

### CERTIFICATE OF ANALYSIS

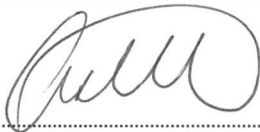
<b>SAMPLE NAME</b>		Cedarwood oil Virginian	
<b>FORM</b>		Oil	
<b>CUSTOMER NAME</b>		Buckley & Phillips Aromatics	
<b>CERTIFICATION DATE</b>		06 May 2019	
<b>CUSTOMER REFERENCE</b>		31306/1	
<b>ARL JOB #</b>	A190904	<b>LAB REF. #</b>	ARL1902299
<b>ANALYSIS</b>	GCFID - Area%		

TEST	ISO 9843** SPECIFICATION	RESULTS	TEST METHOD
	Area %		
$\alpha$ -cedrene + $\beta$ -funebreene	13.0 - 29.0	24.51	ARL-TM101-3*
$\beta$ -cedrene	4.0 - 11.0	4.95	
thujopsene	18.0 - 39.0	25.49	
cuparene	1.0 - 3.0	1.20	
cedrol	10.0 - 20.0	20.53	
widdrol	0.5 - 3.0	2.31	

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

\*\* ISO 9843 - Oil of cedarwood, Chinese type (*Cupressus funebris Endlicher*)

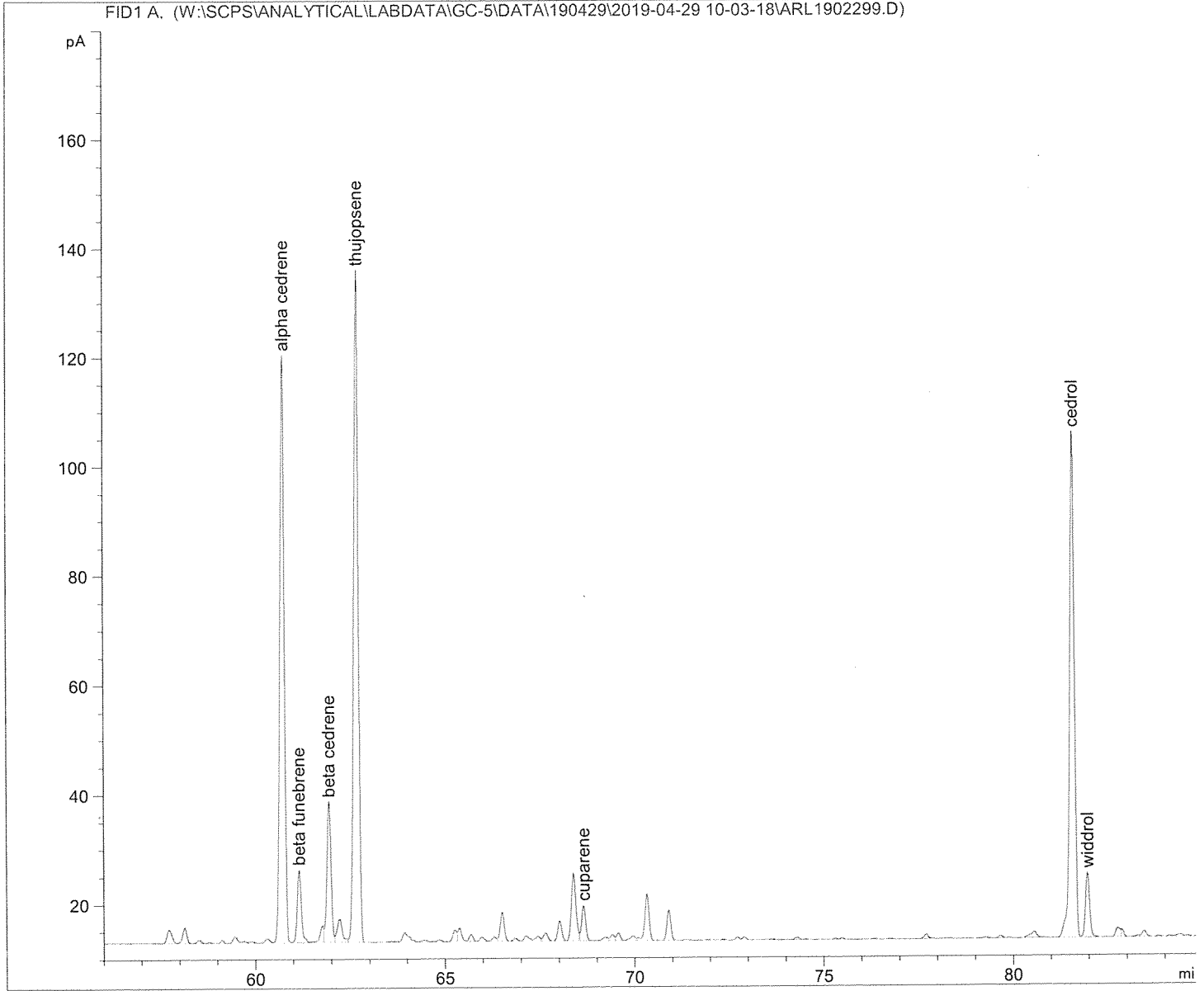
  
.....  
Dr Jeanette Balindong  
ANALYTICAL OFFICER

  
.....  
Mr Ashley Dowell  
MANAGER - ARL

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Acq. Operator   : Ana & Jeanette                Seq. Line :    2
Acq. Instrument : GC-5                          Location  : Vial 3
Injection Date  : 29/04/2019 11:31:28 AM       Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : C:\DATA\GC-5\DATA\190429\2019-04-29 10-03-18\CEDARWOOD.M
Last changed    : 29/04/2019 9:28:58 AM by Jeanette & Sam
Analysis Method : W:\SCPS\ANALYTICAL\LABDATA\GC-5\METHODS\CEDARWOOD.M
Last changed    : 2/05/2019 4:17:46 PM
Method Info     : Method to analyse essential oils
  
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 Area Percent Report  
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Sorted By          :      Signal
Calib. Data Modified : 6/23/2016 9:11:09 AM
Multiplier:        :      1.0000
Dilution:          :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs
  
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*yLB*  
*2/5/19*

Signal 1: FID1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	60.745	VB	0.1022	876.11786	21.9553	alpha cedrene
2	61.155	BV	0.0955	102.11232	2.5589	beta funebre
3	61.947	VV	0.1077	197.49272	4.9491	beta cedrene
4	62.705	VB	0.1106	1017.22144	25.4914	thujopsene
5	68.653	VB	0.0949	47.85265	1.1992	cuparene
6	81.607	BV	0.1063	819.26276	20.5305	cedrol
7	81.973	VB	0.1015	92.02942	2.3062	widdrol

Totals : 3152.08916 78.9907

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\*\*\* End of Report \*\*\*

*6/3*  
*2/5/19*