

## **EFFECTS OF HEXANE OF RICINUS (SEED AND LEAVES )AND BLACK PEPPER HEXANE EXTRACTS ON THE SOME BIOLOGICAL CONTROL OF *Chrysomya albiceps***

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(Received 16 January 2018 ,Accepted 10 April 2018)

**Keywords:** Hexane extracts ,Mortality, Ricinus seed.

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### **ABSTRACT**

This study was carried out to investigate the effects of Hexane extracts of Ricinus (Seed & leaves ) and Black Pepper on *Chrysomya albiceps* larvae .Result showed that the Ricinus leaves Hexane extract had 100% mortality in all stage Larvae at 0.1&0.5mg/ml and 96.666 mortality in larvae at 1.0mg/ml of same extract (Table 2) .Black pepper Hexane extracts Result showed that 1.0mg/ml had mean mortality 86.666 in larvae (Table 3). Ricinus seed Hexane extract showed 83.333 mean mortality rate at 1.0 mg/ml (Table 1 ).Many concentration were prepared (0.1,0.5,1.0 )mg/ml for each plants extracts in our investigation .Chemicals plants compounds were mage red (Alkaloids ,Phenols ,Tannins ,Resins and Oils ).The result showed that's used of natural plants production had more better than the chemicals insecticides which it studied in another time before this our investigation .

### **INTRODUCTION**

Myiasis was defined as infested of larvae of genus *Chrysomya* to living tissue of human or animals caused damage or maybe dead (1;2) .*Chrysomya albiceps* one of important blue fly Calliphoridae Diptera in sheep south of Africa ,it is classed as mainly a Scavenger Species (3) .*Chrysomya albiceps* larvae were used as a forensic indicator in central Europe ,(4). *Chrysomya albiceps* is very common and abundant in southern Europe tropical oriental (from India, China and neotropical region (center and south

America (5); (6). In Basra *Chrysomya albiceps* were separated in all area which captured by local and exported traps ,( 2).*Chrysomya albiceps* Larvae were collected from cadavers and from pig carcasses in and around the city of Vienna, ( 7). Ricinus and peganum harmalane extracts were used on stars of mosquito culex pipienus morlestus ,( 8 );( 11). Effect of plant Ricinus (seed & Leaves)Hexane extracts caused high mortality in larvae of *Chrysomya bezziana* stars larvae ,( 9). Secondary Compound extracts showed good effect on activity of *musca domestica* fly ,(10 ).

## **MATERIAL AND METHODS**

Thirty two Local and exported traps were separated at Basra area (16 Local& 16 exported) (Fig.1,2),from north to south to capture adult fly, and larvae were collected from infested animals directly .Basra area were divided to three sector ( south, center, North) Map 1. Ten Larvae were collected from injury by used medical forceps and put in sterile tube with 60% alcohol ,and then send to Vet. laboratory phylum of medical entomology to confirm diagnosis which its showed its belonged to *Chrysomya albiceps Calliphoridae* Diptera ; adults (picture 1) , larvae (picture 2). Three type of plants were used ,Ricinus seeds Fig.3 &Leaves Fig.4 and Black pepper Fig.5 .Plants were collected from local market ,then washed and dried and crushing carefully . Thirty gm of each crushed plants powder were put in 500ml Hexane flask which are extracted by used Saxhulate opratus . Many concentration were prepared (0.1,0.5.1.0 )mg/ml .Ten larvae were taken in 3 Petri dish for each concentration and extracts .Results recorded after 24 hours .

## **STATISTICAL ANALYSIS**

Data were based on completed randomized with design by using variance with coefficient limited  $p < 0.05$  . Used Abbot method correctly .

