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IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF UTAH  
CENTRAL DIVISION

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YOUNG LIVING ESSENTIAL OILS, LC, a  
Utah limited liability company

Plaintiff,

v.

doTERRA, INC, a Utah corporation,  
doTERRA INTERNATIONAL, LLC, a Utah  
limited liability company, doTERRA  
HOLDINGS, LLC, a Utah limited liability  
company, and JOHN DOES 1-10,

Defendants.

AMENDED COMPLAINT

Case No. 2:13-CV-502

Judge Clark Waddoups

**(Jury Trial Demanded)**

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Plaintiff Young Living Essential Oils, LC (“Young Living” or “Plaintiff”) hereby complains against defendants doTERRA, Inc., doTERRA International, LLC, and doTERRA Holdings, LLC (collectively “doTERRA”), and Does 1-10 (collectively, with doTERRA, “Defendants”) and alleges as follows:

## INTRODUCTION

1. Young Living brings this action against doTERRA, a competitor in the sale and marketing of therapeutic quality essential oils formed by former executives of Young Living, for false advertising because doTERRA falsely claims that its essential oils are of natural plant origins and “100% pure.” Testing of doTERRA essential oils by independent laboratories shows that, contrary to doTERRA’s widespread claims that its essential oils are 100% pure with no fillers or additives and are “Certified Pure Therapeutic Grade,” doTERRA’s essential oils in fact are adulterated with man-made synthetic compounds and unlisted ingredients that unnaturally sweeten or otherwise alter the aroma and profile of the oils and/or make its oils less expensive to produce.

2. Young Living is amending its original Complaint in this action to specify twenty-one additional doTERRA products that are manipulated with man-made synthetic compounds, inconsistent with product labels, and are otherwise the subject of false advertising by doTERRA. These products include essential oils, essential oil blends, skin care products, and dietary supplements.

3. doTERRA’s false advertising concerning the natural origins and purity of its essential oils, combined with its disparagement of the purity of Young Living’s essential oils, has caused significant harm to Young Living. doTERRA has obtained a segment of the market for essential oils that it would not have obtained if it had truthfully disclosed the characteristics of its products—including that the sweetness of the aromas of its essential oils is not a marker of product purity (as it claims), but instead a result of the adulteration of its essential oils with

synthetic chemicals. Accordingly, Young Living seeks monetary damages and/or doTERRA's ill-gotten profits, in addition to injunctive relief, statutory damages, and costs and attorneys fees.

#### **SUBJECT MATTER JURISDICTION**

4. This Court has subject matter jurisdiction over the federal law claims in this action pursuant to 15 U.S.C. § 1121 and 28 U.S.C. §§ 1331. The Court has subject matter jurisdiction over the related Utah state law claims pursuant to 28 U.S.C. § 1367.

#### **VENUE**

5. Venue is proper in this district and division pursuant to 28 U.S.C. § 1391.

#### **PARTIES AND PERSONAL JURISDICTION**

6. Young Living is a Utah limited liability company with its principal place of business in Lehi, Utah. Young Living was formerly known as Aromatic Research and Technology, LC, d/b/a Young Living Essential Oils.

7. doTERRA, Inc., is a Utah corporation with its principal place of business in Orem, Utah. doTERRA was formerly known as Thrive Holdings, Inc. and as Thrive II, Inc.

8. On information and belief, doTERRA International, LLC, is a Utah limited liability company with its principal place of business in Orem, Utah.

9. On information and belief, doTERRA Holdings, LLC, is a Utah limited liability company with its principal places of business in Orem, Utah and Pleasant Grove, Utah.

10. Together, doTERRA, Inc., doTERRA International, LLC, and doTERRA Holdings, LLC, are collectively defined as "doTERRA" for the purpose of this Complaint.

11. doTERRA does business in interstate commerce including in Utah, it manufactures, licenses, and sells products, directly or indirectly, to residents of Utah, and/or has directed its activities at and injured Utah residents.

12. Upon information and belief, John Does 1-10 are individuals and/or entities that have participated in, controlled, had the right to control, benefitted from, contributed to, aided and abetted, facilitated, are licensees, or are otherwise liable for the actions alleged herein, but whose identities are not presently known to Young Living. As Young Living learns the identities of these John Doe defendants it will identify them by name.

## **FACTUAL BACKGROUND**

### Young Living's Business

13. Young Living was founded by Gary and Mary Young almost twenty years ago.

14. Young Living manufactures essential oils and related products, which it markets and sells through a network of independent distributors, most of whom are also consumers of Young Living essential oils.

15. Young Living currently has hundreds of thousands of independent distributors around the world.

16. Young Living also owns and operates farms nationally and internationally where it grows many of the plants it uses to make its essential oils. In Utah, Young Living owns and operates the 1,400 acre Young Living Farm in Mona, Utah.

