| 20 | 13,93 | 125,50 | 0,92 | 129,6 | 3,26 | 139,9 |
| 30 | 13,49 | 121,53 | 0,90 | 126,8 | 2,86 | 122,7 |
| | 11,10 | 100,0 | 0,71 | 100,0 | 2,33 | 100,0 |

15 / ,
45,0 % , 32,4%
- 40,3%.

3d

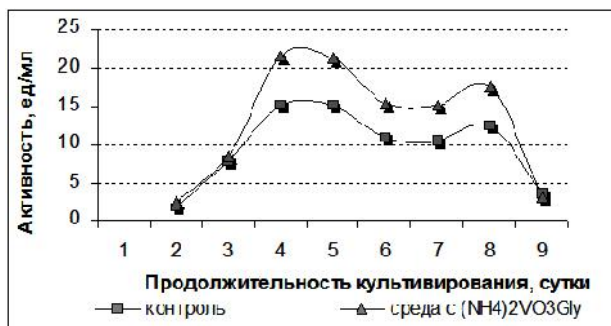
[12, 13, 14].

(NH₄)₂VO₃Gly
Penicillium expansum CNMN FD 05 C.
1-3, ,

Penicillium expansum CNMN FD 05C,

4- -

5-



.1.
Penicillium
expansum FD CNMN 05 C
(-
15 /



. 2. -
-
Penicillium expansum FD
CNMN 05C -
() -
15 / (NH₄)₂VO₃Gly



. 3. -
-
Penicillium
expansum FD CNMN 05 C -
() -
) 15 /
(NH₄)₂VO₃Gly

MoO₂(ac.ac.) Gly.

(1, 5, 10, 15, 20, 30, 40 /) - *Penicillium*

expansum CNMN FD 05 C. -
10, 15, 20 / , -
59,5%, 67,6%, 59,5%

24
(7-9) (3).

3. - *Penicillium expansum*
CNMN FD05C MoO₂(ac.ac.)₂Gly
(15 /)

| | / | | % |
|---|------|------|-------|
| | | | |
| 2 | 0,29 | 0,37 | 127,6 |
| 3 | 0,65 | 0,93 | 141,7 |
| 4 | 3,26 | 5,44 | 166,7 |
| 5 | 2,72 | 4,32 | 157,1 |
| 6 | 1,63 | 2,45 | 150 |

| 3. () | | | |
|--------|------|------|-------|
| 7 | 0,71 | 0,82 | 115,4 |
| 8 | 2,16 | 2,50 | 115,7 |
| 9 | 1,52 | 1,69 | 110,7 |
| 10 | 0,87 | 0,98 | 112,5 |

MoO₂(ac.ac.)Gly (NH₄)₂VO₃Gly, 2

(27,6%),

4 - 66,7%. -

5,44 / 3,26 /

MoO₂(ac.ac.)Gly

:

(

-) *Penicillium expansum* CNMN FD 05C. ,

,

(80-90%) ,

-

MoO₂(ac.ac.) Gly, 47,8

- 67,0%,

(NH₄)₂VO₃Gly

Penicillium expansum CNMN FD 05C,

45 %,

32 % - 40 %.

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6. „ „ „ „ „ „

// i i . . , 2007, 69, 3, . 11-18.

7. „ „ „ „ „ „

„ (II) *Aspergillus niger* (33) CNMN FD 06A

Rhizopus arrhizus (F 67) CNMN FD 03L //

