

THE EFFECT OF EXTRACTS OF SOME MEDICINAL AND AROMATIC PLANTS ON SOME PATHOGENIC MICROORGANISMS

By

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B. Sc. Agric. Sc. (Agricultural Microbiology), Ain Shams University, 2004

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تأثير مستخلصات بعض النباتات الطبية و العطرية على بعض الكائنات الحية الدقيقة الممرضة

رسالة مقدمة من

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ABSTRACT

Marwa Mokhtar Ibrahim Said Ahmed: The Effect of Extracts of Some Medicinal And Aromatic Plants on Some Pathogenic Microorganisms. Unpublished M. Sc. Thesis, Department of Agricultural Microbiology, Faculty of Agriculture, Ain Shams University, 2012.

This study aimed to evaluate the antimicrobial activity of 11 different essential oils such as *Allium sativum*, *Cinnamomum cassia*, *Dianthus caryophyllus*, *Eucalyptus globulus*, *Majorana hortensis*, *Marticaria chamomilla*, *Mentha piperita*, *Nigella sativa*, *Ocimum basilicum*, *Pimpinella anisum* and *Thymus vulgaris* against 5 Gram-negative bacteria, 6 Gram-positive bacteria and 6 pathogenic fungi. While all tested plant extracts produced some antibacterial and antifungal activities, *Eucalyptus globules*, *Marticaria chamomilla* and *Thymus vulgaris* were the most active plants extracts that showed potent antifungal activity. Minimum inhibitory concentration (MIC) of the most efficient extracts against all tested microorganisms and with special reference of *Phytophthora infestans* & *Fusarium oxysporum* were determined. The MIC of the plants extract ranged between 144.7 to 166.2 and 266 µg/ml. According to MIC effect, pot experiment was conducted to test the selected extracts in controlling late blight of tomato plant. *Thymus vulgaris* volatile oil extract and *Matricaria chamomilla* gave the best results in inhibiting of *Phytophthora infestans* in concentration of 600 and 400 µl/ml. *Thymus vulgaris*, *Marticaria chamomilla* and *Thymus vulgaris* were the most active plants extracts against *Fusarium oxysporum* in concentration of 600 µl/ml.

KeyWords: Medicinal plant extracts, MIC, antifungal activity, late blight disease, antibacterial activity.

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CONTENTS

	Page
LIST OF TABLES.....	VII
LIST OF FIGURES.....	XII
List of photos.....	XV
1. INTRODUCTION	1
2. REVIEW OF LITERATURE.....	3
2.1. Chemical composition of some medicinal and aromatic plants.....	5
2.2. Antibacterial activity of medicinal and aromatic plants...	11
2.3. Antifungal activity of medicinal and aromatic plants.....	16
2.4. Solvents used for extraction of active constituents of medicinal and aromatic plants.....	21
2.5. Mode of action of some medicinal and aromatic plants components.....	22
2.6. Specificity of essential oils.....	24
2.7. Synergism between the components of essential oils....	24
2.8. Antimicrobial mode of action of different medicinal and aromatic plants chemical groups	25
2.8.1. Non-volatile substances.....	25
2.8.2 Volatile substances.....	27
2.9. Major groups of antimicrobial compound from aromatic plants.....	28
2.9.1- Phenolics.....	29
2.9.2. Coumarins.....	29
2.9.3. Tannins.....	29
2.9.4. Anthroquinones and Anthroquinone glycosides	29
2.9.5. Flavonoids.....	30
2.9.6.-Iridoids.....	30
2.10. Tomato in world.....	31

2.11. The potential of plant essential oils as biofumigant against fungal and bacterial pathogens of tomato	31
3. MATERIALS AND METHODS.....	40
3.1. Materials.....	40
3.1.1. Medicinal and Aromatic plants.....	40
3.1.2 Test microorganisms.....	41
3.1.3. Soil.....	31
3.1.4 Source of Seedling and phytopathogenic fungal.....	42
3.1.5 Media used	42
3.1.5.1. Nutrient agar medium.....	42
3.1.5.2. Nutrient broth.....	43
3.1.5.3. Bacteriological peptone water.....	43
3.1.5.4 Yeast malt agar medium.....	43
3.1.5.5. Potato dextrose agar medium.....	44
3.1.5.6. Czapek's agar medium.....	44
3.1.5.7. Fertilizers used.....	44
3.2. Methods.....	44
3.2.1 Total chlorophyll.....	45
3.2.2 Preparation of phytopathogenic fungal.....	45
3.2.3 Preparation of Selected essential oils in greenhouse.....	45
3.2.4. Extraction of essential oil from plants.....	45
3.2.5. Preparation of essential oils extracts.....	46
3.2.6. Antibacterial activity.....	46
3.2.7. Antifungal Assay.....	47
3.2.8. Minimal inhibitory concentration (MIC).....	48
3.2.9. In vitro test of essential oils against fungal strains.....	48
3.3.10. Green house pot experiment.....	48
3.2.11. Disease severity.....	49

