

Mei et al, Plant-based therapies for dermatophyte infections, Appendix 1: *In vitro* studies of anti-dermatophytic plants and phytochemical composition, methodology and results, by family. ND: Not determined. NCCLS: National Committee for Clinical Laboratory Standards. ©, Tasman Medical Journal. TMJ 2022; 3; 21-37.

Ref	Family and Scientific name	Phytochemical composition	Antimicrobial susceptibility method	Anti-dermatophytic activity
Lamiaceae				
56	<i>Rosmarinus officinalis L.</i>	Terpinen-4-ol, 1,8-cineole	Broth microdilution	Hydroalcoholic extract MIC 62.5 – 250 µgml ⁻¹ Amphotericin B MIC 1.9 – 15.6 µgml ⁻¹
75		ND	Disc diffusion (NCCLS)	Essential oils did not inhibit tested fungi. Alcoholic plant extracts may confer antifungal activity.
75	<i>Thymus vulgaris L.</i>	O-cymene, γ-terpinene, thymol, carvacrol	Disc diffusion	Two-fractions of oil complete growth inhibition of all six dermatophytes
19		ND	Broth macrodilution	Essential oil MIC 72-288 µgml ⁻¹ Thymol MIC 192 µgml ⁻¹
27		ND	Broth microdilution	Essential oil MIC 0.5 – 1 mgml ⁻¹ Thymol MIC 0.25 – 1 mgml ⁻¹
56	<i>Tetradenia riparia (Hochst.) Codd</i>	ND	Broth microdilution	Hydroalcoholic extract MIC 62.5-25 µg/ml
25	<i>Thymus pulegioides L.</i>	Carvacrol, thymol, p-cymene and c-terpinene	Broth microdilution (NCCLS)	Essential oil MIC 0.16 – 0.32 µlml ⁻¹ Thymol MIC 0.08 – 0.16 µlml ⁻¹ Carvacrol MIC 0.04 – 0.08 µlml ⁻¹ Fluconazole MIC 16 – 128 µgml ⁻¹
76	<i>Ocimum gratissimum L.</i>	1-Methoxy-4-(2-propenyl) benzene, 2-methoxy-4-(1-propenyl) fenol, 1,8-cineole, β-pinene, transcaryophyllene	Disc diffusion	Essential oil inhibition zone 30mm diameter
54		Eugenol	Agar dilution	Eugenol 250 µgml ⁻¹ , essential oil 250 µgml ⁻¹ and hexane extract at 125 µgml ⁻¹ inhibited 100% of dermatophyte growth Itraconazole MIC 0.97-125 µgml ⁻¹ for all isolates.
77		Thymol, p-cymene and γ-terpinene	Agar dilution	Essential oil MIC 80 - 150 µl L ⁻¹
78		ND	Poisoned food technique	Essential oil MIC 50ppm 100% inhibition at 500ppm
79	<i>Ocimum sanctum L.</i>	Steroids, terpenoids, flavonoids, phenolic compounds, lignin proteins and carbohydrates.	Broth microdilution	Benzene fraction of leaf MIC 200 µgml ⁻¹
18		Eugenol, β-elemene, methyl eugenol, trans caryophyllene	Broth microdilution	Essential oil MIC 0.4 – 0.8 µgml ⁻¹
80	<i>Mentha piperita L.</i>	ND	Poisoned food technique	Essential oil MIC 0.1 to 1.5 µl ml ⁻¹ Inhibition zone 36 – 44mm diameter
26		Menthone and Menthol	Broth microdilution	Essential oil MIC 0.125 – 0.5% v/v Synergism with Itraconazole observed Menthol MIC 0.06% v/v
81	<i>Thymus serpyllum L.</i>	p-cymene, carvacrol, γ-terpinene	Microdilution	Essential oil MIC 0.1% (v/v)
75	<i>Origanum majorana L.</i>	terpinen-4-ol and thymol	Disc diffusion	Essential oil (colourless and yellow) inhibition zones of 36 - 47mm
