

CERTIFICATE OF ANALYSIS

SAMPLE	Sandalwood Oil
CUSTOMER	Sacred Grove
CERTIFICATION DATE	23 February 2018
CUSTOMER LOT/BATCH No.	Sandalwood Oil
LABORATORY REF.	ARL181081
JOB No.	A180358

TEST	ISO 22769:2009 SPECIFICATION	RESULTS Area %	TEST METHOD
(Z)- α -santalol	15.0 – 25.0	nd	ARL-TM101-3*
epi- α -bisabolol	2.0 – 12.5	nd	
(Z)- α -trans-bergamotol	2.0 – 10.0	nd	
(E,E)-farnesol	2.5 – 15.0	nd	
epi- β -santalol	0.5 – 3.50	nd	
(Z) β -santalol	5.0 – 20.0	nd	
(Z)-nuciferol	2.0 – 15.0	nd	
(Z)-lanceol	1.0 – 10.0	nd	

* Assay by GC (FID detection) with GCMS confirmation.

** ISO22769 – Oil of Australian sandalwood (*Santalum spicatum*)

nd - denotes not detected



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MS SAMANTHA MORROW
ANALYTICAL OFFICER

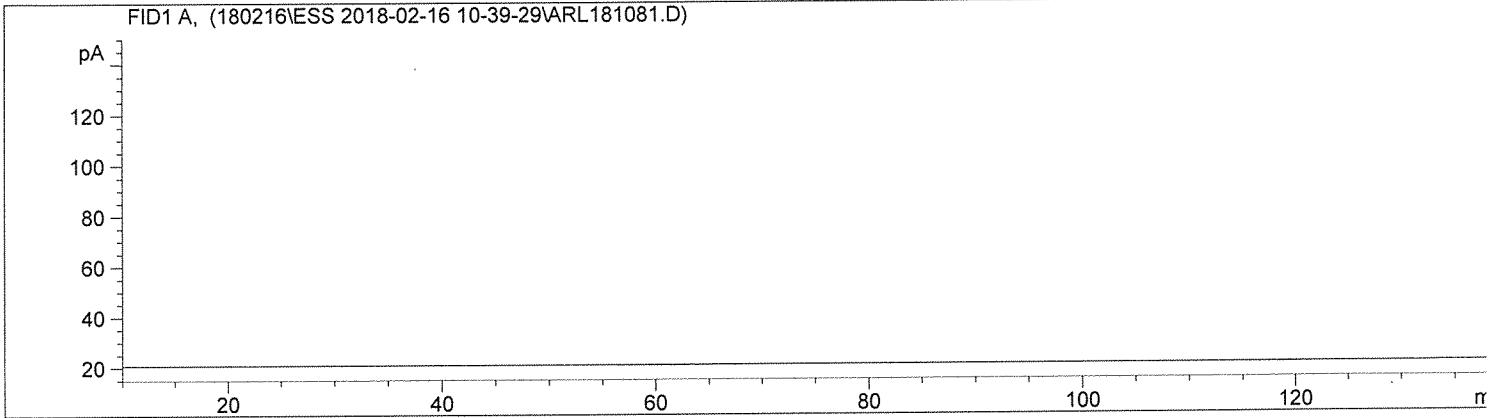


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MR ASHLEY DOWELL
MANAGER - ARL

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Acq. Operator	: SM	Seq. Line	: 4
Acq. Instrument	: GC-4	Location	: Vial 5
Injection Date	: 2/16/2018 1:33:17 PM	Inj	: 1
		Inj Volume	: 1 µl

Acq. Method : D:\GC-4_DATA\DATA\180216\ESS 2018-02-16 10-39-29\SANDALWOOD20(ISO).M
Last changed : 2/2/2018 11:29:16 AM by BB
Analysis Method : D:\GC-4_DATA\METHODS\SANDALWOOD20(ISO).M
Last changed : 2/22/2018 2:06:05 PM by BB
(modified after loading)
Method Info : Standby method gas saving



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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 2/1/2018 3:58:25 PM
Multiplier : 1.0000
Dilution : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