17. Essential oils are aromatic volatile liquids derived from plants. They have many uses, including use in food flavoring, perfume industries, and in aromatherapy.

18. Young Living specializes in the manufacture, sale, and marketing of essential oils of natural plant origin suitable for aromatherapy and wellness practices.

19. Young Living sells a variety of individual essential oils, including lavender, peppermint, and frankincense oils. It also sells proprietary combinations of essential oils and products made with essential oils.

doTERRA's Business

20. doTERRA is a company created by a group of former executives and high-level employees of Young Living to compete directly with Young Living by marketing and selling competing essential oils bearing its doTERRA label through a competing network of independent distributors.

21. Unlike Young Living, doTERRA does not own or operate the farms from which the essential oils bearing its label are produced.

22. The former Young Living executives and employees who formed doTERRA, and/or left Young Living to join doTERRA, include Young Living's former Chief Operating Officer, David Stirling, Young Living's former Director of Scientific Education and Support, David Hill, Young Living's former Senior Director of New Market Development, Gregory Cook, Young Living's former board member and executive assistant, Emily Wright, Young Living's former Regional Business Director (Western Region), Justin Harrison, and Young Living's former Director of Events, Lillian Shepherd.

23. doTERRA's business has expanded rapidly. It now claims to have established a network of more than 100,000 independent distributors throughout the United States and internationally.

24. In the spring of 2013, doTERRA obtained government tax incentives to build a new \$60 million dollar headquarters in Utah County.

25. A significant driver of doTERRA's expansion has been doTERRA's solicitation of Young Living distributors and consumers away from Young Living.

26. The instant Complaint is concerned with false advertisements by which doTERRA has wrongfully lured and continues to wrongfully lure Young Living distributors and customers to switch to doTERRA and by which doTERRA unfairly competes with Young Living for prospective distributors and customers.

doTERRA Advertises Its Products As 100% Pure and  
Unadulterated with Synthetic Chemicals

27. doTERRA's key pitch in its sales of its essential oils to the Young Living distributors and customers it targets with solicitations, as well as to the general public, is a (false) assertion that doTERRA's essential oils are of superior purity to those sold by Young Living and other competitors.

28. doTERRA claims on its websites, including [www.doterra.com](http://www.doterra.com), [www.doterraeveryday.com](http://www.doterraeveryday.com), <http://doterrablog.com>, and [www.doterratools.com](http://www.doterratools.com), among others, which it directs to potential distributors and customers both throughout the United States and internationally, that doTERRA creates "100% Pure" "Certified Pure Therapeutic Grade® essential oils" which "represent the safest, purest, and most beneficial essential oils available today."

29. doTERRA's websites claim that many other companies' essential oils labeled "therapeutic grade" "are devoid of therapeutic value due to impurities."

([www.doterraeveryday.com](http://www.doterraeveryday.com).)

30. doTERRA claims that, “[m]any [products claiming to be or to contain essential oils] do not use 100% pure essential oils and often use fragrant synthetic chemical substitutes to dilute or replace more expensive essential oil extracts.” *Id.* ([www.doterra.com](http://www.doterra.com).)

31. doTERRA’s websites also advertise that “aroma is an excellent indication of true purity,” and it (falsely) claims that the noticeably “sweet” or “extremely pleasing fragrances” of its essential oils are markers of purity and the highest quality, i.e., “having a fragrance that exceeds that of oils that have been diluted or synthetically produced.” *Id.*

32. doTERRA also makes similar or identical claims in its marketing brochures, in its online videos, in its owners’ and employees’ presentations, and in communications directed to the distributors and customers of Young Living who are directly and indirectly solicited by doTERRA. doTERRA also teaches these false advertisements to its national and international networks of distributors, who repeat these claims to the persons they solicit for doTERRA.

33. doTERRA also specifically falsely advertises that Young Living is one of its competitors whose oils are likely adulterated.

34. On information and belief, doTERRA owner Emily Wright has made statements in commercial presentations and in communications to individuals solicited by doTERRA in which she has alleged that she saw evidence of a lack of purity in Young Living’s oils and that this discovery led to her departure from Young Living.

35. doTERRA further encourages potential distributors and consumers to compare the sweeter and more pleasing fragrances of doTERRA essential oils with the fragrances of Young Living’s oils and make a determination of the comparative purity of the oils for themselves based

on doTERRA's (false) claims that the sweetness is a marker of oils that are not diluted or synthetically produced. (*See, e.g.*, [www.doterra.com](http://www.doterra.com).)

36. Such advertisements alleging that doTERRA's essential oils are pure and Young Livings' essential oils are not pure are false. In fact, as alleged in further detail below, doTERRA adulterates its "Certified Pure Therapeutic Grade" essential oils with synthetic chemicals to sweeten or otherwise make the aroma of its essential oils more pleasing and/or to reduce costs.