81	<i>Origanum vulgare L.</i>	Thymol, carvacrol, γ-terpinene	Broth microdilution	Essential oil MIC 0.5% (v/v)
Myrtaceae				
82	<i>Syzygium aromaticum (L.) Merr. & L.M.Perry</i>	Eugenol	Agar diffusion	Essential oil at 0.2 mgml ⁻¹ inhibited greater than 60% hyphal growth
53		Eugenol	Broth microdilution	Essential oil MIC 0.16ml ml ⁻¹
83		Eugenol, β-caryophyllene, eugenyl acetate	Agar well diffusion	Essential oil MIC 9 µl ml ⁻¹
19		Eugenol	Broth microdilution and disc diffusion	Essential oil MIC 160 µgml ⁻¹ Synergistic effects observed with fluconazole decreasing to MIC 1.25 µgml ⁻¹ with fluconazole Eugenol MIC 80 µgml ⁻¹ , decreasing to MIC 2.5 µgml ⁻¹ with fluconazole
18		Eugenol, trans-caryophyllene	Broth microdilution	Essential oil MIC 0.2-0.4 µgml ⁻¹
84	<i>Melaleuca alternifolia (Maiden & Betche) Cheel</i>	ND	Agar dilution	Essential oil MIC 1431 µgml ⁻¹ Miconazole of 0.2 µgml ⁻¹
85		ND	Broth microdilution	Essential oil MICs 0.004% - 0.06%
86		ND	Nanocapsule suspensions against onychomycosis model	After 1 week of treatment a significant decrease in cell count was observed
87		ND	Agar dilution	Essential oil MIC 0.1%
23		Terpinen-4-ol, γ-terpinene, α-terpinene, 1,8-cineole, terpinolene	Broth microdilution	Essential oil 0.12% to 1% Terpinen-4-ol MIC 0.03-0.2% MIC 1,8-cineole higher than that of tea tree oil
27		ND	Broth microdilution	Oil fraction MIC 0.125–0.25 mgml ⁻¹
46	<i>Eucalyptus globulus Labill.</i>	ND	Microdilution	Essential oil activity better than 1% Nystatin against T mentagrophytes but much lower than 1% clotrimazole
21		Macrocarpal C	Microbroth dilution	Macrocarpal C MIC 1.95 µg ml ⁻¹ Terbinafine hydrochloride 0.625 µg ml ⁻¹ Nystatin 1.25 µg ml ⁻¹

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Myrtaceae (continued)				
88	<i>Eucalyptus globulus</i> Labill.	ND	Agar well diffusion	Ethanol and water extract mean inhibition zone 26mm
76	<i>Eugenia uniflora</i> L.	Furanodiene, γ -elemene, transocimene, 2- β -pinene, γ -terpinene	Disc diffusion	Essential oil inhibition zone 20mm
89		ND	Broth microdilution	Leaf ethanolic extract MIC 31.3 – 62.5 μgml^{-1}
36	<i>Eucalyptus pauciflora</i> Steber ex Spreng.	ND	Poisoned food technique	Essential oil MIC 1.0 $\mu\text{l ml}^{-1}$
46	<i>Eucalyptus citriodora</i> Hook.	n-hexyl acetate, butyl formate, allyl valerate, n-dodecane.	Broth microdilution	Essential oil at 100% concentration caused 100% inhibition growth of dermatophytes
90	<i>Eucalyptus camaldulensis</i> Dehnh.	ND	Broth macrodilution	Hydro-alcoholic extract of leaves MIC 0.6 - 0.9 mgml^{-1}
91		ND	Agar diffusion	Distilled water extract MIC 0.2 - 0.4 mgml^{-1}
92		ND	Broth microdilution and Agar dilution	Methanol extracts of leaves MIC 0.4 ⁻¹ .6 mgml^{-1} using agar dilution and 0.2 to 1.6 mgml^{-1} using broth dilution Griseofulvin MIC 0.001 - 0.008 mgml^{-1}
