

CERTIFICATE OF ANALYSIS


SAMPLE	Essential Oil of <i>Alpinia zerumbet</i> var. <i>excelsa</i>
CUSTOMER	Projects Etc Pty (Japan)
CERTIFICATION DATE	05 September 2017
CUSTOMER LOT/BATCH No.	SG2017
LABORATORY REFERENCE	ARL174381
JOB No.	A171715

TEST	RESULTS	TEST METHOD
	Area %	
α -thujene	2.99	ARL-TM101-3*
α -pinene	1.71	
sabinene	12.94	
β -pinene	3.09	
myrcene	0.86	
α -terpinene	3.27	
limonene	1.75	
p-cymene	6.41	
1,8 cineole	15.88	
γ -terpinene	10.80	
trans sabinene hydrate	0.31	
terpinolene	1.54	
cis sabinene hydrate	0.86	
linalool	0.39	
cis p-menth-2-en-1-ol	0.65	
trans p-menth-2-en-1-ol	0.44	
terpinen-4-ol	22.53	
α -terpineol	1.73	
β -caryophyllene	1.29	
ledene	0.20	
δ -cadinene	0.39	
trans nerolidol	0.27	
caryophyllene oxide	1.25	

* Assay by GC (FID detection – percent report)

.....

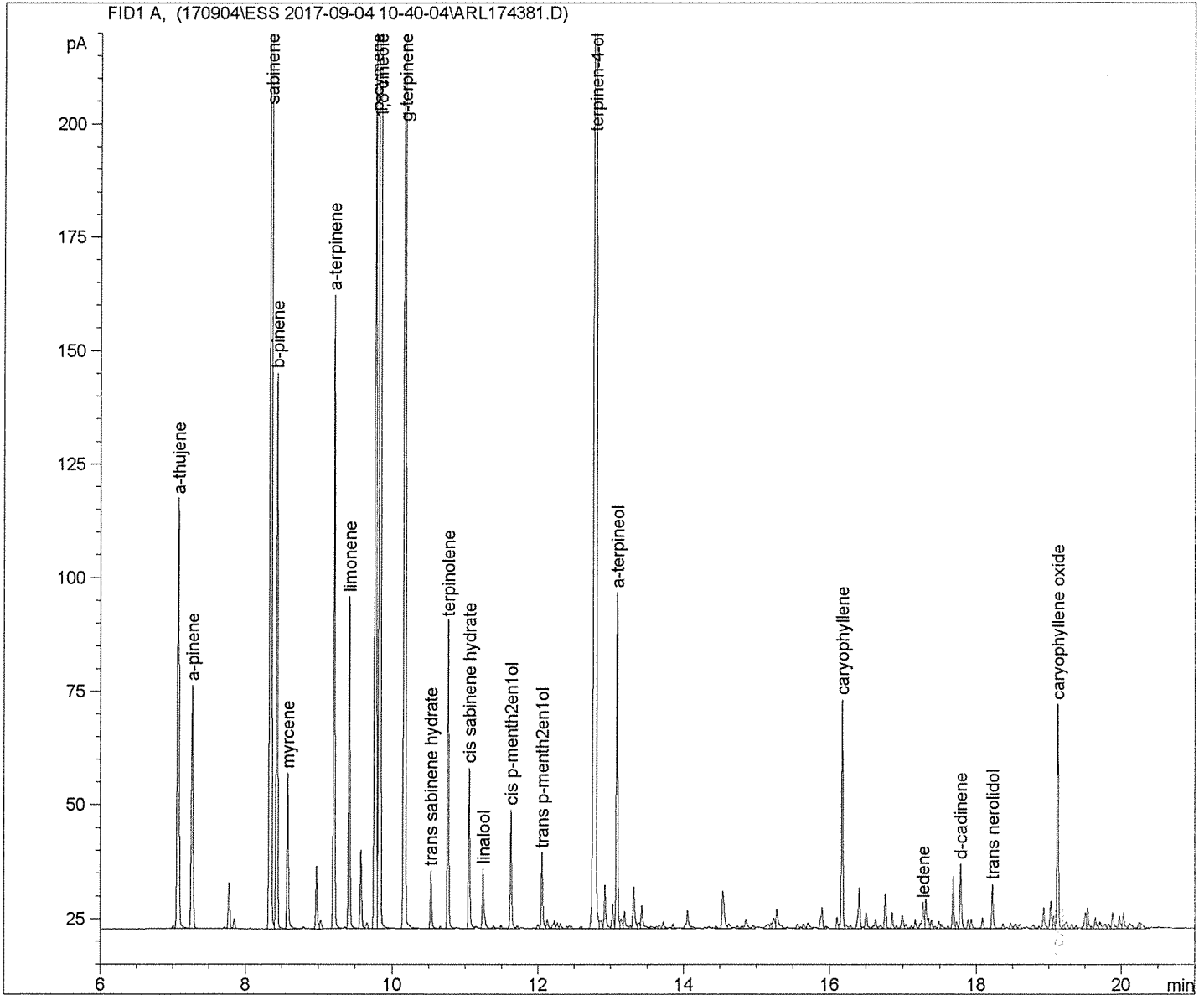
MS SAMANTHA MORROW
ANALYTICAL OFFICER

.....

MR ASHLEY DOWELL
MANAGER - ARL

Sample Name: ALPINIA ZERUMBET SG2017

```

=====
Acq. Operator   : SM BB                      Seq. Line :    8
Acq. Instrument : GC-3                      Location  : Vial 8
Injection Date  : 9/4/2017 3:35:52 PM      Inj       :    1
                                                Inj Volume: 1 µl
Acq. Method     : D:\GC-3_DATA\DATA\170904\ESS 2017-09-04 10-40-04\ALPINIA ZERUMBET.M
Last changed    : 5/27/2016 2:51:22 PM by SS
Analysis Method : D:\GC-3_DATA\METHODS\ALPINIA ZERUMBET.M
Last changed    : 9/5/2017 11:33:09 AM by SM BB
                  (modified after loading)