## **RESULT AND DISCUSSION**

Results showed that's *Chrysomya albiceps* can causes myiasis under secondary infestation after *Chrysomya bezziana* Larvae leaved its infested wounds. Result showed that's *Chrysomya albiceps* larvae can be caused tissue damage and dead the infested animals .Bad smell wounds which infested primary with *Chrysomya bezziana* lead to others type of *Chrysomya genus* like *Chrysomya albiceps* to invasive that's bad wounds and lead its eggs in it inorder to hatch and growth finally to adults .Result showed that's Secondary Plants Hexane extracts extracts of (Ricinus Leave &Seeds)and Black Pepper Hexane extracts improved that *Ricinus Leaves* hexane extract showed 98.888% mortality rate in larvae batter than *Ricinus seeds* hexane extract 61.110%mortality rate in larvae and *Black pepper* hexane extract its result reached mortality rate 75.555 % in larvae ,Table 1,2,3 . There were significant degree under  $P=0.05$  Statistically . Compound extracts were detected , (Tab.4) . (11), showed that Hexane could accumulate compounds extracts in the stomach of the fly causing toxication and death .Hexane is an organic non polar solvent which can extract the non polar compounds like Lipids ,Alkaloids ,Turpentine's , and essential Oil , ( 9)This result agree with, (12) and with (13 ); (14). Elements were can play a role in increase effects on larvae stage mortality due a sensitivity of stage to these compound or compounds and its effects or which may be due to present of analysis Enzymes , ,toxin ,interaction with other elements inside body of larva ,(15 ) ; (16 ); ( 17 ); ( 18 )and (19). Result show that's the elements of Plants compounds are a natural substance not chemicals which prepared in industry ,and plants extracts can interaction with parasite cell causes damage ,(9) .Secondary plants compound didn't effect in the cells of the host when treated myiasis wounds with plants extracts which it was more safety than chemicals insecticide and it was irritant and toxic substance to a live tissue of Human or animals when used as a treated in myiasis that is what our investigation improved it and we recommended to use the secondary medical plants compounds as alternative that a chemicals harmful substance , ( 9).

Table( 1):Effects of Ricinus Seeds hexane extract in Larvae of *Chrysomya albiceps*

%Mg\ml Concent.	%Mortality rate as instars			%Mean mortality rate
	1 <sup>st</sup> .	2 <sup>nd</sup> .	3 <sup>rd</sup>	
0.1	0	0	80	26.666
0.5	100	100	20	73.333
1.0	100	100	50	83.333
% Mean mortality as in stage	66.666	66.666	50	61.110

P= < 0.5

Table (2) :Effects of Ricinus Leaves hexane extract in Larvae of *Chrysomya albiceps*

% Mg\ml Concen.	% Mortality rate as instars			%Mean mortality rate
	1 <sup>st</sup> .	2 <sup>nd</sup> .	3 <sup>rd</sup> .	
0.1	100	100	100	100
0.5	100	100	100	100
1.0	100	100	90	96.666
%Mean mortality as in stage	100	100	96.66	98.888

P= < 0.5

**Table (3) :Effects of Black Pepper hexane extract in Larvae  
of *Chrysomya albiceps***

%Mg\ml Concen.	%Mortality rate as instars			%Mean mortality rate
	1 <sup>st</sup> .	2 <sup>nd</sup> .	3 <sup>rd</sup> .	
0.1	100	90	10	66.666
0.5	100	100	20	73.333
1.0	100	100	60	86.666
%Mean mortality as in stage	100	96.666	30	75.555