93	<i>Gully gum Eucalyptus smithii</i> F. Muell. ex R.T. Baker	1,8-cineole, α -terpineol	Broth microdilution (NCCLS)	Essential oil MIC 62.5 μgml^{-1} to >1,000 μgml^{-1}
Fabaceae				
89	<i>Libidibia ferrea</i> (Mart. ex Tul.) L.P. Queiroz	ND	Broth microdilution	Ethanolic extract of leaves MIC 31.3 μgml^{-1}
94	<i>Mimosa tenuiflora</i> Benth.	DMT (hallucinogenic) Indole alkaloids, chalcones, tannins	Agar dilution	Ethanol extract MIC 10ug ml^{-1}
95	<i>Cassia occidentalis</i> (L.) Rose	ND	Agar and broth dilution	Alcohol and acetone extract MIC 5000 μgml^{-1}
95	<i>Cassia tora</i> L.	ND	Agar and broth dilution	Methanol, alcohol, acetone, chloroform and petroleum ether extracts MIC 5 - 20 mgml^{-1}
96	<i>Acacia nilotica</i> (L.) Delile	ND	Poisoned food technique	10% ethyl acetate extract 22 - 29mm diameter of inhibition
Rutaceae				
57	<i>Agathosma betulina</i> (P.J. Bergius) Pillans	Limonene, menthone, isomenthone, disophenol, geranial	Diameter of mycelia growth inhibition on agar	40 μL of essential oil inhibited <i>T. rubrum</i> growth with a fungal growth index of 2.3%.
68	<i>Citrus bergamia</i> Risso	ND	Broth microdilution	Natural essence MIC (v/v) 0.156% - 2.5% Distilled extract MIC 0.02% - 2.5% Furocoumarin-free extract MIC 0.08% - 1.25%
97		ND	Agar dilution	Bergamot oil 1.25% dilution - inhibition zone of 28mm 2.5% dilution - inhibition zone 32 mm diameter
98	<i>Aegle marmelos</i> (L.) Correa	Trace amounts of triterpenoids, phenolic compounds, tannins and flavonoids	Broth microdilution	Methanol, ethanol and water extract MIC 200 $\mu\text{g ml}^{-1}$
67	<i>Citrus acida</i> Pers.	ND	Agar diffusion	Fresh lime juice yielded zones of inhibition surrounding lime, miconazole and econazole
Zingiberaceae				
99	<i>Curcuma longa</i> L.	ND	Agar well diffusion	Essential oil in ethylene glycol MIC 114.9 – 919.2 μgml^{-1}
100		ND	Disc diffusion and microdilution	Essential oil MIC 1.4 – 1.6 $\mu\text{l ml}^{-1}$
101		Ar-turmerone, atlantone, zingiberone	Broth dilution	Turmeric oil cream MIC 312 μgml^{-1} Ar-turmerone MIC 1.56 – 6.25 μgml^{-1} Ketoconazole MIC 4.9 – 7.81 μgml^{-1}
76	<i>Alpinia speciosa</i> (Blume) D. Dietr.	1, E-Cineol, α -terpinene, P-pinene, α -pinene, transcaryophyllene	Disc diffusion	Essential oil up to 20mm diameter of inhibition
100	<i>Zingiber officinale</i> Roscoe	ND	Microdilution and disc diffusion	Essential oil MIC 0.05 – 0.06 $\mu\text{l ml}^{-1}$ with a 36 - 69mm diameter inhibition zone Clotrimazole 36mm inhibition zone Ketoconazole 60mm inhibition zone Essential oil combined with <i>Curcuma longa</i> MIC 0.02 $\mu\text{l ml}^{-1}$ and 82mm inhibition zone
Piperaceae				
