

***Ziziphus spina- christi* (L)Desf .**

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*Ziziphus**spina- christi* (L)Desf.

.

, *Streptococcus pyogens.* , *Staphylococcus aureus**Candida**Klebsiella pneumonia* , *Escherichia coli*

/ 500) :

Cryptococcus neoformans. , *albicans*

(/ 0.065 / 125 , / 250 ,

Staphylococcus aureus

/ 500 (18)

/ 500 (32)

. *Candida albicans*

(18)

. *Candida albicans* / 500

500

/

.

Evaluation the antimicrobial activity of aqueous and alcoholic extracts of leaves *Ziziphus spina- christi* (L)Desf

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Summary

Including this studying prepared aqueous and alcoholic extracts of leaves *Ziziphus spina- christi* (L)Desf chemical test showed that both aqueous and alcoholic extracts contain all active compounds which tested it exception resin , fuocoumarins compounds in aqueous extracts and resin in alcoholic extracts

The inhibitory activity tested with aqueous and alcoholic extracts of leaves *Ziziphus spina- christi* (L)Desf against four bacterial isolates ; two gram positive *Staphylococcus aureus* , *Streptococcus pyogens*. and two gram negative *Escherichia coli* , *Klebsiella pneumonia*, in addition to two yeasts isolates *Candida albicans* , *Cryptococcus neoformans* by using four concentrations : (500 mg\ ml , 250 mg\ ml , 125 mg\ ml, 0.065 mg\ ml) from both extracts were used .

Alcoholic extract concentrations showed an inhibitory activity against both types of isolates (yeasts and bacterial isolates)the highest inhibition diameter rate(18 mm) in concentration 500 mg \ ml against *Staphylococcus aureus* ; while *Candida albicans* showed the highest inhibition diameter(32mm) in concentration 500 mg \ ml .

Aqueous extract concentrations did not appear any inhibition against all bacterial isolates , while clear inhibition appeared against fungal isolates ; the highest inhibition diameter rate (18mm) in concentration 500 mg\ ml against *Candida albicans*.

Also no action of any cytotoxicity against red blood cells had been shown for both types of extracts in concentration 500 mg\ ml.

%80

(1993 WHO)

Gupta)

. (1994

Pushpangadan Subramoniam)

(1999

Rhamanaceae

.(2003 Hussain Sudhersan)

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. (2006 , Dahiru)

.(2004 , Nok Wurochekke)

,

.(1998 Epfrain)

/

(20) (1984) Harborn

Thumbles

%95 400 Soxhelet extractor

. 24 ,

Whatman-No-1-(England)

(5)

. ° 4

(2001) Adedayo (1984) Harborn

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(1)

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-2

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10

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5

glucagon

20

aglycone

) NaOH (0.5

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-31% (HgCl₃)

2

3

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(

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-4

(0.5)

1

2

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-5

(1)

(1)

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(

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-6

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Staphylococcus aureus (NCTC 5671) *Streptococcus pyogenes*
Escherichia coli (NCTC 5933) *Klebsiella pneumoniae* (ATCC 10031)

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- 4

. (2003 Hammer)
 / 0.065 / 125 , / 250 , / 500 :
 -:

(Oxoid) -1
 ° 27
 24 ° 37 5-3

. / /
 / 10× 6 3 (Loopful) -2
 Loop 2 1

.(Cork borer) 6 -3
 100 -4

. 5-3 ° 27 () -5
 24 ° 37

-5

2 (1994) Urasella Xian-guo
 / 500
 phosphate buffer saline

0.8 , ()
 1 0.2
 3 ° 37 .
 Hemolysis

(1)

(1)

+	+		1
+	+		2
+	+		3
+	+		4
+	+		5
+	+		6
+	+		7
+	+		8
+	+		9
-	-		10
4	5		11
+	-		12

: (-) •

: (+) •

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(2)

()					
/ 0.065	/ 125	/ 250	/ 500		
13	13	15	18	<i>Staphylococcus aureus</i> (NCTC 5671)	1
9	11	12	13	<i>Klebsiella pneumoniae</i> (ATCC 10031)	2
12	13	13	16	<i>Streptococcus pyogenes</i>	3
11	11	14	17	<i>Escherichia coli</i> (NCTC 5933)	4

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()

(3)

()					
/ 0.065	/ 125	/ 250	/ 500		
0	0	0	0	<i>Staphylococcus aureus</i> (NCTC 5671)	1
0	0	0	0	<i>Klebsiella pneumoniae</i> (ATCC 10031)	2
0	0	0	0	<i>Streptococcus pyogenes</i>	3
0	0	0	0	<i>Escherichia coli</i> (NCTC 5933)	4

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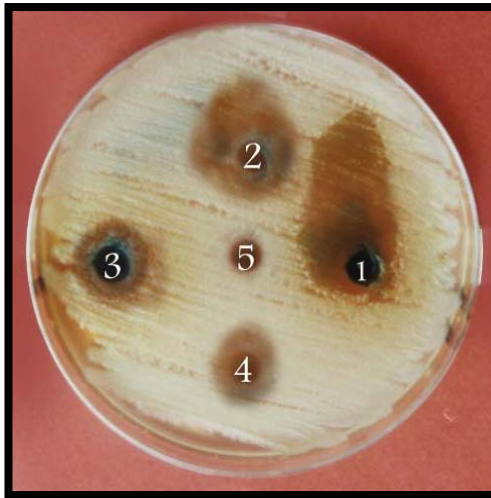
....

