

LABORATORY REPORT

SAMPLE NAME: Basil ct. Linalool

BOTANICAL NAME: *Ocimum basilicum L.*

COMPANY NAME: ACHS

COMPANY LOT #: 27141R

Column: ZB5 (60 m length × 0.25 mm inner diameter × 0.25 µm film thickness)

Instrument: Shimadzu GCMS-QP2010 Ultra

Carrier gas: Helium 80 psi

Temperature ramp: 2 degrees Celsius per minute up to 260-degree Celsius

Split ratio: 30:1

Sample preparation: 5% w/v solution with Dichloromethane

Interpretation on sample:

This sample meets the standard profile of *Ocimum basilicum L.*

Analyzed by: Dr. Prabodh Satyal

Reviewed by: Ambika Poudel

Issued Date: 10/04/2019

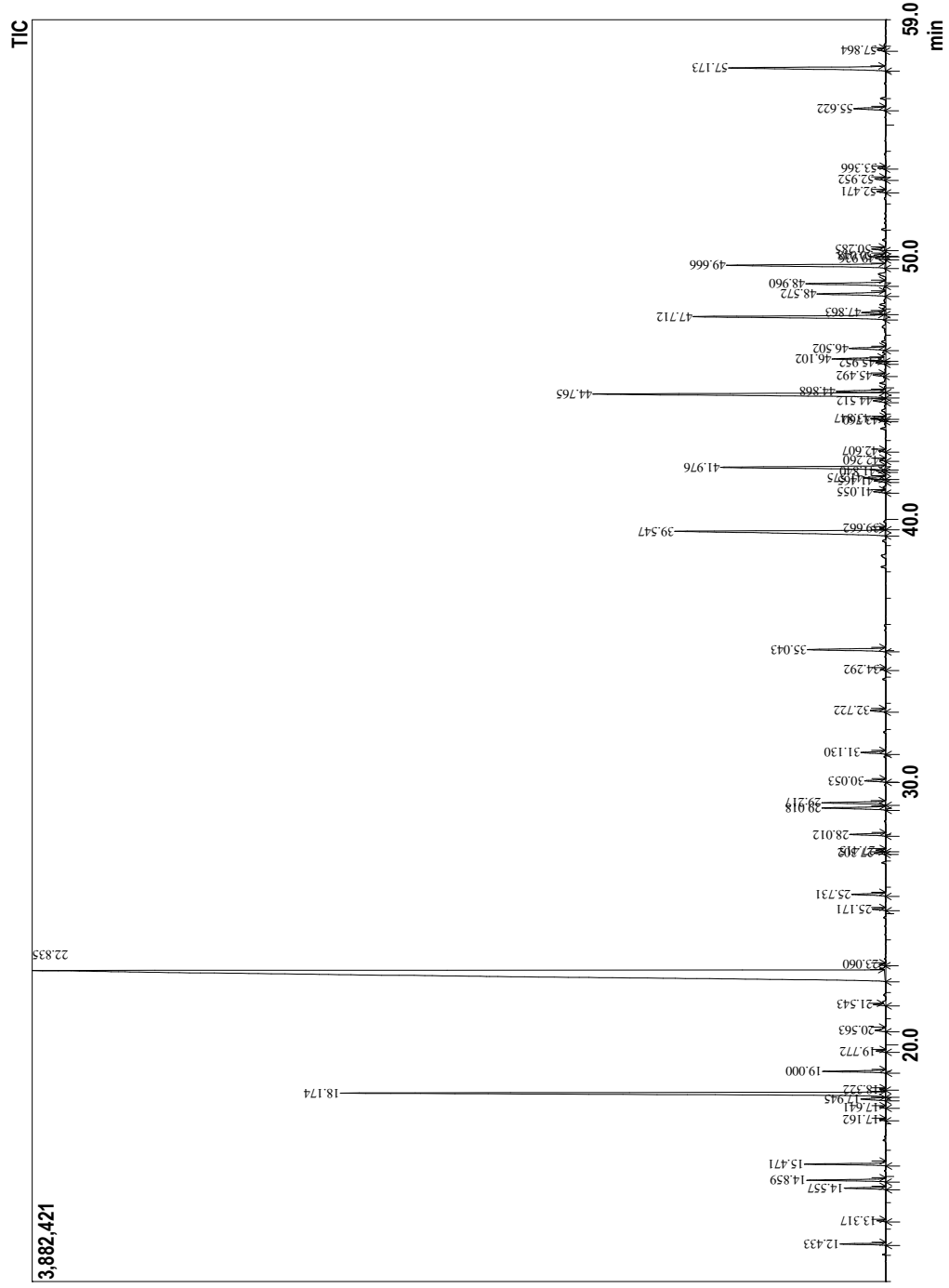
R.Time	Peak Name	Area%
12.433	Pinene <alpha>	0.53
13.317	Camphene	0.10
14.557	Sabinene	0.52
14.859	Pinene <beta>	1.02
15.471	Myrcene	1.03
17.162	Terpinene <alpha>	0.07
17.641	Cymene <para>	0.09
17.945	Limonene	0.42
18.174	1,8-cineole	9.68
18.322	Ocimene <Z-beta>	0.06
19.000	Ocimene <E-beta>	0.86
19.772	Terpinene <gamma>	0.13
20.563	Sabinene hydrate <cis>	0.19
21.543	Terpinolene	0.14
22.835	Linalool	46.20
23.060	Octen-3-yl acetate<1>	0.07
25.171	Myroxide <trans>	0.19
25.731	Camphor	0.51
27.302	Terpineol <delta>	0.14
27.415	Borneol	0.14
