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Certificate of Analysis & Gas Chromatography

Copaiba Balsam Essential Oil
(Copaifera langsdorffii Desf.)

COMMON NAME	Copaiba Balsam
LATIN NAME	Copaifera langsdorffii Desf.
COUNTRY OF ORIGIN	Brazil
CULTIVATION METHOD	Wild Harvested
TYPE	Balsam/Resin
EXTRACTION METHOD	Natural Exudate
PLANT PART	Natural Oleoresin (also known as a Balsam)
USE	Aromatherapy, Natural Perfumery.

LOT #	8
MANUFACTURING DATE	May 2025
BEST BY DATE	May 2028

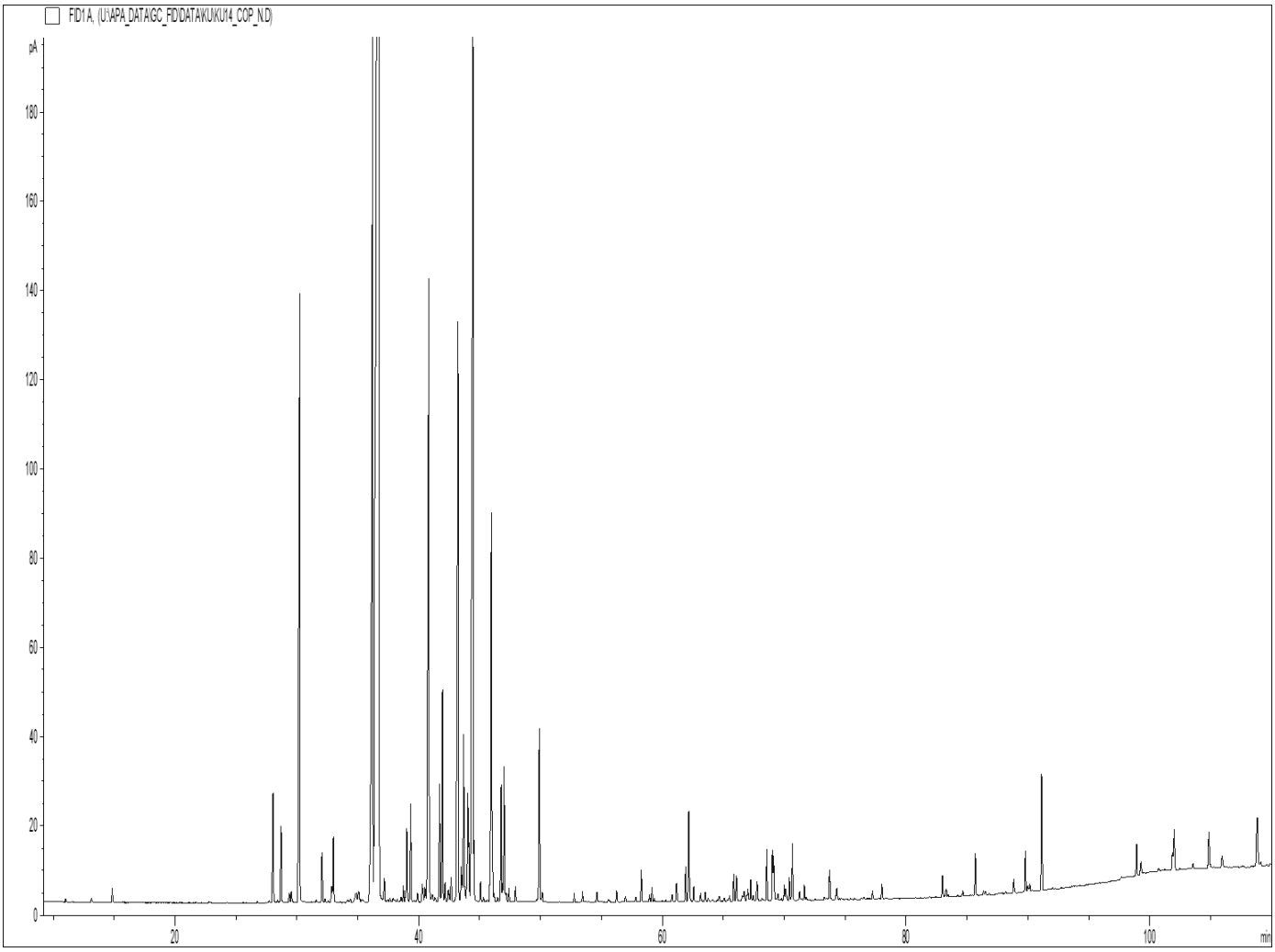
	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20˚C	0.905 – 0.960	0.9521
REFRACTIVE INDEX @20˚C	1.500 – 1.515	1.5079
OPTICAL ROTATION @20˚C	-20° to 0°	-13.08°

PHYSICAL APPEARANCE	Transparent semi-viscous mobile liquid	*Conforms*
COLOR	Pale yellow to light orange/brown	*Conforms*
ODOR	Somewhat sweet, mild, soft woody, slightly spicy-peppery aroma with modest tenacity.	*Conforms*
SOLUBILITY	Soluble in fixed oils. May cause cloudiness when diluted in alcohol, if left undisturbed, this will clarify in a day or two.	
SPECIAL USE INSTRUCTIONS	Dilute before use	

PRIMARY CONSTITUENTS	Beta-Caryophyllene (20-70%), Germacrene D (1-11.1%).