()				(4)	
()					
/ 0.065	/ 125	/ 250	/ 500		
11	13	22	32	<i>Candida albicans</i>	1
14	15	15	16	<i>Cryptococcus neoformans</i>	2

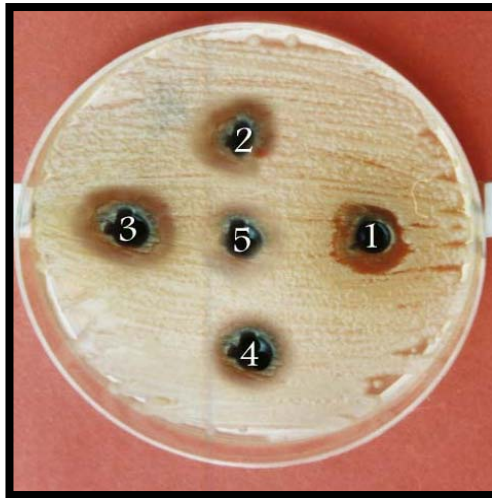
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()				(5)	
()					
/ 0.065	/ 125	/ 250	/ 500		
11	13	15	18	<i>Candida albicans</i>	1
12	13	13	15	<i>Cryptococcus neoformans</i>	2

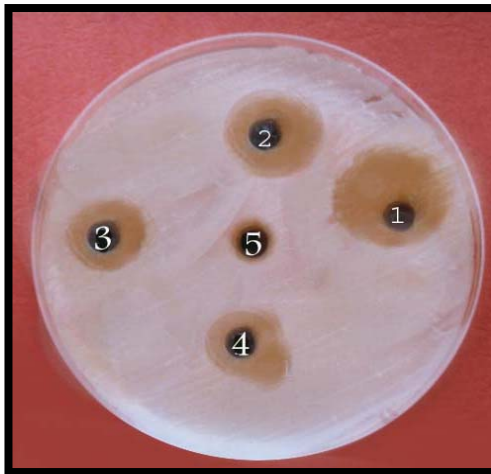
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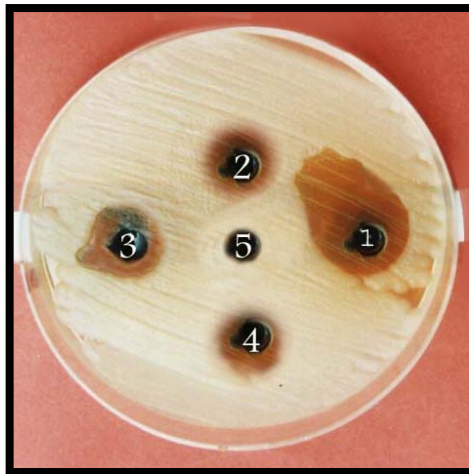
Staphylococcus aureus



Klebsiella pneumoniae

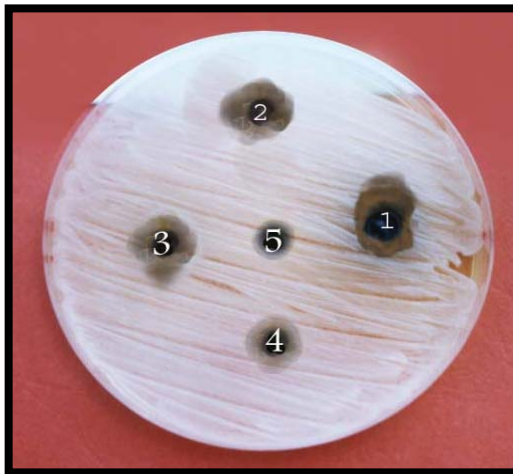


Escherichia coli

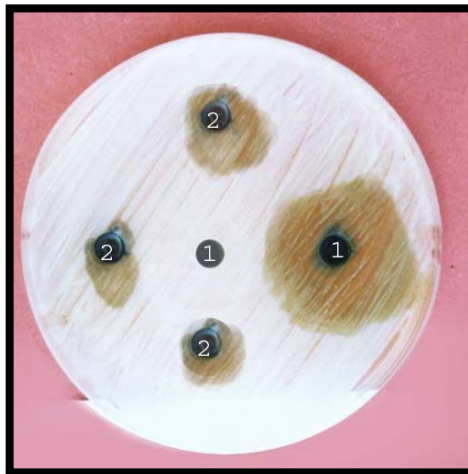


Streptococcus pyogenes

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(5) / 0.065 (4) / 125(3) / 250 (2) / 500 (1)