III

3.2.12. Statistical analysis.....	49
4. RESUIHLT AND DISCUSSION.....	51
Part I. 1. 4.1 Antimicrobial activity of medicinal and aromatic plant.....	51
4.1.1. Effect of plant extracts individually against test microorganisms.....	51
4.1.1.1. Potent extract of <i>Allium sativum</i>	51
4.1.1.2 Potent extract of <i>Cinnamon cassia</i>	60
4.1.1.3 Potent extract of <i>Dianthus caryophyllus</i>	68
4.1.1.4 Potent extract of <i>Eucalyptus globulus</i>	73
4.1.1.5 Potent extract of <i>Majorana hortensis</i>	82
4.1.1.6 Potent extract of <i>Martricaria chamomilla</i>	87
4.1.1.7 Potent extract of <i>Mentha piperita</i>	93
4.1.1.8 Potent extract of <i>Nigella sativa</i>	99
4.1.1.9 Potent extract of <i>Ocimum bacilicum</i>	105
4.1.1.10 Potent extract of <i>Pimpinella anisum</i>	110
4.1.1.11 Potent extract of <i>Thymus vulgaris</i>	116
4.1.2. Effect of plant extracts combinations against test microorganisms	124
4.1.2.1. Potent extract of the combinations of aqueous and ethanolic extracts of <i>Eucalyptus globulus</i> and <i>Matricaria</i> <i>chamomilla</i> using aqueous or ethanolic as solvent.	124
4.1.2.2. Potent the combinations of aqueous and ethanolic extracts of <i>Eucalyptus globulus</i> and <i>Matricaria</i> <i>chamomilla</i>	131
4.1.2.3. Potent extract of the combinations of aqueous and	132

ethanolic extracts *Eucalyptus globulus* and *Thymus vulgaris*

4.1.2. 4. Potent extract of the combinations aqueous and ethanolic of <i>Eucalyptus globulus</i> and <i>Thymus vulgaris</i>	133
4.1.2.5. Potent extract of the combinations aqueous or ethanolic of <i>Matricaria chamomilla</i> and <i>Thymus vulgaris</i>	137
4.1.2.6. Potent extract of the combinations aqueous or ethanolic of <i>Matricaria chamomilla</i> and <i>Thymus vulgaris</i>	144
4.1.1.7. Antimicrobial activity of aqueous and ethanolic plant extracts against microorganisms strains.	146
4.1.1.7.1. Effect of ethanolic plant extracts.	146
4.1.1.7.2 Effect of aqueous plant extracts	152
4.1.1.8. Minimum inhibitory concentration (MIC) for plant extracts against microorganisms strains	158
4.1.1.8.1. Minimum inhibitory concentration of tested eathanolic plant extracts	158
4.1.1.8.2. Minimum inhibitory concentration of tested aqueous plants extracts.	163
4.1.1.8.3 Minimum inhibitory concentration (MIC) of tested ethanolic of mixture of plant extracts	168
4.1.1.8.4. Minimum inhibitory concentration (MIC) of tested aqueous of mixture of plant extracts	171
4.1.1.8.5. Minimum inhibitory concentration (MIC) of tested aqueous and ethanolic of mixture of plant extracts.	176
Part II: 4.1.1.9. Application of the selected efficient essential oil extracts to control tomato disease	181
4.1.1.9. Tomato late blight disease.	181

