

## Certificate of Analysis

Product: Geranium Bourbon Oil – BIO

Botanical Name: *Pelargonium x asperum* - BIO

Country of Origin: Madagascar

### PHYSICAL AND CHEMICAL PROPERTIES

TEST	RESULT	SPECIFICATION
Specific Gravity @ 20° C	0.890	0.883 - 0.905
Refractive Index @ 20° C	1.464	1.461 - 1.477
Optical Rotation @ 20° C	-15°	-18° - -8°

### GAS CHROMATOGRAPH ANALYSIS (TYPICAL)

CONSTITUENT	RESULT (%)	SPECIFICATION (%)
α pinene	0.49	
β pinene	0.06	
myrcene	0.20	
α phellandrene	0.10	
limonene	0.18	
β phellandrene	0.11	
cis β ocimene	0.14	
trans β ocimene	0.14	
paracymene	0.08	
terpinolene	0.89	
trans rose oxyde	0.36	
menthone	0.34	
trans linalol oxyde	0.07	
citronellal	0.11	
α copaene + isomenthone	7.42	<=10.00
β bourbonene	1.06	
linalol	4.96	<=10.00
β caryophyllene	1.13	
guaidiene 6.9	8.82	4.00 – 14.00
citronellyl formiate	9.88	2.00 – 14.00
citronellyl acetate	0.41	
neral	0.55	

$\alpha$ terpineol	0.33	
geranyl formiate	5.91	
germacrene d	2.11	
geranial	0.10	
geranyl acetate	0.40	
citronellol	24.10	18.00 – 30.00
nerol	1.15	
citronellyl butyrate	0.35	
geraniol	13.59	3.00 – 17.00
geranyl butyrate	1.08	
caryophyllene oxyde	0.19	
geranyl tiglate	1.76	
tiglate phenyl ethylique	0.61	