28.012	Terpinen-4-ol	0.55
29.018	Terpineol <alpha>	1.02
29.217	Methyl chavicol	0.98
30.053	Octyl acetate	0.31
31.130	Citronellol	0.37
32.722	Geraniol	0.24
34.292	Citronellyl- formate	0.07
35.043	Bornyl acetate	1.31
39.547	Eugenol	5.06
39.662	Vulgarole	0.09
41.055	Copaene <alpha>	0.18
41.465	Elemene<beta-cis>	0.18
41.575	Bourbonene <beta>	0.39
41.840	Cubebene <beta>	0.12
41.976	Elemene<beta-trans>	3.09
42.260	Cubebene <epi-isomer>	0.08
42.607	Methyleugenol	0.10
43.760	Ylangene <beta>	0.09
43.847	Caryophyllene <beta>	0.24
44.512	Gurjunene<beta>	0.22
44.765	Bergamotene <trans-alpha>	6.02
44.868	Gualene <alpha>	0.86
45.492	Muurola-3,5-diene<cis>	0.17
45.952	Farnesene<(E)-beta>	0.14
46.102	Humulene <alpha>	0.87
46.502	Cadina-1(6),4-diene <cis>	0.61
47.712	Germacrene D	3.69
47.863	Farnesene isomer	0.41
48.572	Bicyclogermacrene	1.29
48.960	Bulnesene <alpha>	1.47
49.666	Amorphene <delta>	2.96
49.936	Cadinene <delta>	0.16
50.048	Calamene<trans>	0.20
50.285	Sesquiphellandrene <beta>	0.21
52.471	Nerolidol <trans>	0.13
52.952	Maailol	0.16
53.366	Spathulendol	0.10
55.622	Cubanol<1,10-di-epi->	0.56
57.173	Cadinol <epi-alpha>	3.07
57.864	Cadinol<alpha->	0.13
		100.00