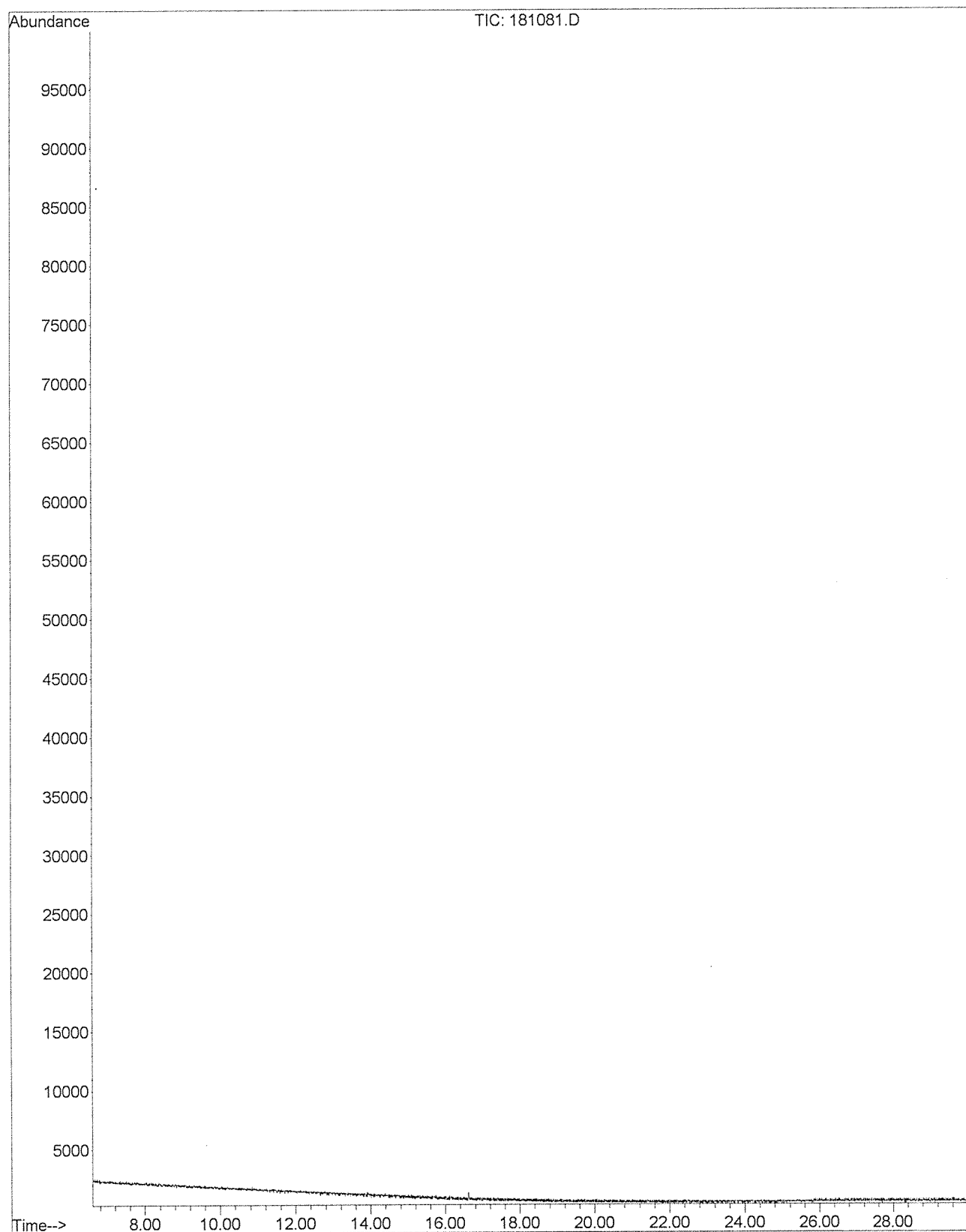
Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	65.779		0.0000	0.00000	0.00000	epi a bisabolol
2	68.960		0.0000	0.00000	0.00000	cis-a-santalol
3	71.810		0.0000	0.00000	0.00000	trans a bergamotol
4	75.100		0.0000	0.00000	0.00000	trans trans farnesol
5	75.777		0.0000	0.00000	0.00000	epi b santalol
6	78.407		0.0000	0.00000	0.00000	cis b santalol
7	82.780		0.0000	0.00000	0.00000	cis nuciferol
8	87.100		0.0000	0.00000	0.00000	cis lanceol

Totals : 0.00000 0.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

File :D:\Data\180219\181081.D
Operator : GC-MS3
Acquired : 19 Feb 2018 11:36 using AcqMethod MIKER.M
Instrument : Instrument #1
Sample Name: SANDALWOOD
Misc Info : SACRED GROVE
Vial Number: 5



Library Search Report

Data Path : D:\Data\180219\
Data File : 181081.D
Acq On : 19 Feb 2018 11:36
Operator : GC-MS3
Sample : SANDALWOOD
Misc : SACRED GROVE
ALS Vial : 5 Sample Multiplier: 1

Search Libraries:	C:\Database\ESSOILS.L	Minimum Quality: 80
	C:\Database\ADAMS.L	Minimum Quality: 70
	C:\Database\WILEY6.L	

Unknown Spectrum: Apex
Integration Events: Chemstation Integrator - EVENTS.E

No Peaks Found !!!

SPME.M Fri Feb 23 10:02:33 2018