

## Certificate of Analysis

Product: Black Pepper Oil

Batch Number: 187247

Botanical Name: *Piper nigrum*

Code: EOBPEPBULK

### Parameter Specification<sub>1</sub> Result

Appearance: Clear free flowing liquid Complies

Colour: Colourless to Pale Straw Yellow Complies

Odour: Characteristic: Spicy pepper Complies

Specific Gravity at @ 20°C: 0.858 – 0.880 0.8667

Optical Rotation: -0.0° to + 10.0° +5.00

Refractive index at @ 20°C: 1.460 – 1.490 1.4775

Main Constituents Sample	Component	Specification <sub>1</sub> (%)	Result (%)
<i>Piper nigrum</i>	a-pinene	2- 15	11.98
	Sabinene	Trace- 5	4.81
	b-pinene	5- 20	17.30
	Delta 3-carene	15- 35	26.76
	a-phellandrene		
	d-Limonene	8- 25	17.92
	b-caryophyllene	5- 15	12.78

NOTE (1) Version (2/3/2011)

Retest Date: February 2014

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Quality Assurance Manger

18/3/2011

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