28	<i>Pothomorphe umbellata</i> (L.) Miq.	Octadecanoic acid, pentacosanoic acid, tetracosanoic acid, tricosanoic acid, eicosanoic acid, b-stigmasterol and nerolidol	Plate microdilution	Ethanol extract MIC 156.25 μgml^{-1} and methanol extract 78.13 μgml^{-1} against multi-drug resistant strains of <i>T. rubrum</i>
18	<i>Piper betle</i> L.	Eugenol, eugenol acetate	Broth microdilution	Essential oil MIC 0.2-0.4 μgml^{-1}
58	<i>Piper regnellii</i> (Miq.) C. DC.	Eupomatenoid-3 & eupomatenoid-5	Broth microdilution (NCCLS)	Hydroalcoholic leaf extract MIC 15.6 - 62.5 μgml^{-1} Pure eupomatenoid-3 and eupomatenoid-5 MIC 50 μgml^{-1} and 6.2 μgml^{-1} respectively

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Apiaceae				
24	<i>Thapsia villosa L.</i>	limonene and methyleugenol	Macrodilution	Essential oil MIC 0.64 ⁻¹ .25 µl ml ⁻¹ Methyleugenol MIC 0.32 µl ml ⁻¹ Limonene MIC 0.08-0.16 µl ml ⁻¹ Fluconazole MIC 16 ⁻¹ 28 µgml ⁻¹
102	<i>Foeniculum vulgare Mill.</i>	Trans-anethoe, pinene, fenchone	Broth microdilution	Essential oil MIC 0.039-0.078 µgml ⁻¹ Fluconazole MIC 25 ⁻¹ 00 µgml ⁻¹ Amphotericin B MIC 0.156-0.132 µgml ⁻¹
70	<i>Angelica major Gilib.</i>	α-pinene and cis-β-ocimene	Broth microdilution (NCCLS)	Essential oil from aerial parts MIC 0.32-0.64 µL ml ⁻¹
Lauraceae				
76	<i>Cinnamomum zeylanicum Blume</i>	α-Pinene, 1,8-cineole, L-limonene, L-P-pinene	Disc diffusion	Essential oil inhibition zone 30mm diameter
19	<i>Cinnamomum verum J.Presl</i>	Cinnamaldehyde	Broth microdilution, disc diffusion assay	Essential oil MIC 80—160 µgml ⁻¹ Cinnamaldehyde MIC 40-80µg/ml against resistant strains of dermatophytes to fluconazole and itraconazole. Zone of inhibition 42.66 mm. Synergism is also exhibited as cinnamaldehyde reduced the MIC fluconazole from 200 µgml ⁻¹ to 25 µgml ⁻¹ .
Euphorbiaceae				
103	<i>Croton urucurana Baill.</i>	ND	Tube dilution and paper disk diffusion assay	Dragon's blood in sterile water MIC 1.25-2.5 mgml ⁻¹ , and inhibition zone range of 7.6-26.9mm Griseofulvin 25.2-34mm diameter inhibition
88	<i>Croton macrostachyus Hochst. Ex Delile</i>	ND	Agar well diffusion	Ethanol and water extract mean inhibition zone 23mm diameter
Poaceae				
29	<i>Cymbopogon citratus (DC.) Stapf.</i>	Citral	Disc diffusion, broth microdilution, time-kill methods and checkerboard microtiter tests	Essential oil MIC 288 µgml ⁻¹ Citral MIC 72 µgml ⁻¹ Fluconazole and Itraconazole MIC 200 µgml ⁻¹ Citral, but not <i>C. citratus</i> also had synergistic antifungal effect with fluconazole.
76		E-Citral, Z-citral, 2-P-pinene	Agar Diffusion	Essential oil <i>C. citratus</i> and Citral inhibited zones of diameter 24.7-32.6mm against azole resistant strains of <i>T. rubrum</i> . All tested combinations had synergistic activity with fluconazole against <i>T. rubrum</i> .