Method Info     : Method to analyse essential oils
    
```



Sample Name: ALPINIA ZERUMBET SG2017

 =====
 Area Percent Report
 =====

Sorted By : Signal
 Calib. Data Modified : Wednesday, 23 December 2015 11:57:39 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	7.079	VV	0.0273	164.18777	2.99323	a-thujene
2	7.271	VB	0.0279	93.63401	1.70700	a-pinene
3	8.350	VV	0.0231	709.92285	12.94227	sabinene
4	8.433	VV	0.0221	169.27019	3.08588	b-pinene
5	8.582	VB	0.0216	47.19571	0.86040	myrcene
6	9.213	VV	0.0200	179.40594	3.27066	a-terpinene
7	9.421	VV	0.0208	95.97426	1.74966	limonene
8	9.773	VV	0.0257	351.39044	6.40603	p-cymene
9	9.838	VB	0.0220	871.32446	15.88470	1,8 cineole
10	10.174	VB	0.0217	592.17517	10.79567	g-terpinene
11	10.533	BV	0.0208	17.25351	0.31454	trans sabinene hydrate
12	10.766	VV	0.0196	84.62972	1.54284	terpinolene
13	11.058	BV	0.0206	47.18598	0.86023	cis sabinene hydrate
14	11.247	VV	0.0239	21.36010	0.38941	linalool
15	11.630	VV	0.0210	35.66478	0.65019	cis p-menth2enlol
16	12.058	VV	0.0224	24.27655	0.44257	trans p-menth2enlol
17	12.795	VV	0.0259	1235.62769	22.52614	terpinen-4-ol
18	13.090	VV	0.0199	94.64142	1.72536	a-terpineol
19	16.176	VV	0.0225	70.99325	1.29424	caryophyllene
20	17.275	VV	0.0275	10.82376	0.19732	ledene
21	17.790	VV	0.0233	21.60658	0.39390	d-cadinene
22	18.228	VV	0.0231	14.85542	0.27082	trans nerolidol
23	19.125	VV	0.0217	68.53133	1.24936	caryophyllene oxide

Totals : 5021.93091 91.5524

 =====
 *** End of Report ***