

1 Identification de l'échantillon / Sample identification

Désignation commerciale <i>Trade name</i>	HE TEA TREE BIO <i>Organic Tea Tree Oil</i>
Code article / Article code	[MP10079]
Type d'extrait <i>Type of Extract</i>	Huile Essentielle <i>Essential Oil</i>
Nom commun <i>Common name</i>	Arbre à thé <i>Tea Tree</i>
Nom botanique <i>Botanical name</i>	<i>Melaleuca alternifolia</i>
Qualité / Quality	Biologique / <i>Organic</i>
Partie de la plante <i>Part of the plant</i>	Feuilles <i>Leaves</i>
Origine de la plante <i>Origin of the plant</i>	Australie
Producteur / Fournisseur <i>Manufacturer / Supplier</i>	LABORATOIRE ALTHO
N° de Lot / Batch number	INT231212-01
Informations / Information	
N° unique d'échantillon <i>Sample number</i>	Analyse fournisseur



2 Analyse par Chromatographie Phase Gazeuse / GC-MS Analysis

2.1 Résultats d'analyse / Results

Description: Oil steam distilled from the leaves and terminal twigs of Melaleuca Alternifolia.

Physical and Chemical properties	RANGE	RESULTS
Odour	characteristic piney odour	
Appearance	Mobile liquid	
Colour	Colourless to pale yellow	Conforms
Specific gravity at 20°C	0.885 to 0.906 (@20°C)	0.8945
Refractive index at 20°C	1.475 to 1.482 (@ 20°C)	1.477
Optical rotation at 20°C	+7° to +12°	+9.80
Flash point	55 degrees Celcius	

Chromatographic analysis
Identification by GC/MS and quantification by GC/FID

Sample preparation : 50th dilution in hexane

Rt	# CAS	Compounds	Fid %
10.75	2867-05-2	Alpha-Thujène	0.894
11.03	80-56-8	Alpha-Pinène	2.350
11.64	79-92-5	Camphène	0.007
12.47	3387-41-5	Sabinène	0.324
12.66	127-91-3	Béta-Pinène	0.748
13.06	123-35-3	Myrcène	0.928
13.68	99-83-2	Alpha-Phellandrène	0.416
14.11	99-86-5	Alpha-Terpinène	10.728
14.34	99-87-6	Para-Cymène	1.330
14.50	138-86-3	Limonène	0.986
14.57	555-10-2	Béta-Phellandrène	0.815
14.64	470-82-6	Eucalyptol	3.343
15.58	99-85-4	Gamma-Terpinène	21.697
15.95	17699-16-0	Cis-Hydrate de Sabinène (IPP vs. OH)	0.028
16.43	586-62-9	Terpinolène	3.669
16.58	1195-32-0	Para-Cyménène	0.024
16.88	78-70-6	Linalol	0.050
16.98	15826-82-1	Trans-Hydrate de Sabinène (IPP vs. OH)	0.068
17.74	29803-82-5	Cis-Para-Menth-2-ène-1-ol	0.342
18.33	29803-81-4	Trans-Para-Menth-2-ène-1-ol	0.236
19.69	562-74-3	Terpinène-4-ol	42.029
20.01	98-55-5	Alpha-Terpinéol	2.688
20.05	34350-53-3	Cis-Pipéritol	0.064
20.39	16721-39-4	Trans-Pipéritol	0.103

Tea Tree Oil

Chromatographic analysis

Rt	# CAS	Compounds	Fid %
23.90	32531-56-9	Bicycloélémente	0.100
24.31	17699-14-8	Alpha-Cubébène	0.036
24.98	95910-36-4	Isolédène	0.040
25.12	3856-25-5	Alpha-Copaène	0.107
25.19	-	Hydrocarbure Sesquiterpénique Masse Molaire 204	0.014
25.46	515-13-9	Béta-Elémène	0.029
25.62	-	Hydrocarbure Sesquiterpénique Masse molaire 204	0.012
25.66	93-15-2	Méthyl-Eugénol	< 0.010
25.98	489-40-7	Alpha-Gurjunène	0.217
26.11	-	Hydrocarbure Sesquiterpénique Masse molaire 204	0.031
26.33	87-44-5	Béta-Caryophyllène	0.253
26.51	-	Hydrocarbure Sesquiterpénique Masse molaire 204	0.035
26.62	3691-12-1	Alpha-Guaiène	0.005
26.72	489-28-1	Alpha-Maaliène	0.037
26.82	489-39-4	Aromadendrene	0.678
26.99	-	Hydrocarbure Sesquiterpénique Masse molaire 204	0.080
27.07	157374-44-2	Cis-Muurole-3,5-Diène	0.106
27.26	6753-98-6	Alpha-Humulène	0.065
27.37	25246-27-9	Allo-Aromadendrene	0.309
27.63	20085-11-4	Trans-Cadina-1(6),4-diène	0.212
27.66	30021-74-0	Gamma-Muurole	0.054
28.01	28624-28-4	Delta-Sélinène	0.072
28.13	21747-46-6	Viridiflorène	0.662
28.19	54324-03-7	Trans-Muurole-4(14),5-Diène	0.057

