



GC-MS Analysis					
Product Name		Black Pine Es.Oil			
Product Type		Essential oil			
Botanical Name		<i>Pinus nigra</i>			
Batch N°		BP2020001B			
Label name		GREEK BLACK PINE ORGANIC ESSENTIAL OIL			
Density at 20°C (g/cm³)		0.865			
Refractive index		1.475			
Optical rotation at 20°C		-23°			
Production Date		August 2019			
Shelf Life		5 years			
Origin		Greece			
Production		Steam Distillation			
Plant Part		Needles			
Time	Compounds	CAS N°	%	Chemical Family	IFRA 49th Restriction
13.62	Alpha-Pinene	80-56-8	85.52	Monoterpene	
14.58	Camphene	79-92-5	2.35	Monoterpene	
16.54	Verbenene	4080-46-0	0.04	Monoterpene	
20.75	Beta-pinene	18172-67-3	1.17	Monoterpene	
22.8	Beta-Myrcene	123-35-3	0.55	Monoterpene	
24.78	Para-cymene	99-87-6	1.00	Monoterpene	
25.5	Limonene	138-86-3	3.76	Monoterpene	Cosmetic Allergen

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vessel
essential oils

26.01	C ₁₀ H ₁₄	141-93-5	0.13	Hydrocarbon
26.62	Alpha-terpinolene	586-62-9	0.39	Monoterpene
29.09	Verbenol	18881-04-4	0.14	Monoterpenic alcohol
30.61	Terpinen-4-ol	562-74-3	0.88	Alcohol
48.6	Alpha-terpineol	98-55-5	1.16	Alcohol
50.54	Alpha-amorphene	483-75-0	0.05	Sesquiterpene
54.6	Alpha-muurolene	31983-22-9	0.06	Sesquiterpene
55.88	Gamma-cadinene	1460-97-5	0.17	Sesquiterpene
65.04	Delta-cadinene	483-76-1	0.35	Sesquiterpene
Total			97.72	

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