104	<i>Cymbopogon martini (Roxb.) W. Watson</i>	trans-geraniol, b-elemene, E-citral and linalool	Poisoned food technique	Essential oil MIC 150 - 200ppm
105		ND	Broth microdilution	Volatile oil MIC 1-2µl ml ⁻¹
Berberidaceae				
106	<i>Nandina domestica Thunb.</i>	ND	Disc diffusion	Essential oil, n-hexane, chloroform, ethyl acetate, and methanol extracts 31.1-68.6% and 19.2-55.1% anti-dermatophytic effect and MIC 62.5-2000 µgml ⁻¹
Meliaceae				
107	<i>Azadirachta indica A.Juss.</i>	ND	Broth microdilution	Ethanol, ethyl acetate and hexane extract MIC 31 µgml ⁻¹
108		ND	Broth microdilution	Methanol and hexane extract leaves MIC 50 – 200 µgml ⁻¹ Seed oil MIC 625 µg/ml – 2500 µgml ⁻¹ Terbinafine MIC 0.0019 – 0.0313 µgml ⁻¹
109		Terpenoids	Broth microdilution	Ethanol, ethyl acetate and hexane extract MIC 125 – 500 µgml ⁻¹
Moringaceae				
110	<i>Moringa oleifera Lam.</i>	pentacosane, hexacosane, (E)-phytol and 1-[2,3,6-trimethylphenyl]-2-butanone	Broth microdilution	Crude essential oils MIC 0.2 - 1.6 mgml ⁻¹ Essential oils MIC 80 43.5 ⁻¹ 33 µgml ⁻¹ Ketoconazole was 0.125 µgml ⁻¹
111		alkaloids flavonoids, glycosides, tannins, triterpenoids and steroids.	Disc diffusion and broth dilution	Methanol and ethyl acetate extracts MIC 1.56 - 6.25 mgml ⁻¹
Vitaceae				
48	<i>Vitis vinifera L.</i>	monomeric and polymeric flavan-3-ols.	Broth dilution	Ethanol seed extracts MIC 20 - 97 µgml ⁻¹ MICs inversely correlated with polymeric fraction of flavan-3-ols but weakly correlated with the monomeric fraction.
Lythraceae				
112	<i>Lawsonia inermis L.</i>	ND	Agar dilution	Hexane extract MIC 625ug ml ⁻¹
113		ND	Broth dilution assay	Chloroform, methanol and aqueous extracts MIC 3.12 ⁻¹ 2.5 mgml ⁻¹
114		ND	Macroscopic broth dilution and agar disc diffusion	Crude methanol and aqueous extract MIC 25 mgml ⁻¹ Methanol diameter zones of inhibition 8.0 mm - 18.8. Aqueous extract diameter zones inhibition 9.0 mm - 14.5 mm.
115		ND	Broth microdilution	Ethanol and petroleum extracts MIC 5 – 10 mgml ⁻¹
116		ND	Broth microdilution	Ethanol, ethyl acetate and hexane extracts MIC 31.25-62.5 µgml ⁻¹
95		ND	Agar and broth dilution	Acetone, ethyl acetate, chloroform and pet. ether extracts 100% inhibition growth <i>T. rubrum</i> at 40 mgml ⁻¹
47	<i>Punica granatum L.</i>	Gallic acid	Gallic acid (NCCLS)	Gallic acid MIC 43.75 µgml ⁻¹ Comparable to fluconazole 10.4 µgml ⁻¹
117		Tannins (ellagic acid, gallic acid), polyphenols, punicalagin	Broth microdilution and disc diffusion (NCCLS)	Crude hydroalcoholic plant extract MIC 125 – 250 µgml ⁻¹ Punicalagin MIC 62.5 µgml ⁻¹ Nystatin 0.78 µgml ⁻¹

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Asteraceae				
95	<i>Xanthium indicum</i> Klatt	ND	Agar and broth dilution	Methanol, alcohol, acetone, ethyl acetate and chloroform MIC 20 mgml ⁻¹
118	<i>Ageratina pichinchensis</i> (Kunth) R.M.King & H.Rob.	Chromenes	Agar dilution	Active components of the n-hexane extract: Enecalinal MIC 6.2 – 12.5 µgml ⁻¹ Taraxerol MIC 12.5 µgml ⁻¹ β-eudesmol MIC 25 µgml ⁻¹ Miconazole 0.004 µgml ⁻¹
