

Certificate of Analysis

Product: Pine Scotch Oil
Botanical Name: *Pinus sylvestris L.*
Country of Origin: Austria

PHYSICAL AND CHEMICAL PROPERTIES

TEST	RESULT	SPECIFICATION
Specific Gravity @ 20° C	0.860	0.855 - 0.870
Refractive Index @ 20° C	1.471	1.470 - 1.480
Optical Rotation @ 20° C	-25°	-30° - -9°

GAS CHROMATOGRAPH ANALYSIS (TYPICAL)

CONSTITUENT	RESULT (%)	SPECIFICATION (%)
tricyclene	0.10	
α pinene	53.85	50.00 – 60.00
α fenchene	0.06	
camphene	1.44	
β pinene	9.86	6.00 – 10.00
sabinene	0.05	
2carene	0.06	
δ^3 carene	10.71	6.00 – 16.00
myrcene	4.55	
α terpinene	0.36	
α phellandrene	0.16	
limonene	8.99	5.00 – 9.00
β phellandrene	1.88	
γ terpinene	0.09	
para cymene	1.35	
terpinolene	0.66	
α cubebene	0.07	
α copaene	0.10	
bornyl acetate	0.91	
β elemene	0.06	
β caryophyllene	2.11	
α humulene	0.21	
α terpineol	0.57	

borneol	0.10	
δ cadinene	0.17	
caryophyllene oxyde	0.09	