

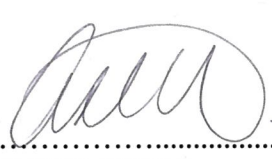
## CERTIFICATE OF ANALYSIS

<b>SAMPLE</b>	Callitris intratropica Bark and Wood modified
<b>COUNTRY OF ORIGIN</b>	Australia
<b>CUSTOMER</b>	Australian Blue Cypress
<b>CERTIFICATION DATE</b>	25 February 2016
<b>CUSTOMER LOT/BATCH No.</b>	Lot number 18022016 Pinelands
<b>LABORATORY REFERENCE</b>	ARL160692
<b>JOB No.</b>	A160309

TEST	RESULTS	TEST METHOD
	Area %	
$\alpha$ -pinene	0.52	ARL-TM101-3*
$\beta$ -elemene	1.04	
myrtenic acid	2.70	
$\alpha$ -guaiene	0.42	
iso longifolene 9,10 dihydro	0.97	
$\gamma$ – selinene	1.58	
$\beta$ – selinene	2.40	
$\alpha$ – selinene	1.19	
$\delta$ – guaiene	2.22	
elemol	1.78	
guaiol	14.87	
$\gamma$ – eudesmol	6.84	
10 epi $\gamma$ – eudesmol	1.33	
$\beta$ – eudesmol	6.22	
$\alpha$ – eudesmol	5.76	
bulnesol	10.58	
$\gamma$ – costol	1.98	
chamazulene	0.60	
$\alpha$ – costol + $\beta$ – costol	2.86	
guaiazulene	0.33	
callitrin	0.49	
callitrin isomer	1.70	
callitrisin isomer	1.15	
dihydro columellarin	10.80	
callitrisin	0.64	
columellarin	1.63	
dihydro callitrisin	1.16	
Relative Density @ 20°C	0.988	Ph.Eur.2.2.5
Refractive Index @ 20°C	1.5074	Ph.Eur.2.2.6
Optical Rotation @ 20°C	+ 10.14	Ph.Eur.2.2.7

\* Assay by GC (FID detection)

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 MS SAMANTHA MORROW  
 ANALYTICAL OFFICER

.....  
  
 MR ASHLEY DOWELL  
 MANAGER - ARL

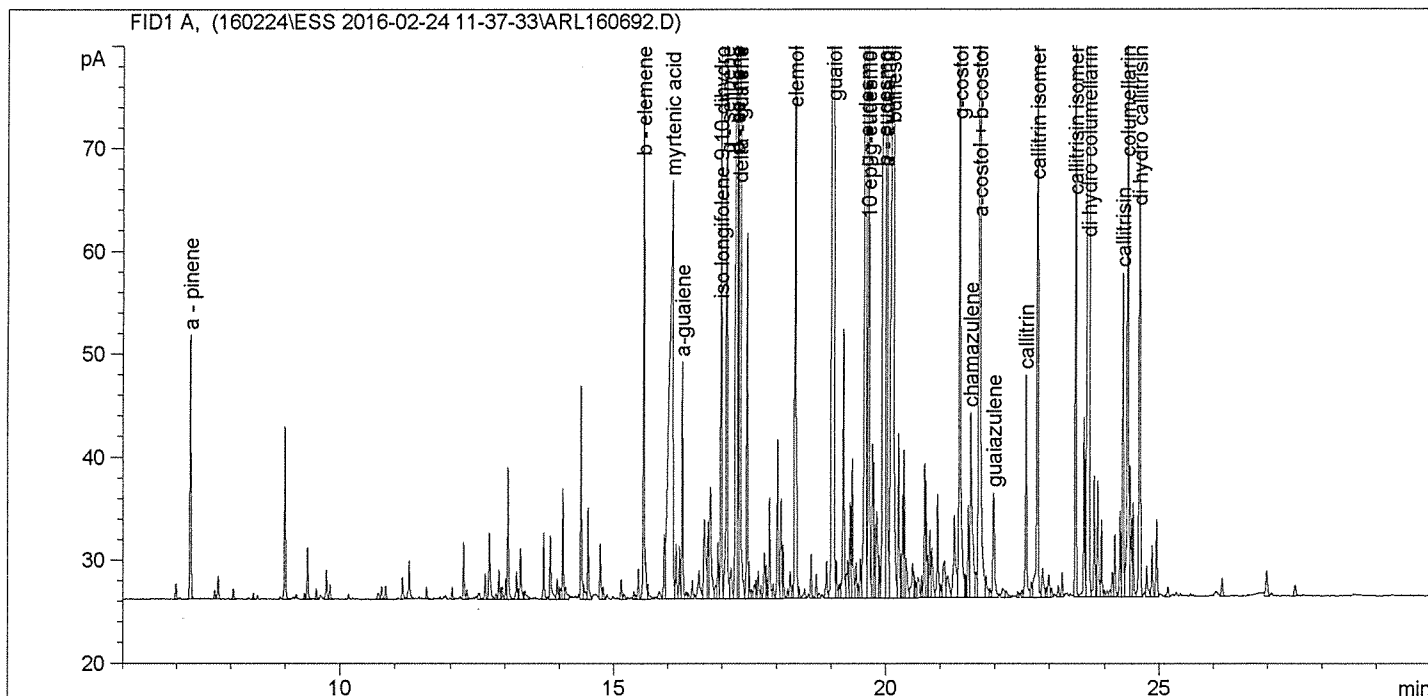
Sample Name: CALLITRIS INTRATROPICA 18022016PINELANDS