Phytolaccaceae				
88	<i>Phytolacca dodecandra</i> L'Hér.	ND	Agar well diffusion	Ethanol and water extract mean inhibition zone 20mm
Araliaceae				
50	<i>Polyscias fulval</i> (Hiern) Harms	Crude extract: ethyl acetate, n-butanol and residue fractions: saponins, tannins, alkaloids, anthraquinones and phenols. Hexane fraction: only alkaloids.	Broth microdilution and well diffusion	The ethyl-acetate, n-butanol and residue fractions displayed the highest anti-fungal activity. MIC 0.125-0.5 mgml ⁻¹
119		phenolics, steroids, triterpene and terpenoid saponins	Broth microdilution	Dichloromethane-methanol extract from the stem bark MIC 0.78 ⁻¹ 00 µgml ⁻¹ . Saponins most active against tested dermatophytes
Faboideae				
120	<i>Astragalus verus</i> Olivier	ND	Disc diffusion	Aqueous extract MIC 160 mgml ⁻¹ Acetone and methanol extracts MIC 320 mgml ⁻¹
Pinaceae				
121	<i>Picea abies</i> (L.) H. Karst.	p-coumaric acid, resin acids and ligans	Agar diffusion tests	Salve with a resin concentration at 20% caused a fungicidal effect with a significant inhibition zone for all dermatophytes.
Combretaceae				
122	<i>Terminalia chebula</i> Retz.	phenolic, tri-terpinoid and tannin	Broth microdilution (NCCLS)	Ethanol and aqueous extract MIC 3.125-6.25 µgml ⁻¹ Itraconazole MIC 3.125 µgml ⁻¹ Fluconazole 50 µgml ⁻¹
123		ND	Microbroth dilution	Stem and stem bark MIC 0.039 mgml ⁻¹ and inhibition zone 41.5+/-0.5mm diameter. Apigenin (flavonoid) most active antifungal component
Amaranthaceae				
104	<i>Chenopodium ambrosioides</i> L.	m-Cymene, myrtenol, alpha-terpene	Poisoned food technique	Essential oil MIC 350 - 700ppm Griseofulvin, ketoconazole and fluconazole MIC 1000-5500ppm
124		Absence of phenols	Poisoned food technique	Essential oil MIC 50ppm
Moraceae				
125	<i>Ficus exasperate</i> Roxb.	ND	Well-in-agar diffusion	Ethanol extract MIC 25.12 – 44.67 mgml ⁻¹ Diameter zones of inhibition between 13.00 and 22.45mm.
Ranunculaceae				
126	<i>Nigella sativa</i> L.	Thymoquinone; p-cymene	Broth macrodilution	Essential oil MIC 4 mgml ⁻¹
127		ND	Agar diffusion	Ether extract MIC 40mg/ml Thymoquinone MIC 0.125-0.25 mgml ⁻¹ Griseofulvin: 0.00095 – 0.0155 mgml ⁻¹
128		ND	Broth microdilution	Essential oil MIC 2-4 mgml ⁻¹
129		ND	Disc diffusion	Essential oil inhibition zones 20-35mm diameter
Caprifoliaceae				
130	<i>Lonicera japonica</i> Thunb.	ND	Poisoned food technique	Essential oil MIC 62.5 – 500 µgml ⁻¹
Hypericaceae				
131	<i>Hypericum perforatum</i> L.	Terpinen-4-ol, terpinolene, 1,8-cineole, c-terpinene, a-terpinene, qeymene, a-terpineol and b-myrcene	Broth microdilution	Essential oil MIC 0.01% - 0.06% v/v T. tonsurans Griseofulvin 0.5 – 1 µgml ⁻¹
132		Xanthonnes	Broth microdilution	Control roots MIC 125-500 µgml ⁻¹ Chitosan treated roots to enhance xanthone content MIC 64–125 µgml ⁻¹ Amphotericin MIC 0.125-8 µgml ⁻¹ Fluconazole MIC 1-32 µgml ⁻¹