Tea Tree Oil

Chromatographic analysis

Rt	# CAS	Compounds	Fid %
28.26	24703-35-3	Bicyclogermacrène	0.771
28.41	-	Hydrocarbure Sesquiterpénique Masse molaire 204	0.026
28.66	39029-41-9	Gamma-Cadinène	0.013
28.76	483-76-1	Delta-Cadinène	0.723
28.90	41929-05-9 + 72937-55-4	Zonarène + Cis-Calaménène	0.224
29.13	38758-02-0	Trans-Cadina-1,4-diène	0.122
29.87	-	Sesquiterpène oxygéné Masse molaire 220	0.009
29.92	-	Sesquiterpène oxygéné Masse molaire 222	0.049
30.12	5986-49-2	Palustrol	0.051
30.27	6750-60-3	Spathulénol	0.042
30.50	51371-47-2+-	Globulol + Sesquiterpène oxygéné Masse molaire 222	0.212
30.71	552-02-3	Viridiflorol	0.106
30.72	220766-71-2	Cubéban-11-ol	0.091
30.98	63891-61-2	Rosifoliol	0.076
31.38	15051-81-7	10-Epi-Gamma-Eudesmol	0.095
31.43	73365-77-2	1,10-Di-Epi-Cubénol	0.129
31.55	-	Sesquiterpène oxygéné Masse molaire 220	0.024
31.78	19912-67-5	1-Epi-Cubénol	0.070
Total			99.911

3 Données pesticides / Pesticides report

Results Summary

Internal reference: 23391160

Sample description

Product Organic Tea Tree Oil
Batch No. **REC-1251212-01**

<i>Compound(s) Detected</i>	<i>Residue [mg/kg]</i>
None detected	

The following compounds were sought, but not detected above their reporting limits [mg/kg], for the sample(s) on report 277986, unless specified in the body of the report.

LCMS (LC-MS/MS)

2,4D (Free Acid)	0.01	Abamectin	0.01	Accephate	0.01
Acetamiprid	0.01	Acetochlor	0.01	Aldicarb	0.01
Aldicarb Sulphone (Aldoxycarb)	0.01	Aldicarb Sulphoxide	0.01	Ametoctradin	0.01
Benomyl (see Carbendazim)	0.01	Benthiavalcarb-isopropyl	0.01	Benzalkonium chloride (mixture of alkylbenzyltrimethylammonium chlorides with alkyl chain lengths of C10, C12, C14 and C16)	0.05
Bitertanol	0.01	Buprofezin	0.01	Cadusafos	0.01
Carbaryl	0.01	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim)	0.01	Carfentrazone-ethyl	0.01
Chloramizol (Imazalil)	0.01	Chlorantraniliprole	0.01	Cyantraniliprole	0.01
Cycloxydim	0.01	Cymoxanil	0.01	Cyprodinil	0.01
Cyromazine	0.01	Demeton-S-Methyl	0.01	Demeton-S-methyl Sulphone	0.01
Dichlorprop (Free Acid) (including Dichlorprop-P)	0.01*	Dichlorvos	0.01	Didecyltrimethylammonium Chloride	0.02
Diethyltoluamide	0.01	Difenoconazole	0.01	Diflubenzuron	0.05
Dimethoate	0.01	Dimethomorph	0.01	Diuron	0.01
Dodine	0.01	Emamectin benzoate B1a, expressed as emamectin	0.01	Epoxiconazole	0.01
Fenamidone	0.01	Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)	0.01	Fenazaquin	0.01
Fenbuconazole	0.01	Fenbutatin-Oxide	0.01	Fenoxycarb	0.05
Fentin Hydroxide	0.01	Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil) (F)	0.005	Fluazifop (free acid)	0.01
Flubendiamide	0.01	Fludioxonil	0.01	Flufenoxuron	0.01
Flupicolide	0.01	Fluopyram	0.01	Flusilazole	0.01
Formetanate	0.01	Haloxypol (free acid)	0.01	Imidacloprid	0.01
Iproconazole	0.01	Iprovalicarb	0.01	Linuron	0.01
Lufenuron	0.01	Mefenoxam (Metalaxyl)	0.01	Mercaptothion (Malathion)	0.01
Methiocarb (Sum of Methiocarb, its sulphone & sulphoxide)	0.01	Methomyl	0.01	Methoxyfenocide	0.01
* Metolachlor	0.01	Novaluron	0.01	Oxamyl (sum of oxamyl and its oxime expressed as oxamyl)	0.01
Oxydemeton-methyl	0.01	Paclobutrazole	0.01	Phoxim	0.01
Piperonyl Butoxide	0.01	Pirimicarb	0.01	Prochloraz	0.01
Profenofos	0.01	Propamocarb	0.01	Propaquizafop	0.01
Propargite	0.01	Propiconazole (sum of isomers)	0.01	Pymetrozine	0.01
Pyraclostrobin	0.01	Pyrethrins (Sum of Cinerin I & II; Jasmolin I & II; Pyrethrin I & II)	0.01	Pyrimethanil	0.01
Pyriproxyfen	0.01	Spinetoram	0.01	Spinosad	0.01
Spirodiclofen	0.01	Spirotetramat and spirotetramat-enol (sum of), expressed as spirotetramat	0.01	Spiroxamine	0.01
Sulfoxaflor	0.01	Tebuconazole	0.01	Teflubenzuron	0.01
Terbutylazine	0.01	Thiabendazole	0.01	Thiacloprid	0.01