Peak Report TIC



Sample Information

Analyzed by : Dr. Prabodh Satyal
 Analyzed : 10/4/2019 3:03:24 AM
 Sample Type : Essential Oil
 Sample Name : Basil ct. Linalool
 Company Name : ACHS
 Lot# : 27141R
 Injection Volume : 0.30



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Reviewed by: Ambika Poudel

PHYSICAL CONSTANTS REPORT

Oil Name: Basil ct. linalool

Botanical Name: *Ocimum basilicum*

Lot #: 27141R

Organoleptic Information	
Appearance	Clear, mobile liquid
Color	Pale light yellow
Odour	Herbaceous, warm, sweet

Physical Constants Information (at 20 °C)	
Tests	Observed
Specific Gravity	0.899
Refractive Index	1.482
Optical Rotation	-9.9

Prepared by: Ambika Poudel

Reviewed by: Prabodh Satyal

Date: 10/09/2019

Date: 10/09/2019



American College Of Healthcare Sciences
5940 SW Hood Ave
Portland, OR 97239

Report Number: P193187
Report Date: October 24, 2019
Client Project ID:

Client Sample ID: Basil ct. Linalool essential oil **27141R**
PAL Sample ID: P193187-01

le Date: 10/10/2019
Received Date: 10/14/2019
Extraction Date: 10/15/2019

Certificate of Analysis

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
Modified EPA 8270D (GC-MS/MS)									
10/16/2019	2,6-Dichlorobenzamide	ND	0.50		10/16/2019	a-BHC	ND	0.50	
10/16/2019	Acetochlor	ND	0.50		10/16/2019	Alachlor	ND	0.50	
10/16/2019	Aldrin	ND	0.50		10/16/2019	Ametryn	ND	0.50	
10/16/2019	b-BHC	ND	0.50		10/16/2019	Benfluralin	ND	0.50	
10/16/2019	Bifenthrin	ND	0.50		10/16/2019	Bromopropylate	ND	0.50	
10/16/2019	Buprofezin	ND	0.50		10/16/2019	Captan	ND	10	
10/16/2019	Chlordane	ND	0.50		10/16/2019	Chloroneb	ND	0.50	
10/16/2019	Chlorothalonil	ND	0.50		10/16/2019	Chlorpropham	ND	0.50	
10/16/2019	Chlorpyrifos	ND	0.50		10/16/2019	Chlorpyrifos-methyl	ND	0.50	
10/16/2019	cis-Nonachlor	ND	0.50		10/16/2019	Cyfluthrin	ND	2.5	
10/16/2019	Cypermethrin	ND	2.5		10/16/2019	Dacthal	ND	0.50	
10/16/2019	d-BHC	ND	0.50		10/16/2019	Deltamethrin	ND	2.5	
10/16/2019	Diazinon	ND	0.50		10/16/2019	Dichlobenil	ND	0.50	
10/16/2019	Dichlorofenthion	ND	0.50		10/16/2019	Dichlorvos	ND	0.50	
10/16/2019	Diclofop-methyl	ND	0.50		10/16/2019	Dicloran	ND	2.5	
10/16/2019	Dicofol	ND	0.50		10/16/2019	Dieldrin	ND	0.50	
10/16/2019	Dimethenamid	ND	0.50		10/16/2019	Diphenamid	ND	0.50	
10/16/2019	Diphenylamine	ND	0.50		10/16/2019	Disulfoton	ND	0.50	
10/16/2019	Dithiopyr	ND	0.50		10/16/2019	Endosulfan I	ND	1.0	
10/16/2019	Endosulfan II	ND	1.0		10/16/2019	Endosulfan sulfate	ND	1.0	
10/16/2019	Endrin	ND	0.50		10/16/2019	Endrin aldehyde	ND	0.50	
10/16/2019	Endrin ketone	ND	0.50		10/16/2019	Esfenvalerate	ND	0.50	
10/16/2019	Ethalfuralin	ND	0.50		10/16/2019	Ethofumesate	ND	0.50	
10/16/2019	Ethoprop	ND	0.50		10/16/2019	Ethoxyquin	ND	0.50	
10/16/2019	Etoxazole	ND	0.50		10/16/2019	Etridiazole	ND	0.50	
10/16/2019	Fenarimol	ND	0.50		10/16/2019	Fenoxaprop-ethyl	ND	0.50	
10/16/2019	Fenvalerate	ND	0.50		10/16/2019	Fipronil	ND	0.50	
10/16/2019	Fluazifop-p-butyl	ND	0.50		10/16/2019	Fludioxonil	ND	0.50	
10/16/2019	Fluroxypyr-meptyl	ND	0.50		10/16/2019	Flutolanil	ND	0.50	
10/16/2019	g-BHC	ND	0.50		10/16/2019	Heptachlor	ND	0.50	
10/16/2019	Heptachlor epoxide	ND	0.50		10/16/2019	Hexachlorobenzene	ND	0.50	
10/16/2019	Kresoxim-methyl	ND	0.50		10/16/2019	lambda-Cyhalothrin	ND	1.0	
10/16/2019	Malathion	ND	0.50		10/16/2019	Mefenoxam	ND	0.50	
10/16/2019	Methoxychlor	ND	0.50		10/16/2019	Metolachlor	ND	0.50	
10/16/2019	MGK-264	ND	0.50		10/16/2019	Myclobutanil	ND	0.50	
10/16/2019	Napropamide	ND	0.50		10/16/2019	o-Phenylphenol	ND	0.50	
10/16/2019	Oxadiazon	ND	0.50		10/16/2019	Oxyfluorfen	ND	0.50	



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Report Number: P193187
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PAL Sample ID: P193187-01

le Date: 10/10/2019
Received Date: 10/14/2019
Extraction Date: 10/15/2019

Certificate of Analysis
(Continued)

Table with 10 columns: Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes, Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes. Contains two sections: Modified EPA 8270D (GC-MS/MS) and Modified EPA 8321B (HPLC MS-MS).