4.1.1.10. Tomato fusarium wilt.....	١89
SUMMARY.....	199
REFERENCES	208
ARABIC SUMMARY.....	

LIST OF TABLES

	Page
1 Medicinal and aromatic plants used.	36
2 Some Physico_ chemical properties of the experimental soil	37
3 Antimicrobial activity of aqueous or ethanolic tracts of <i>Allium sativum</i>	54
4 Antifungal activity of aqueous or ethanolic extracts of <i>Allium sativum</i>	57
5 Antibacterial activity of aqueous or ethanolic extracts of <i>Cinnamon cassia</i>	62
6 Antifungal activity of aqueous or ethanolic extracts of <i>Cinnamon cassia</i>	65
7 Antibacterial activity of aqueous or ethanolic extracts of <i>Dianthus caryophyllus</i> .	70
8 Antibacterial activity of aqueouse or ethanolic extracts of <i>Eucalyptus globulus</i>	76
9 Antifungal activity of aqueouse or ethanolic extracts of <i>Eucalyptus globulus</i>	79
10 Antibacterial activity of aqueous or ethanolic extracts of <i>Majorana hortensis</i>	84
11 Antibacterial activity of aqueous or ethanolic <i>extracts</i> of <i>Matricaria chamomilla</i>	89
12 Antibacterial activity of aqueous or ethanolic extracts of <i>Mentha piperita</i>	95
13 Antibacterial activity of aqueous or ethanolic	101

VIII

extracts of *Nigella sativa*

14	Antibacterial activity of aqueous or ethanolic extracts of <i>Osmium bacilicum</i>	107
15	Antibacterial activity of aqueous or ethanolic extracts of <i>Pimpinella anisum</i>	112
16	Antibacterial activity of mixture of aqueous or ethanolic extracts of <i>Thymus vulgaris</i> .	119
17	Antifungal activity of mixture of aqueous or ethanolic extracts of <i>Thymus vulgaris</i> .	122
18	Antibacterial activity of mixtyre of aqueous or ethanolic extracts of <i>Eucalyptus globulus</i> and <i>Matricaria chamomilla</i> .	127
19	Antifungal activity of aqueous or ethanolic extracts of mixture of <i>Eucalyptus globulus</i> and <i>Thymus vulgaris</i>	134
20	Antibacterial activity of mixture of aqueous and ethanolic extracts of <i>Matricaria chamomilla</i> and <i>Thymus vulgaris</i>	141
21	Inhibition zone of bacterial growth affected by Medicinal and aromatic plants extracts	146
22	Inhibition zone of fungal growth affected by some ethanolic medicinal and aromatic plant extracts	150
23	Inhibition zone of bacterial growth affected by some	154

aqueous medicinal and aromatic plants extracts

24	Inhibition zone of fungal growth affected by some aqueous medicinal and aromatic plants extracts	156
25	Minimum inhibitory concentration (MIC) of tested ethanolic plants extracts against some bacterial strains	160
26	Minimum inhibitory concentration (MIC) of tested aqueous plants extracts against some bacterial strains	164
27	Minimum inhibitory concentration (MIC) of tested aqueous plants extracts against some fungal strains	166
28	Minimum inhibitory concentration (MIC) of the mixture of some medicinal and aromatic aqueous extracts against bacterial strains	173
29	Effect of <i>Eucalyptus globulus</i> oil extracts on growth parameters and severity of infected tomato plants with <i>Phytophthora infestans</i> race 6 as foliar inoculum.	185
30	Effect of <i>Thymus vulgaris</i> oil extracts on growth parameters and severity of infected tomato plants with <i>Phytophthora infestans</i> race 6 as foliar inoculum	186
31	Effect of <i>Matricaria chamomilla</i> oil extracts on growth parameters and severity of infected tomato plants with <i>Phytophthora infestans</i> race 6 as foliar inoculums	187
32	The effect of different concentrations of <i>Thymus vulgaris</i> extract on tomato infected with <i>Fusarium oxysporum lycopersici</i> rice 6 as root inoculum	191
33	The effect of different concentrations <i>Maticaria</i>	192

- chamomilla and Eucalyptus globulus* extracts mixture on tomato infected with *Fusarium oxysporum lycopersici* rice 6 as root inoculum. 193
- 34 The effect of different concentrations *Maticaria chamomilla and Thymus vulgaris* extracts mixture on tomato infected with *Fusarium oxysporum lycopersici* rice 6 as root inoculum
- 35 The effect of different concentrations *Thymus vulgaris and Eucalyptus globulus* extracts concentrations on tomato infected with *Fusarium oxysporum lycopersici* rice 6 as root inoculum 194