

Certification of analysis

1. PRODUCT IDENTIFICATION AND COMPOSITION

1.1 Product Name: Ginger Essential Oil

1.2 Botanical Name: Zingiber Officinalis

1.3 Batch:221703 3

TEST SPECIFICATION RESULT

2.1 Appearance: yellow to reddish orange liquid Conforms

2.2 Odour: Characteristic Conforms

2.3 Specific Gravity: 0.776 to 0.976 @ 20° C Conforms

2.4 Refractive Index: 1.439 to 1.539 @ 20° C Conforms

CONSTITUENT SPECIFICATION RESULT

3. GAS CHROMATOGRAPH ANALYSIS

Hexanal 0.61

2-heptanone 0.09

Tricyclene 0.16

Alpha-pinene 1.85

Camphene 6.90

Sabinene 0.08

Beta-pinene 0.26

60methylhept-5-en-2-one 0.69

Myrcene 0.80

n-octanal 0.21

alpha-phellandrene 0.24

delta-3-carene 0.03

p-cymene 0.05

limonene, beta-phellandrene 5.11

1,8-cineole 2.52

Gamma-terpinene 0.03

Terpinolene 0.26

Linalool 0.28

Borneol 0.91

Terpinene-4-ol 0.10

Alpha-terpineol 0.47
Citronellol 0.14
Neral 0.07
Geraniol 0.41
Geranial 0.11
Bornyl acetate 0.09
2-undecanone 0.20
Alpha-copaene 0.45
Geranyl acetate 0.43
Beta-elemene 0.87
Cis-alpha-bergamotene 0.27
Germacrene D, AR-curcumene 7.65
Alpha-zingiberene 34.27
Alpha-selinene 1.87
(E,E)-alpha-farnesene 3.71
Beta-bisabolene 6.50
Beta-sasquiphellandrene 12.63

Note(1)Analytical conditions:GC COLUMNS:Rxi-5SI 1 MS, Length:30.0m, Inside Diameter:0.25mm, Thickness:0.25
Mass Spectrometer: Detector Type:Quadrupole Ms, Ion Source:EI, Ion Source Temp:200.0C
Oven Temp Program:Rate:5.0Temperature(Degree):50.0-270.0