

## Certificate of Analysis

Product: Ginger Oil (China)

Botanical Name: *Zingiber officinale*

Origin: China

Part of Plant: Root

Extraction: Steam Distillation

<b>Physical data</b>	<b><u>Specification</u><sup>2</sup></b>	<b><u>Result</u></b>
Appearance:	Clear mobile liquid	Complies
Colour:	Pale yellow to amber/brown	Complies
Odour:	Warm, fresh, woody, spicy	Complies
Specific Gravity at 20°C:	0.860 to 0.882	0.878
Refractive Index at 20°C:	1.470 to 1.510	1.491
Optical Rotation:	-52.00 <sup>0</sup> to -25.00 <sup>0</sup>	-36.00 <sup>0</sup>

### Chromatographic Profile

<b>Sample</b>	<b>Component</b>	<b>Specification<sup>2</sup> Peak Area<sup>1</sup> (%)</b>	<b>Result Peak Area<sup>1</sup> (%)</b>
<i>Zingiber officinale</i>	a-Pinene	Trace to 6	1.78
	Camphene	Trace to 10.5	5.61
	Ar-curcumene	2 to 25	7.87
	Zingiberene	10 to 45	33.99
	a- Farnesene	Trace to 10	4.93
	b-Bisabolene	Trace to 10	6.22
	b- Sesquiphellandrene	5 to 20	12.56