LCMS (LC-MS/MS)

Thiadiazuron	0.01	Thiamethoxam (Sum of thiamethoxam and clothianidin, expressed as thiamethoxam)	0.01	Triadimenol	0.01
Trichlorfon	0.05	Vamidithion	0.01		
DF02 (GC-MS)					
4,4-DDE	0.05	Acrinathrin	0.01	Allethrin	0.01
Alpha-BHC	0.01	Azinphos-ethyl	0.01	Azinphos-methyl	0.01
(Alpha-hexachlorocyclohexane)					
Azoxystrobin	0.01	Benfluralin	0.01	Beta-BHC	0.01
				(Beta-hexachlorocyclohexane)	
Bifenoxy	0.01	Bifenthrin (sum of isomers)	0.01	Boscalid	0.01
Bromocyclofen	0.01	Bromophos-Ethyl	0.01	Bromophos-Methyl	0.01
Bromopropylate	0.01	Bromuconazole (sum of diastereoisomers)	0.01	Carbophenothion	0.01
Chinomethionate	0.01*	Chlordane (sum of cis- and trans-chlordane)	0.05	Chlorfenvinphos	0.01
Chlorothalonil	0.05	Chlorphenapyr	0.01	Chlorpyrifos	0.01
Chlorpyrifos-methyl	0.01	Chlorthal-dimethyl	0.01	Coumaphos	0.01
Cyflufenamid	0.01	Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers))	0.01	Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers))	0.01
Cyphenothrin	0.01	Deltamethrin	0.05	Dichlobutrazole	0.1
Dichlofenthion	0.01	Dichlofuanid	0.05	Dicloran	0.01
Dieldrin	0.01	Dimoxystrobin	0.01	Endosulfan (Sum of alpha, beta endosulfan and endosulfan sulphate)	0.01
EPN	0.01	Etaconazole	0.1	Ethion	0.01
Famoxadone	0.01	Fenarimol	0.01	Fenitrothion	0.01
Fenpropathrin	0.01	Fenson	0.01	Fenvalerate (Sum of isomers, including esfenvalerate)	0.01
Fluchloralin	0.01	Fluquinconazole	0.01	Gamma-BHC	0.01
				(Gamma-hexachlorocyclohexane, Lindane)	
Heptachlor Epoxide	0.01	Hexachlorobenzene	0.01	Hexaconazole	0.01
Indoxacarb	0.01	Isofenphos	0.1	Kresoxim-methyl	0.01
Lambda-cyhalothrin (includes gamma-cyhalothrin) (sum of R,S and S,R isomers)	0.01	Methidathion	0.01	Metrafenone	0.01
Myclobutanil	0.01	Nuarimol	0.01	Oxadiazon	0.01
Oxyfluorfen	0.01	Parathion-ethyl	0.01	Parathion-methyl	0.01
Penconazole	0.01	Pendimethalin	0.01	Permethrin (sum of isomers)	0.05
Phenthoate	0.01	Phosmet	0.01	Picoxystrobin	0.01
Procymidone	0.1	Propyzamide	0.01	Proquinazid	0.01
Prothiofos	0.01	Quinoxifen	0.01	Quintozene	0.01
tau-Fluvalinate	0.01	Tefluthrin	0.01	Tetradifon	0.01
Triadimefon	0.01	Trifloxystrobin	0.01*	Trifluralin	0.01
Vinclozolin	0.01	Zoxamide	0.01		

* indicates that this determination is not included in the scope of accreditation for the laboratory

***** end of report *****