



## Laboratory Test Report

**SAMPLE NAME** : Thyme ct. Linalool Thymus vulgaris

**COMPANY NAME** : ACHS

**COMPANY LOT #** : 42158R

**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 analysis of Thyme meets the standard chemical profile of Thymus vulgaris essential oil.

**Analyzed by:** Dr. Prabodh Satyal

**Reviewed by:** Ambika Poudel

**Issued Date:** 4/3/2020

### Sample Information

Analyzed by : Dr. Prabodh Satyal  
Analyzed : 4/3/2020 2:12:02 AM  
Sample Type : Essential Oil  
Sample Name : Thyme ct. Linalool Thymus vulgaris  
Company Name : ACHS  
Lot# : 42158R  
Injection Volume : 0.30

### Chromatogram



## Peak Report

Peak#	R.Time	Name	Area%
1	12.791	Pinene isomer	0.29
2	12.923	Tricyclene	0.05
3	13.070	Thujene<alpha->	0.16
4	13.325	2-Methyl-5-isopropenylfuran	0.01
5	13.527	Pinene<alpha->	4.69
6	14.447	Camphene	0.93
7	14.638	Thuja-2,4(10)-diene	0.02
8	15.741	Sabinene	0.65
9	16.062	Pinene<beta->	0.43
10	16.369	Octanone<3->	0.06
11	16.711	Myrcene	5.32
12	17.090	Octanol<3->	0.05
13	17.680	Linalool oxide<dehydroxy-cis->	0.05
14	17.787	Phellandrene<alpha->	0.34
15	18.481	Terpinene <alpha->	2.96
16	18.951	Cymene<para->	1.63
17	19.281	Limonene	2.22
18	19.382	Phellandrene <beta->	0.66
19	19.458	Cineole<1,8->	0.24
20	20.336	Ocimene<(E)-beta->	0.03
21	21.199	Terpinene<gamma->	4.91
22	21.970	Sabinene hydrate<cis->	1.54
23	23.010	Terpinolene	1.51
24	23.284	Cymenene<para->	0.08
25	24.255	Linalool	52.80
26	24.336	Hotrienol	1.02
27	25.700	Menth-2-en-1-ol<cis-para->	0.38
28	25.848	Campholenal<alpha->	0.03
29	26.910	Menth-2-en-1-ol<trans-para->	0.26
30	27.130	Verbenol<trans->	0.02
31	27.250	Camphor	0.34
32	27.790	Pinene oxide<beta>	0.05
33	28.815	Linalool oxide<cis->(pyanoid)	0.04
34	29.014	Borneol	2.20
35	29.155	Linalool oxide<trans->(pyanoid)	0.07
36	29.686	Terpinen-4-ol	9.16
37	29.812	Acetophenone <4'-methyl->	0.01
38	29.954	Cymen-8-ol<para->	0.13
39	30.584	Terpineol <alpha>	1.29
40	30.757	Dihydro carvone<cis->	0.27
41	31.200	Dihydro carvone<trans->	0.21
42	31.516	Piperitol<trans->	0.12
43	32.170	Carveol<trans->	0.06
44	32.534	Nerol	0.03
45	32.895	Bornyl formate	0.25
46	33.540	Carvacrol Methyl ether	0.05
47	33.871	Carvone	0.03
48	34.296	Linalyl acetate	0.69
49	35.553	Isopiperitenone	0.03
50	36.688	Bornyl acetate	0.16
51	36.957	Thymol	0.17
52	37.512	Carvacrol	0.05
53	42.827	Geranyl acetate	0.05
54	43.342	Bourbonene <beta>	0.04
55	45.644	Caryophyllene <beta>	0.84
56	49.461	Germacrene D	0.05
57	50.357	Bicyclogermacrene	0.12
58	51.705	Cadinene <delta>	0.03
59	55.167	Spathulenol	0.04
60	55.498	Caryophyllene oxide	0.08
			100.00

## PHYSICAL CONSTANTS REPORT

**Oil Name:** Thyme

**Botanical Name:** *Thymus vulgaris* CT Linalool

**Lot #:** 42158R

Organoleptic Information	
<b>Appearance</b>	Mobile liquid
<b>Color</b>	Clear, Light yellow
<b>Odour</b>	Sweet, Herbaceous

Physical Constants Information	
Tests	Observed
<b>Specific Gravity @25 C</b>	0.87083
<b>Refractive Index @20 C</b>	1.46792
<b>Optical Rotation @25</b>	-1.512

**Prepared by:** Ambika Poudel  
**Reviewed by:** Dr. Prabodh Satyal

**Date:** 04/08/2020  
**Date:** 04/08/2020



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**For:** American College of Healthcare Sciences  
5940 SW Hood ave  
Portland, Oregon, 97239  
United States  
(971) 703-5064

**Case#:** 2003213

**Received Date:** 03/13/2020

**Tested Date:** 03/18/2020

**Completed Date:** 03/27/2020

**Purchase Order:**

**ATTN:** Natalya Shepeleva  
natalyashpeleva@achs.edu  
(971) 703-5064/

**Case Notes:**

<b>Sample#:</b> 2003213-01		<b>Sample Description:</b> Thyme ct. Linalool essential oil Lot# 42158R	
<b>Test</b>	<b>Unit</b>	<b>Result</b>	<b>Method</b>
AMPA	ppb	None Detected (< 200)	HPLC
Glyphosate	ppb	None Detected (< 170)	HPLC
Multiresidue Pesticide Screen	pass / fail	Pass	AOAC 2007.1, European EN 15662 Method

**Reviewed By** \_\_\_\_\_  
Joshua Wyman  
Quality Assurance  
Manager

**Date** 3/30/20

**Test Report**