THIRD PARTY LAB ANALYSIS (COA)

Chromatographic profile:



- COPAIBA BALSAM - LOT 8 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
1	13.14	LIMONENE	0.02		0.02
2	14.84	cis-beta-OCIMENE	0.08		
3	28.03	alpha-CUBEBENE	0.79		
4	28.40	ELEMENE ISOMER	0.02		
5	28.70	delta-ELEMENE	0.51		
6	29.36	ISOLEDENE	0.08		
7	29.54	YLANGENE	0.09		
8	30.23	**alpha-COPAENE**	**5.27**		
9	31.57	SESQUITERPENE	0.02		
10	32.06	CYPERENE	0.37		
11	32.30	alpha-GURJUNENE	0.03		
12	32.57	SESQUITERPENE	0.02		
13	32.85	BERGAMOTENE ISOMER	0.12		
14	32.99	beta1-CUBEBENE	0.50		
15	34.19	BERGAMOTENE ISOMER	0.03		
16	34.38	COMPOUND Mw=206	0.04		
17	34.87	alpha-cis-BERGAMOTENE	0.17		
18	35.08	epsilon-CADINENE	0.13		
19	35.33	SESQUITERPENE	0.06		
20	36.21	**alpha-trans-BERGAMOTENE**	**8.89**		
21	36.37	beta-ELEMENE	1.20		
22	36.75	**beta-CARYOPHYLLENE**	**35.81**		35.81
23	36.83	SESQUITERPENE	0.08		
24	37.17	AROMADENDRENE	0.19		
25	37.45	SESQUITERPENE	0.03		
26	37.63	SELINENE ISOMER	0.04		
27	37.89	GURJUNENE ISOMER	0.03		
28	37.99	SESQUITERPENE	0.02		
29	38.24	SESQUITERPENE	0.02		
30	38.56	CADINA-3,5-DIENE	0.05		
31	38.73	Epi-beta-SANTALENE	0.11		
32	38.95	SESQUITERPENE	0.05		
33	39.02	GERMACRENE A	0.50		
34	39.33	ALLO-AROMADENDRENE	0.73		
35		FARNESENE ISOMER			
36	39.62	beta-SANTALENE	0.02		
37	39.90	FARNESENE ISOMER	0.07		
38	40.29	ZONARENE	0.18		
39	40.51	SESQUITERPENE	0.14		
40	40.81	**alpha-HUMULENE**	**5.43**		
41	41.13	gamma-SELINENE	0.09		
42	41.32	SESQUITERPENE	0.05		
43	41.71	Z-beta-FARNESENE	0.88		

- COPAIBA BALSAM - LOT 8 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
44	41.94	gamma-MUUROLENE	1.53		
45	42.16	gamma-CURCUMENE	0.15		
46	42.41	LEDENE	0.13		
47	42.65	CAPARRATRIENE	0.16		
48	43.22	**GERMACRENE D**	**5.20**		
49	43.48	MUUROLADIENE ISOMER	0.31		
50	43.68	beta-SELINENE	1.12		
51	43.78	SESQUITERPENE	0.09		
52	44.02	alpha-SELINENE	0.86		
53	44.10	alpha-MUUROLENE	0.34		
54	44.44	**beta-BISABOLENE**	**7.81**		
55	44.45	cis-alpha-BISABOLENE	1.16		
56	44.52	BICYCLOGERMACRENE	0.35		
57	45.06	beta-CURCUMENE	0.12		
58	45.30	SESQUITERPENE	0.03		
59	45.63	SESQUITERPENE	0.01		
60	45.96	**delta-CADINENE**	**2.76**		
61	46.10	gamma-CADINENE	0.69		
62	46.17	7-epi-alpha-SELINENE	0.07		
63	46.48	SESQUITERPENE	0.03		
64	46.75	beta-SESQUIPHELLANDRENE	0.74		
65	46.87	alpha-CURCUMENE	0.11		
66	47.00	trans-alpha-BISABOLENE	0.93		
67	47.16	SELINA-3,7-DIENE	0.07		
68	47.38	CADINA-1,4-DIENE	0.09		
69	47.93	alpha-AMORPHENE	0.10		
70	49.65	SESQUITERPENE	0.01		
71	49.90	GERMACRENE B	1.23		
72	50.13	cis-CALAMENENE	0.07		
73	52.76	COMPOUND Mw=208	0.05		
74	53.44	Epi-CUBEBOL	0.07		
75	54.61	alpha-CALACORENE	0.07		
76	55.59	SESQUITERPENIC OXIDE	0.03		
77	56.24	CUBEBOL	0.08		
78	56.95	beta-CALACORENE	0.06		
79	57.80	ISOCARYOPHYLLENE OXIDE	0.04		
80	58.26	CARYOPHYLLENE OXIDE	0.23		
81	58.93	SESQUITERPENOL	0.05		
82	59.13	SESQUITERPENOL	0.10		
83	59.33	SESQUITERPENIC OXIDE	0.03		
84	60.78	LEDOL	0.06		
85	61.15	GLEENOL	0.15		
86	61.90	CARYOPHYLLENOL	0.25		