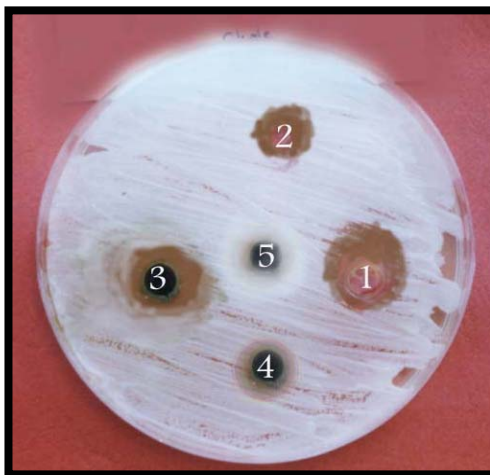


Cryptococcus neoformans

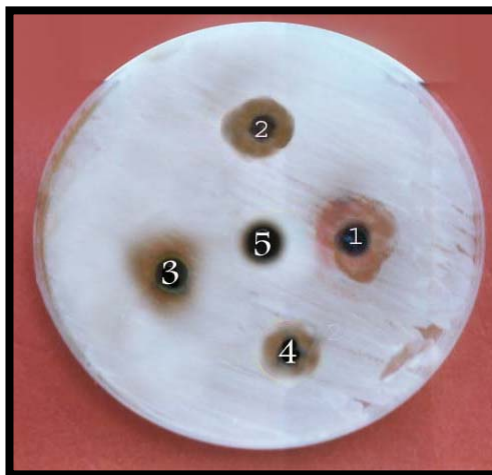


Candida albicans

-: (2)
(5) / 0.065 (4) / 125(3) / 250 (2) / 500 (1)

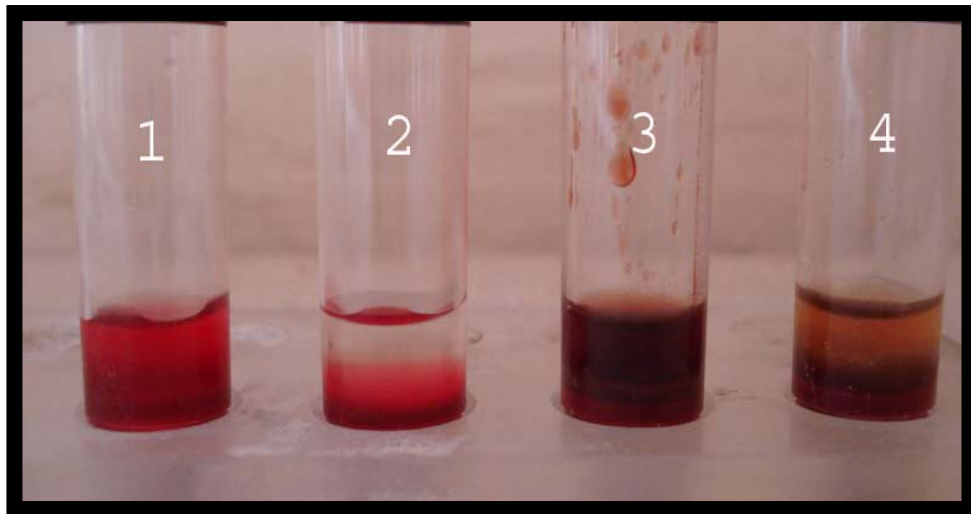


Cryptococcus neoformans



Candida albicans

-: (3)
(5) / 0.065 (4) / 125(3) / 250 (2) / 500 (1)



(1) :

(6)

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/ 500 18
 32
 (4 , 2) *Candida albicans* *Staphylococcus aureus* / 500
 (2 , 1)

(3)

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(5)	<i>Candida albicans</i>	/	500	18
				(3)
				(1998)
	(1)			
		(1992)		
.				
		(2006)		Rajakaruna
			(Ergosterole)	
	3- hydroxyl-3- methyl glutase			
			mevalonic acid	
, Ellis)				
			.(2001	1994
	.(1987	) (24.25)		(78.54)
		(1999) Cowan		
	(2003)			
				(2005)
			(1)	
		(1996)	Tylor	

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. (1976 , Anthony)

(1987) Park Hoon

(1995) Berenbaum

(2002) Nishanta

Staphylococcus aureus

Escherichia

Candida albicans

(2003)

Pseudomonas aeruginosa

Basillus sp. , coli

Staphylococcus aureus

. *Escherichia coli*

(1) (6)

Ahmed

(1998)

.(1993 , WHO)

.(2005) .

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. 165.

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.(1998)

84.

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.(1987)

552 .

.(1992)

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.(2001)

65 .

.(2003) . ,

67.

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