

Enterobacter cloacae

(2003/6/28 2003/1/19)

Enterobacter cloacae

Rapid

Enterotoxins

Delayed permeability test permeability test

Suckling infant mouse

Alkaline phosphatase

Protease

0.211 2.120 Protease Alkaline phosphatase

Cell Free Cell

/ /³ /

.Lysate supernatant

.supernatant

. Protease Alkaline phosphatase

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The production of alkaline phosphatase and protease were detected in both cell free supernatant and lysate supernatant. The specific activities of both were 2.120 , 0.120 unit/cm³/min/mg protein in cell free supernatant. No activity were seen in lysate supernatant. This indicates the ability of this bacteria to produce these enzymes extracellularly.

Enterobacter *Enterobacter cloacae*

Enterobacter . Aerobacter

(16) .(Gavini et al., 1989) Edwards and Ewing (1962)

Enterobacter

:

Enterobacter cloacae

Enterobacter aerogenes

Enterobacter agglomeras

Enterobacter gergoviae

Enterobacter sakazakii

.(Ingraham et al., 1986)

Endotoxin

Lipopolysaccharide

.(Dean et al., 1972)

(ST) Heat stable (Schulz et al., 1997)

(GC-c receptor) Guanylyl-cyclase

. cGMP .
Protease (1996) Vermelho
:

Pseudomonas aeruginosa and *Micrococcus luteus*
Serratia marcescens

Pseudomonas aeruginosa (1997) Beveridge Kadurngamuwa

Alkaline

peptidoglycan hydrolase phosphatase

/ / *Enterobacter cloacae*
.
.(/)

37 (BHI) 3 25
3 1 3 100
.(180xg) 15

: Cell Free Cell Supernatant (CFCS)

(10000xg) MAE Ultra centrifugation

(Millipore 0.22) . 4

.(Rahman et al., 1992) CFCS

:Lysate Supernatant (LS)

³ 5

.(7.4) (0.02M) Phosphate buffer

(MSE NOPG 1545) Ultrasonic

(30) / 2000

. (4) (30)

(10000xg)

Millipore 0.22 Mm

.(Hostacka et al., 1993) (LS)

:

:

.1

(Dean et al., 1972) :

³ (0.1) 5-3

(4) (CFCS)

³ (0.1)

:Rapid permeability test .

(1976) Peterson Sandefur

4mm

(CFCS) ³ (0.1) Evan Blue

.

:

.2

(CFCS) ³ (0.1) 48

.(Sandefur and Peterson 1979)

:

: Exo enzyme (LS) (CFCS)

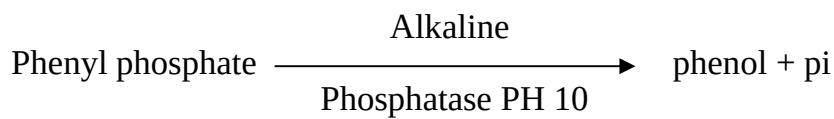
:Exo Cellular protease

Protease (1979) Decedue³ (1)
 (0.1)
 (CFCS)³ (1) (% 1) (7.2)
³ (3) (20) 30 (LS)
 % 50 Trichloro acetic acid TCA
 . (10000xg)
 (280 nm)
 (280 nm) (0.1)
³ (1)
 .(LS) ³ (1) CFCS

:Alkaline phosphatase

(Biomerieux Sa)

:



(Potassium (Amino 4- antipyrine)

.

(Sodium arsenate)

ferricyanide)

Schacterle

(LS)

