

CERTIFICATE OF ANALYSIS

SAMPLE NAME		Nutmeg oil	
FORM		Oil	
CUSTOMER NAME		Buckley & Phillips Aromatics	
CERTIFICATION DATE		22 March 2019	
CUSTOMER REFERENCE		29916/23	
ARL JOB #	A190548	LAB REF. #	ARL1901304
ANALYSIS	GCFID - Area%	METHOD	ARL-TM101-3

TEST	BP 2016** SPECIFICATION	RESULTS	TEST METHOD
	Area %		
α -pinene	15.0 - 28.0	20.62	ARL-TM101-3*
β -pinene	13.0 - 18.0	19.28	
sabinene	14.0 - 29.0	18.43	
car-3-ene	0.5 - 2.0	0.83	
limonene	2.0 - 7.0	7.14	
γ -terpinene	2.0 - 6.0	4.50	
terpinen-4-ol	2.0 - 6.0	5.50	
safrole	NMT 2.5	1.04	
myristicine	5.0 - 12.0	1.64	

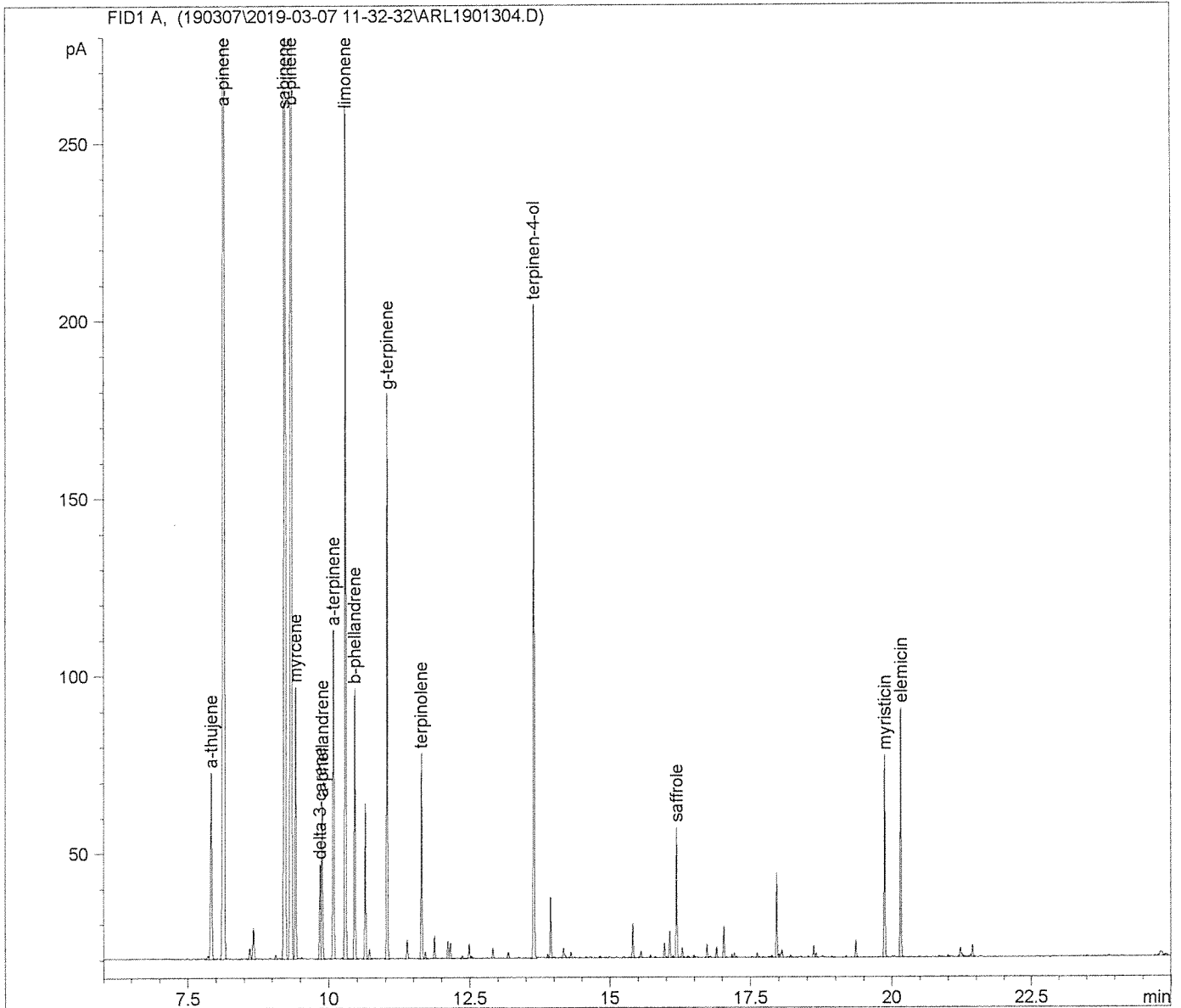
* Assay by GC (FID detection –area percent report)

** *Ph. Eur. monograph 1552*



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Ashley Dowell
MANAGER - ARL

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Acq. Operator : Jeanette Balindong Seq. Line : 11
Acq. Instrument : GC-3 Location : Vial 18
Injection Date : 3/7/2019 6:54:06 PM Inj : 1
 Inj Volume : 1 μ l
Acq. Method : C:\DATA\GC-3\DATA\190307\2019-03-07 11-32-32\NUTMEG.M
Last changed : 3/7/2019 2:43:23 PM by Jeanette Balindong
Analysis Method : C:\DATA\GC-3\METHODS\NUTMEG.M
Last changed : 3/21/2019 2:59:53 PM by Jeanette Balindong
 (modified after loading)
Method Info : Method to analyse essential oils



✓
21/03/19

Sample Name: Nutmeg Oil 29916/23

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Area Percent Report
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Sorted By : Signal
Calib. Data Modified : Thursday, 23 July 2015 11:17:41 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	7.914	VB	0.0266	88.34312	1.97498	a-thujene
2	8.138	VB	0.0274	922.57007	20.62477	a-pinene
3	9.223	VV	0.0274	824.48999	18.43211	sabinene
4	9.333	VV	0.0255	862.42279	19.28013	b-pinene
5	9.412	VV	0.0209	100.75944	2.25256	myrcene
6	9.844	BV	0.0216	36.94354	0.82590	delta 3-carene
7	9.882	VV	0.0225	62.46936	1.39655	a-phellandrene
8	10.077	VB	0.0212	124.42284	2.78157	a-terpinene
9	10.288	VV	0.0210	319.33377	7.13895	limonene
10	10.455	VV	0.0209	100.30270	2.24234	b-phellandrene
11	11.028	VB	0.0198	201.07259	4.49513	g-terpinene
12	11.634	VV	0.0198	73.44069	1.64182	terpinolene
13	13.638	VV	0.0211	245.96484	5.49874	terpinen-4-ol
14	16.181	VV	0.0197	46.57528	1.04123	saffrole
15	19.875	VV	0.0205	73.17932	1.63598	myristicin
16	20.161	VB	0.0193	86.22797	1.92769	elemicin

Totals : 4168.51832 93.1905

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*** End of Report ***