



## Gas Chromatography Analysis

Dear Customer,

Attached you will find the results of gas chromatographic analysis based on the information provided by our Producer/Laboratory for:

**Sample Reference** **2485**

We testify that the Chromatographic Analysis (GC) for the mentioned sample is identical with:

<b>Product No.:</b>	<b>2485</b>
<b>Product Name:</b>	<b>Pepper green</b>
<b>Botanical Name:</b>	<b>Piper nigrum</b>
<b>Batch No.:</b>	<b>1016025</b>

Bühl, 2019-03-20

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Dr. David Nayan

**Chromatographic analysis by GC/FID**

Rt	# CAS	Compounds	Fid %
12.40	2867-05-2	Alpha-Thujène	0.626
12.70	80-56-8	Alpha-Pinène	4.912
13.30	79-92-5	Camphène	0.113
14.15	3387-41-5	Sabinène	4.796
14.33	127-91-3	Béta-Pinène	6.000
14.65	123-35-3	Myrcène	1.393
15.34	99-83-2	Alpha-Phellandrène	1.290
15.44	13466-78-9	Delta-3-Carène	10.148
15.67	99-86-5	Alpha-Terpinène	0.056
15.76	527-84-4	Ortho-Cymène	0.046
15.97	99-87-6	Para-Cymène	0.790
16.18	138-86-3	Limonène	19.107
16.25	555-10-2	Béta-Phéllandrène	0.807
16.30	470-82-6	Eucalyptol	0.024
16.64	27400-72-2	(E)-Béta-Ocimène	0.051
17.09	99-85-4	Gamma-Terpinène	0.108
17.52	17699-16-0	Cis-Hydrate de Sabinène (IPP vs OH)	0.076
17.90	-	Terpinolène*	0.127
18.02	586-62-9	Terpinolène	0.309
18.16	34995-77-2	Trans-Oxyde de Linalol	0.016
18.45	78-70-6	Linalol	0.362
18.55	15826-82-1	Trans-Hydrate de Sabinène (IPP vs OH)	0.082
19.90	547-61-5	Trans-pinocarvéol	0.025
21.14	562-74-3	Terpinène-4-ol	0.181

Rt	# CAS	Compounds	Fid %
21.26	1197-01-9	Para-Cymène-8-ol	0.027
21.54	98-55-5	Alpha-Terpinéol	0.044
25.55	-	Delta-Elémène*	0.066
25.66	20307-84-0	Delta-Elémène	2.221
26.00	17699-14-8	Alpha-Cubébène	0.215
26.69	22469-52-9	Cyclosativène	0.108
26.84	3856-25-5	Alpha-Copaène	2.406
27.16	515-13-9	Béta-Elémène	1.089
28.15	87-44-5	Béta-Caryophyllène	32.163
28.30	18252-44-3	Béta-Copaène	0.188
28.38	3691-12-1	Alpha-Guaiène	0.257
28.66	28973-97-9	(Z)-Béta-Farnésène	0.061
29.00	6753-98-6	Alpha-Humulène	2.043
29.62	23986-74-5	Germacrène D	0.255
29.85	17066-67-0	Béta-Sélinène	1.260
30.00	473-13-2	Alpha-Sélinène	1.110
30.15	495-61-4	Béta-Bisabolène	0.466
30.40	39029-41-9	Gamma-Cadinène	0.013
30.47	483-76-1	Delta-Cadinène	0.778
30.58	72937-55-4	Cis-Calaménène	0.100
31.42	-	Sesquiterpène oxygéné MW 220	0.102
31.61	7212-44-4	(E)-Nérolidol	0.023
32.01	6750-60-3	Spathuléol	0.057
32.18	1139-30-6	Oxyde de Caryophyllène	1.481

Rt	# CAS	Compounds	Fid %
32.84	19888-34-7	Humulène-1,2-Epoxyde	0.064
33.16	-	Sesquiterpène Oxygéné MW220	0.219
33.45	21287-22-0	Cubénol	0.070
		Total	98.331