- COPAIBA BALSAM - LOT 8 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
87	62.16	JUNEOL	0.75		
88		Epi-CUBENOL			
89	62.56	CUBENOL	0.10		
90	63.12	GLOBULOL	0.06		
91	63.50	VIRIDIFLOROL	0.06		
92	63.74	SESQUITERPENOL	0.02		
93	64.65	10-epi-gamma-EUDESMOL	0.05		
94	65.06	ROSIFOLIOL	0.04		
95	65.51	SPATHULENOL	0.04		
96	65.84	COMPOUND Mw=206	0.16		
97	66.07	SESQUITERPENOL	0.19		
98	66.54	beta-COPAEN-4-alpha-OL	0.06		
99	66.69	SESQUITERPENOL	0.08		
100	66.93	SESQUITERPENOL	0.03		
101	67.01	SESQUITERPENOL	0.08		
102	67.25	COMPOUND Mw=206	0.15		
103	67.43	SESQUITERPENOL	0.04		
104	67.76	T-CADINOL	0.15		
105	68.16	SESQUITERPENOL	0.02		
106	68.56	alpha-MUUROLOL	0.36		
107	69.02	SESQUITERPENOL	0.33		
108	69.12	delta-CADINOL	0.35		
109	69.46	SESQUITERPENOL	0.06		
110	69.76	ALIPHATIC ESTER	0.01		
111	70.01	Epi-alpha-BISABOLOL	0.11		
112	70.14	alpha-BISABOLOL	0.09		
113	70.43	CADALENE	0.15		
114	70.68	alpha-CADINOL	0.41		
115	71.26	SESQUITERPENOL	0.06		
116	71.65	EUDESMA-7(11)-EN-4-OL	0.10		
117	71.81	beta-NOOTKATOL	0.02		
118	73.32	cis-alpha-BISABOLOL	0.02		
119	73.73	JUNIPER CAMPHOR	0.23		
120	74.31	AROMATIC COMPOUND	0.11		
121	74.68	AROMATIC COMPOUND	0.02		
122	76.31	SESQUITERPENOL	0.02		
123	76.54	SESQUITERPENONE	0.02		
124	77.26	SESQUITERPENOL	0.07		
125	78.02	KAUR-16-ENE	0.11		
126	83.00	COMPOUND Mw=262	0.17		
127	83.30	COMPOUND Mw=262	0.07		
128	84.67	SESQUITERPENOL	0.04		
129	85.69	COMPOUND Mw=262	0.31		

- COPAIBA BALSAM - LOT 8 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
130	86.35	COMPOUND Mw=262	0.03		
131	86.51	SESQUITERPENIC OXIDE	0.03		
132	88.84	DITERPENE	0.11		
133	89.80	Epi-MANOOL	0.29		
134	90.00	AROMATIC COMPOUND	0.05		
135	90.16	DITERPENE	0.06		
136	91.14	AROMATIC COMPOUND	0.86		
137	98.93	METHYL COPALATE	0.23		
138	99.29	ALCOHOL COMPOUND	0.13		
139	100.72	PALMITIC ACID	0.03		
140	101.87	AROMATIC COMPOUND	0.14		
141	102.00	COMPOUND Mw=318	0.38		
142	103.56	AROMATIC COMPOUND	0.04		
143	104.86	COMPOUND Mw=290	0.35		
144	105.95	COMPOUND Mw=290	0.12		
145	108.83	AROMATIC COMPOUND	0.55		
146	109.11	COMPOUND Mw=290	0.06		
147	109.89	AROMATIC COMPOUND	0.04		
148	110.85	AROMATIC COMPOUND	0.04		
149	112.82	LINOLEIC ACID	0.07		
150	115.62	SESQUITERPENIC OXIDE	0.07		
151	116.12	COMPOUND Mw=260	0.15		
152	118.02	COMPOUND Mw=330	0.24		
		TOTAL	**99.81**		**35.83**