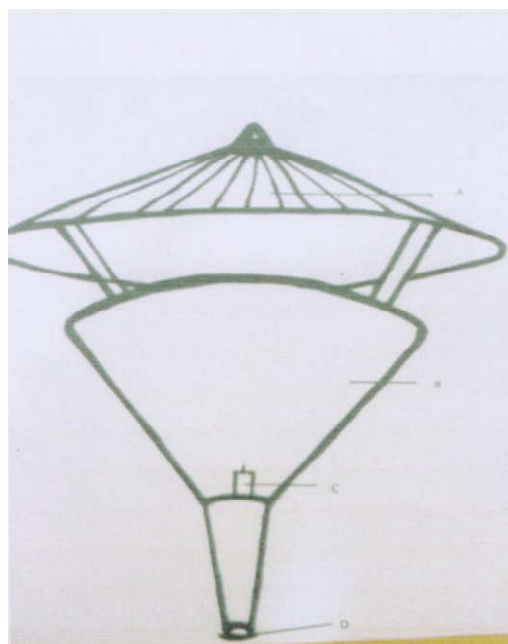
**P= < 0.5**

**Table (4) :Chemicals detection to plants Compounds**

Type of plants	Alkaloids reagent	Phenol reagent	Saponins reagent	Tannins reagent	Resins rea.	Oil Reag	PH
<b>Ricinus Leas</b>	+	+	+	+	+	+	7.7
<b>Ricinus Seeds</b>	+	+	+	+	+	+	7.7
<b>Black Pepper Seed</b>	+	+	+	+	+	+	7.7



**Fig 1 : Basra Map**



**Fig 2: Local trap**

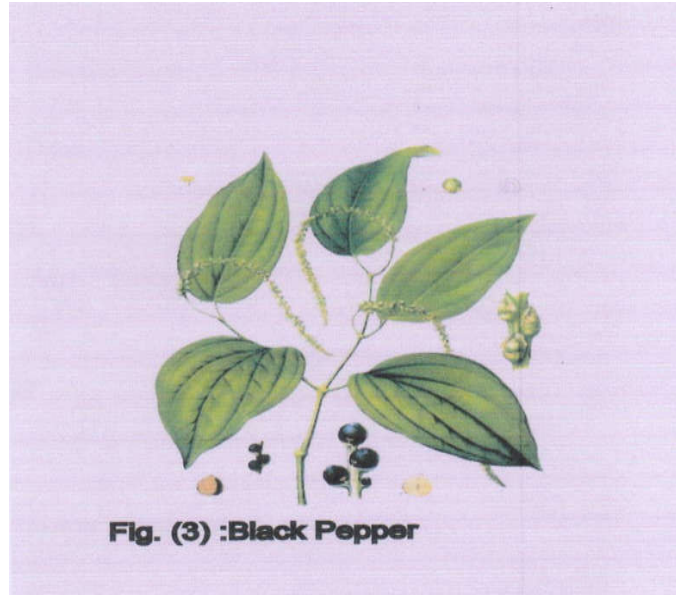


Fig 3:Black pepper

تأثير المستخلص الهكساني لبعض النباتات الطبية (بذور وأوراق نبات الخروع وبذور نبات الفلفل الأسود) للسيطرة على حياتية يرقات ذبابة كرايسوما البيسيس .

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#### الخلاصة

شملت الدراسة تأثير المستخلص الهكساني لبعض النباتات الطبية (الخروع بذور واوراق) وكذلك (بذور نبات الفلفل الاسود) على حياتية يرقات الذباب المعدني كرايسوما البيسيس. وأظهرت النتائج ان مستخلص اوراق الخروع الهكساني اعطى نسبة معدل هلاك 100% لليرقات تحت تركيز 0.1 و 0.5 ملغم/مل، و96.666% نسبة هلاك في اليرقات تحت تركيز 1.0 ملغم/مل لنفس المستخلص. اما المستخلص الهكساني لبذور نبات الفلفل الاسود اوضحت النتائج بان تركيز 1.0 ملغم/مل اعطى نسبة هلاك لليرقات بلغت 86.666%. بينما المستخلص الهكساني لبذور الخروع اوضحت نسبة هلاك لليرقات بلغت 83.333% تحت تركيز 1.0 ملغم/مل. وقد حضرت بعض التراكيز من المستخلصات لكل نبات هيه 0.1، 0.5، 1.0 ملغم/مل. كذلك تم قياس المركبات الكيماوية الثانوية المتواجدة في النباتات المستخدمه بالدراسة وكانت (الكلويدات، فينولات، تينيس، ريسنس، وزيت) . واقد اوضحت النتائج بان استخدام النواتج الثانوية الطبيعية النباتية هيه الافضل من استخدام المبيدات الكيماوية .

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