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Acq. Operator   : SM                      Seq. Line :    5
Acq. Instrument : GC-3                   Location  : Vial 4
Injection Date  : 2/24/2016 4:31:23 PM   Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : D:\GC-3_DATA\DATA\160224\ESS 2016-02-24 11-37-33\BLUE CYPRESS.M
Last changed    : 1/21/2016 2:53:11 PM by MR
Analysis Method : D:\GC-3_DATA\METHODS\BLUE CYPRESS.M
Last changed    : 2/25/2016 12:32:06 PM by SM
                 (modified after loading)

Method Info     : Method to analyse essential oils
    
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Area Percent Report

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Sorted By      : Signal
Calib. Data Modified : 1/21/2016 12:32:12 PM
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
    
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Signal 1: FID1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	7.264	BB	0.0236	38.65718	0.52437	a - pinene
2	15.555	VV	0.0223	76.98268	1.04423	b - elemene
3	16.093	VV	0.0614	199.20351	2.70210	myrtenic acid
4	16.273	VV	0.0212	30.87244	0.41877	a-guaiene
5	16.987	VV	0.0211	71.36494	0.96803	iso longifolene 9,10 dihydro
6	17.089	VV	0.0225	116.60175	1.58164	g - selinene

Sample Name: CALLITRIS INTRATROPICA 18022016PINELANDS

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
7	17.260	VV	0.0231	176.94896	2.40022	b - selinene
8	17.289	VV	0.0200	87.86227	1.19181	a - selinene
9	17.338	VV	0.0218	163.88297	2.22299	delta - guaiene
10	18.350	VV	0.0232	131.58965	1.78495	elemol
11	19.048	VV	0.0253	1096.41858	14.87237	guaiol
12	19.637	VV	0.0232	504.49704	6.84325	g - eudesmol
13	19.698	VV	0.0230	98.33956	1.33393	10 epi-g-eudesmol
14	19.968	VV	0.0303	458.19827	6.21523	b - eudesmol
15	20.025	VV	0.0224	424.96805	5.76448	a - eudesmol
16	20.144	VV	0.0283	779.65552	10.57563	bulnesol
17	21.360	VV	0.0260	145.64186	1.97556	g-costol
18	21.565	VV	0.0339	44.33288	0.60135	chamazulene
19	21.728	VV	0.0265	211.17300	2.86446	a-costol + b-costol
20	21.981	VV	0.0376	24.03070	0.32596	guaiazulene
21	22.573	VV	0.0250	35.88861	0.48681	callitrin
22	22.786	VV	0.0228	125.68306	1.70483	callitrin isomer
23	23.482	VV	0.0226	84.91714	1.15186	callitrisin isomer
24	23.727	VV	0.0259	796.15894	10.79950	di hydro columellarin
25	24.345	VV	0.0241	47.32991	0.64201	callitrisin
26	24.432	VV	0.0241	120.24934	1.63112	columellarin
27	24.653	VV	0.0303	85.45749	1.15919	di hydro callitrisin

Totals : 6176.90631 83.7866

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