133		Glycosides, flavonoids, oils, phenols, amino acids, tannins and terpenoids	Broth microdilution	Methanol extract MIC 0.1-0.6 mgml ⁻¹
Primulaceae				
134	<i>Anagallis arvensis</i> L.	ND	Serial agar dilution plate technique	Aqueous extract 15 µgml ⁻¹ fully inhibited <i>T. violaceum</i> growth, and inhibited the growth of <i>M. canis</i> and <i>T. mentagrophytes</i> to a great extent
133		Glycosides, saponins, Alkaloids, phenols, terpenoids	Broth microdilution	Methanol extract MIC 0.4 ⁻¹ 9 mgml ⁻¹
Araceae				
135	<i>Pistia stratiotes</i> L.	ND	Broth microdilution	Methanolic extract MIC 250 µg ml ⁻¹
Polypodiaceae				
136	<i>Drynaria quercifolia</i> (L.) J. Sm.	Coumarins and triterpenes	Agar disc diffusion	Di-ethyl ether extract 25mm inhibition zone Ethanol extract did not show inhibitory activity up to concentration of 20 mgml ⁻¹
Convolvulaceae				
137	<i>Argyreia nervosa</i> (Burm. F.) Bojer	Flavonoids and glycosides, steroids and tannins	Disc diffusion	Ethyl acetate of leaves extract MIC 70-80 µgml ⁻¹

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Geraniaceae				
27	<i>Pelargonium graveolens</i> L.'Her.	Citronellol and geraniol	Broth microdilution, disc diffusion assay and checkerboard microtitre assay	Essential oil MIC 0.25–2 mgml ⁻¹ Essential oil fraction and main components exhibited synergistic activity with ketoconazole (MIC 0.18-0.38 mgml ⁻¹)
Celastraceae				
60	<i>Salacia senegalensis</i> (Lam.) DC.	Quercetin, myricitrin (flavonoids)	Broth microdilution	Hydroethanolic extract MIC <1 – 4 mgml ⁻¹
Caesalpiniaceae				
95	<i>Caesalpinia bonducella</i> (L.) Fleming	ND	Agar and broth dilution	Ethyl acetate extract 100% inhibition growth dermatophytes at 10 mgml ⁻¹
Urticaceae				
61	<i>Urtica dioica</i> L.	Coumarins, saponins, tannins, moderate content of triterpenes, steroids and cardiac glycosides	Disc diffusion	No antifungal activity at 100 mgml ⁻¹ for both aqueous and hydroalcoholic extracts
138		ND	Agar dilution	Cold methanol extract of whole plant inhibited growth at rate of 4.5mm per day against 15.4mm for control
Rubiaceae				
139	<i>Borreria verticillate</i> (L.) G. Mey.	Flavonoids, terpenes, saponins, glycosides. Absence of phenols	Agar well diffusion and broth dilution	Crude extract MIC 512 mgml ⁻¹ Terbinafine MIC 64 mgml ⁻¹
Apocynaceae				
140	<i>Calotropis procera</i> (Aiton) Dryand	Alkaloids, saponin, tannins, steroids, flavonoids, anthraquinone, and triterpenoids.	Agar incorporation method	100% undiluted latex inhibited mycelial spread diameter significantly less than negative control
141		ND	Agar dilution	Ethanolic leaves extract MIC 25 0 µgml ⁻¹
142		ND	Paper disc diffusion	Ethanolic extract MIC 125ppm and maximum inhibitory zone 9.3 - 12.5mm.
143		Saponins, tannins, sesquiterpenes and alkaloids	Agar diffusion	Aqueous extract, MIC 0.5-0.9 mgml ⁻¹ Zones of inhibition were comparable to griseofulvin