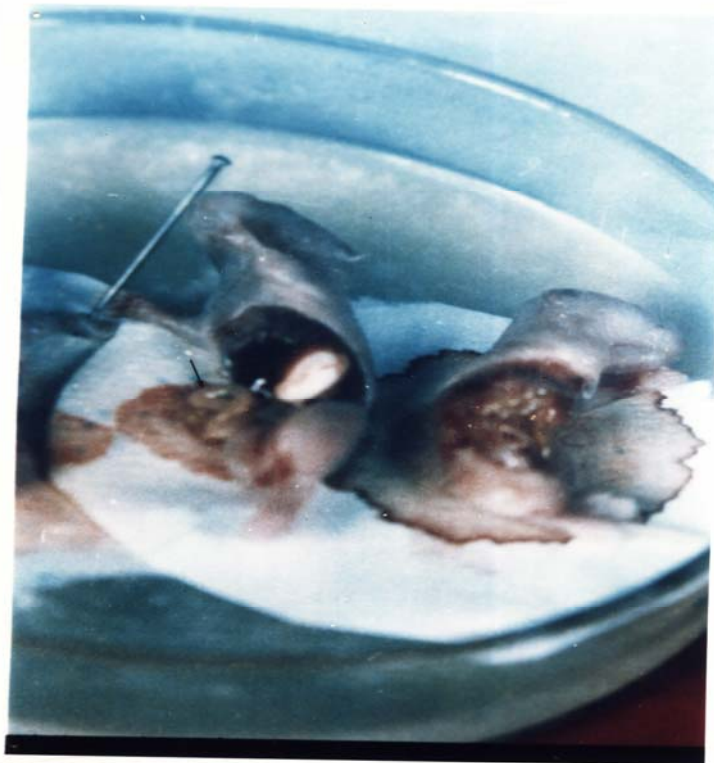
(CFCS)

.(Lowry et al., 1951)

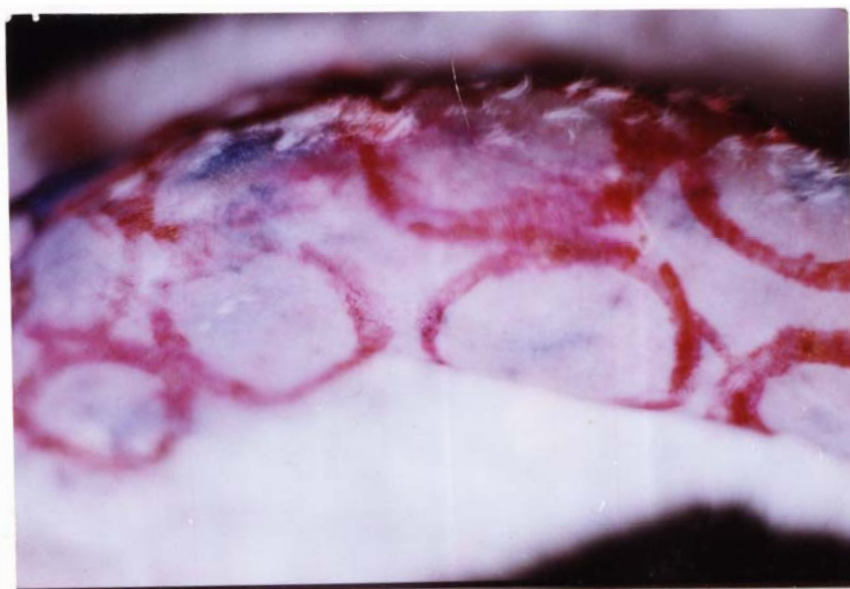
(1973) Pollak

(2) (1)

.



شكل (١): يبين النتيجة الموجبة لاختبار تجريع الفئران الرضعية Suckling infant mouse . لاحظ تجمع السوائل في الامعاء بالنسبة لفأرة السيطرة (الفأرة الاولى الى اليمين) التي حقنت بـ (٠,١) سم^٣ من مرق نقيع القلب والدماغ المعقم .



الشكل (٢): يبين النتيجة الموجبة لاختبار النفاذية السريع لجلد الارنب
Rapid permeability test

(1997) Schulz
Guanosyl-cyclase
cGMP
(1986) Ingraham
Paton *E. cloacae*
E. cloacae (1996) Paton
(Shiga like toxin) *Shigella*

:Alkaline phosphatase Protease
Alkaline phosphatase Protease

2.120 0.211
/³ /

E. cloacae LS CFCS Protease Alkaline phosphatase : 1

LS	CFCS	
0	2.120	Alkaline phosphatase
0	0.211	Protease

Alkaline Protease
(1997) Kudurugamuwa phosphatase
Pseudomonas aeruginosa
Alkaline phosphatase Protease
.Peptidoglycan hydrolase Pro-Elastase Phospholipase
Serratia marcescens extracellular protease
(1996) Vermelho (1997) Hume *keratitis*
Protease
.Micrococcus luteus and *Serratia marcescens* , *Pseudomonas aeruginosa*

Serpins

Pseuelomonas

Staphylococcus , (Kaminishi et al., 1995) *Candida albicans* , (Moriyama et al., 1979)
(Potempa et al., 1986) *aureus*

.(Maeda , 1996)

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