

Althea rosea

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Althea rosea

Klebsiella

Salmonella typhi

**Activity of Aqueous and Alcoholic Extract for *Althea rosea* Flowers
Against Many Gram Positive and Negative Bacteria**

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ABSTRACT

This research aim to study antibacterial activity of aqueous and alcoholic extract of *Althea rose* flowers which belong to *Malvaceae* family against some pathogenic bacteria. The results showed that aqueous in its wet state was more active than the dried aqueous

extract and the alcoholic extract were more active than aqueous extract, and it was found that there were differences in the sensitivity of studied bacteria towards that extract. *Salmonella typhi* and *Klebsiella* species were the most sensitive. Besides, it was shown the superiority of that extract activity upon some of those antibiotics according to the type of studied bacteria, which may indicate the capability of using this extract to control pathogens which are sensitive to it.

3000

. (626-688)

(1998 1988 1981)

. (2004 1991) .

Malvaceae (*Althea rosa*)

. (2001 1987)

75

. (1981 Bailey, 1977) (1)

. (1998 1988)



Althea rosa

: 1

:

-1

Escherichia coli, Proteus mirabilis, Salmonella typhi, Streptococcus pyogenes, Pseudomonas aeruginosa, Klebsiella pneumonia and Klebsiella aerogenes.

/ /

Cruckshank et al., 1975)

.(Benson, 2002 Finegold et al., 1978

Althea rosea -2

:(1987) /

Kingdom: *Plantae*
Division: *Spermatophyta*
Class: *Angios Permae*
Subclass: *Dicotyledoneae*
Order: *Malvales*
Family: *Malvaceae*
Species: *Althea Rosa*

: -3

: -

(1988) Riöse

3 160 40

60 (Blender)

24 4

Lyophilizer (Whatmam No.1)

(Edwardi)

40

3 200 24 50 Oven

: -

Verporrt (1988) Grand

40 (1982)

Blender (%95) 3 160

24

(Electrothermal) (Rotary vaccume evaporator)

...

: -

: -1

5

1

1

/ 200

10 C0 62

Dimethyl Sulfoxide (DMSO) 5

10

0.1

Bauer

(6.5)

(1966)

Nutrient Broth

4-5

18

37

0.1

/ 108

(3)

⁰ 37

L

Nutrient agar

30

24

37

.(Garrod et al., 1981)

: -2

:

Amoxicillin (AX) 25

Trimethoprim/Sulfamethoxazole(SXT) 25

Ciprofloxacin(CIP) 5

Cefotaxime(CTX) 30

(BIOANALYSE LTD Ankara / TURKEY)

(1)

.(1982 ;Finegold et al., 1978)

Salmonella *Klebsiella*
Proteus *E.coli*
Pseudomonas *Streptococcus* *Staphylococcus*

(1988)

(2)

Klebsiella sp. *Staphylococcus* *Pseudomonas* *E.coli* *Protues* *Salmonella*

:1

+	±	<i>Staphylococcus aureus</i>
-	±	<i>Streptococcus pyogenes</i>
+	++	<i>Salmonella typhi</i>
+	++	<i>Klebsiella pneumoniae</i>
+	++	<i>Klebsiella aerogenes</i>
-	+	<i>E.coli</i>
-	±	<i>Pseudomonas aeruginosa</i>
-	+	<i>Proteus mirabilis</i>

10

++

7.5

±

-

10- 7.5

+

...

.(Bailey, 1977 ; 1998)

(Finegold et al., 1978 ; Cruckshank et al., 1975)

.(Riose et al., 1988 ; Grand et al., 1988)

: 2

+	<i>Staphylococcus aureus</i>
±	<i>Streptococcus pyogenes</i>
+++	<i>Salmonella typhi</i>
++	<i>Klebsiella pneumoniae</i>
++	<i>Klebsiella aerogenes</i>
++	<i>E. coli</i>
+	<i>Pseudomonas aeruginosa</i>
+	<i>Proteus mirabilis</i>

· 10	++	· 7.5	±
· 15	+++	· 10- 7.5	+

.(3)

Salmonella

Proteus

SXT AX

CTX

Klebsiella

E. coli

AX

(2004 2001 1990)

: 3

()				()	
SXT.	AX.	CTX.	CIP.		
8 R	11 R	20 M	31 S	17	<i>Salmonella typhi</i>
12 M	14 R	15M	34 S	15	<i>Klebsiella pneumoniae</i>
11 M	9 R	12 R	40 S	14	<i>Klebsiella aerogenes</i>
20 S	8 R	30 S	17 M	12	<i>E. coli</i>
9 R	11 R	18M	21 S	12	<i>Proteus mirabilis</i>

Resistant : (R) Intermediate : (M) Sensitive : (S)

.2001

...

.1991

.1990

.1982

.1998

.2004

(Enteropathogenic *Escherichia coli* (EPEC))

.1981

.1998

.1988

.1987

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