Handwritten signature of Rick Jordan



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Certificate of Analysis
(Continued)

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
Modified EPA 8321B (HPLC MS-MS) (Continued)									
10/16/2019	Dodine	ND	0.50		10/16/2019	d-Phenothrin	ND	0.50	
10/16/2019	Emamectin Benzoate	ND	0.50		10/16/2019	Ethion	ND	0.50	
10/16/2019	Famoxadone	ND	0.50		10/16/2019	Famphur	ND	0.50	
10/16/2019	Fenamidone	ND	0.50		10/16/2019	Fenamiphos sulfone	ND	0.50	
10/16/2019	Fenamiphos sulfoxide	ND	0.50		10/16/2019	Fenazaquin	ND	0.50	
10/16/2019	Fenbuconazole	ND	0.50		10/16/2019	Fenbutatin oxide	ND	0.50	
10/16/2019	Fenhexamid	ND	0.50		10/16/2019	Fenobucarb	ND	0.50	
10/16/2019	Fenpropathrin	ND	0.50		10/16/2019	Fenpyroximate	ND	0.50	
10/16/2019	Fenuron	ND	0.50		10/16/2019	Flonicamid	ND	0.50	
10/16/2019	Fluazinam	ND	0.50		10/16/2019	Flubendiamide	ND	1.0	
10/16/2019	Flumioxazin	ND	0.50		10/16/2019	Fluometuron	ND	0.50	
10/16/2019	Fluopicolide	ND	0.50		10/16/2019	Fluopyram	ND	0.50	
10/16/2019	Fluoxastrobin	ND	0.50		10/16/2019	Flupyradifurone	ND	0.50	
10/16/2019	Fluridone	ND	0.50		10/16/2019	Flutriafol	ND	0.50	
10/16/2019	Fluvalinate	ND	0.50		10/16/2019	Fluxapyroxad	ND	0.50	
10/16/2019	Fonofos	ND	1.0		10/16/2019	Formetanate HCl	ND	0.50	
10/16/2019	Hexaconazole	ND	0.50		10/16/2019	Hexazinone	ND	0.50	
10/16/2019	Hexythiazox	ND	0.50		10/16/2019	Imazalil	ND	0.50	
10/16/2019	Imidacloprid	ND	0.50		10/16/2019	Indaziflam	ND	0.50	
10/16/2019	Indoxacarb	ND	0.50		10/16/2019	Iprodione	ND	2.5	
10/16/2019	Isoxaben	ND	0.50		10/16/2019	Linuron	ND	0.50	
10/16/2019	Malaoxon	ND	0.50		10/16/2019	Mandipropamid	ND	0.50	
10/16/2019	Metconazole	ND	0.50		10/16/2019	Methamidophos	ND	1.0	
10/16/2019	Methidathion	ND	0.50		10/16/2019	Methiocarb	ND	0.50	
10/16/2019	Methomyl	ND	0.50		10/16/2019	Methoxyfenozide	ND	0.50	
10/16/2019	Metrafenone	ND	0.50		10/16/2019	Metribuzin	ND	0.50	
10/16/2019	Mevinphos	ND	0.50		10/16/2019	Norflurazon	ND	0.50	
10/16/2019	Novaluron	ND	0.50		10/16/2019	Omethoate	ND	0.50	
10/16/2019	Oryzalin	ND	0.50		10/16/2019	Oxadixyl	ND	0.50	
10/16/2019	Oxamyl	ND	0.50		10/16/2019	Oxydemeton-Methyl	ND	0.50	
10/16/2019	Penthiopyrad	ND	0.50		10/16/2019	Phorate Sulfone	ND	0.50	
10/16/2019	Phorate Sulfoxide	ND	0.50		10/16/2019	Phosalone	ND	0.50	
10/16/2019	Phosmet	ND	0.50		10/16/2019	Phosphamidon	ND	0.50	
10/16/2019	Piperonyl Butoxide	ND	0.50		10/16/2019	Pirimicarb	ND	0.50	
10/16/2019	Pirimiphos-methyl	ND	0.50		10/16/2019	Prometon	ND	0.50	
10/16/2019	Prometryn	ND	0.50		10/16/2019	Propargite	ND	0.50	
10/16/2019	Propazine	ND	0.50		10/16/2019	Propiconazole	ND	1.0	



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Certificate of Analysis
(Continued)

Table with 10 columns: Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes, Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes. Contains data for Modified EPA 8321B (HPLC MS-MS) (Continued) with various pesticides and their detection results.

Notes and Definitions

Table with 2 columns: Notes, Definition. Includes definitions for LOQ (Limit of Quantitation), ND (Not Detected), and * (Not included under current scope of accreditation).

The results contained in this report relate only to the items tested.
The results reflect the condition of the samples as received by PAL.
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PAL is accredited to ISO/IEC 17025:2017 Standard, by PJLA, Accreditation #64422, Testing.

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