37. A few of the many specific false statements doTERRA has made in advertising the purity of its essential oils are as follows:

a. "doTERRA's therapeutic-grade essential oils are 100% pure natural aromatic compounds carefully extracted from plants. They do not contain fillers or artificial ingredients that would dilute their active qualities." ([www.doterra.com](http://www.doterra.com).)

b. "doTERRA's Certified Pure Therapeutic Grade essential oils are guaranteed to be 100% pure and natural and free of synthetic compounds or contaminants." *Id.*

c. "The doTERRA brand and registered CPTG mark represent doTERRA's guarantee of 100% pure essential oil extracts that meet high standards for both purity and material composition and accurate product labeling." *Id.*

d. "We harvest our plants and quickly and carefully distill the aromatic compounds of the plants. Other than testing for purity and composition, there is no other processing or manufacturing of the oils. They contain are [sic] 100% pure aromatic



compounds. Nature did all the work; we just carefully remove the aromatic compounds and put them in the bottles. Pure and simple!” ([www.doterraeveryday.com](http://www.doterraeveryday.com).)

e. “Each oil provides the living essence of its source botanical, gently distilled from plants that are nurtured and carefully harvested throughout the world. Each oil is 100% natural and passes strict standards of purity and potency.” (doTERRA’s 2012-2013 Product Guide (online at [www.doterratools.com](http://www.doterratools.com).)

38. In support of these and its other claims that its essential oils are 100% pure and superior to all other essential oils in the marketplace, doTERRA advertises at [www.doterra.com](http://www.doterra.com) that “at a minimum, doTERRA’s Certified Pure Therapeutic Grade® essential oils are cross tested using mass spectrometry and gas chromatography to ensure both extract purity and composition potency of each batch.”

doTERRA’s Advertisements Are False; Its Peppermint Essential Oil Is Adulterated with Synthetics to Manipulate the Natural Aromas and Flavor

39. In or about March 2013, Young Living asked independent European laboratory Institut des Sciences Analytiques to analyze certain doTERRA oils using gas chromatography-mass spectrometry (“GC-MS”).

40. GC-MS separates the component chemicals in each sample of essential oil and allows the laboratory to identify the chemical makeup of each essential oil.

41. Service Central D’Analyse – Institut des Sciences Analytiques (“SCA”) tested three samples of doTERRA’s peppermint essential oil bearing different lot numbers and expiration dates (representing three consecutive years) using GC-MS.

42. Its lab test results found a manmade synthetic chemical additive, ethyl vanillin, in doTERRA's peppermint essential oil. The body of the report of the peppermint studies conducted by SCA is attached hereto as Exhibit A and incorporated herein by reference.

43. Ethyl vanillin is a manmade compound that gives an intense sweet vanilla aroma and sweet flavor.

44. The detection of ethyl vanillin explains the noticeably sweet aroma and flavor of doTERRA's peppermint essential oil.

45. These test results demonstrate that all of doTERRA's statements concerning the natural origin and purity of its peppermint essential oils constitute false advertisements.

46. On information and belief, peppermint essential oil is one of doTERRA's top selling essential oils.

47. On information and belief, each of doTERRA's blends containing peppermint essential oil also contains ethyl vanillin.

48. doTERRA actively and willfully misleads consumers and distributors of essential oils concerning the reason its peppermint essential oil aroma is sweeter than natural peppermint essential oils. Among other examples, Emily Wright has stated as follows: "doTERRA's oils are much sweeter. Our peppermint is a good example of that. The Young Living peppermint has a very bitter note to it that burns the throat when swallowed. doTERRA's peppermint is sweet and smooth when swallowed. The reason for the sweetness has to do with the purity and the high menthol content due to the region in which it is grown. . . . Most people are not used to pure peppermint, and they think it should smell weedy and bitter in order to be 'pure.' This is

not the case; rather the opposite is true. A pure oil should smell smooth and clean and should be pleasing to the senses.”

doTERRA’s “100% pure” Lavender Essential Oil Is Adulterated  
with Synthetic Linalyl Acetate, Geranium, and Chamomile

49. In or about March 2013, SCA also analyzed three vials of doTERRA lavender essential oil bearing different lot numbers and expiration dates (representing three consecutive years) using GC-MS.

50. Based on its tests of three vials of doTERRA’s Lavender essential oils, SCA concluded that these lavender essential oils contain added synthetic linalyl acetate in addition to the naturally occurring linalyl acetate. The body of the report of the lavender studies conducted by SCA is attached hereto as Exhibit B and incorporated by reference.

51. Synthetic linalyl acetate is widely used to create a lavender aroma at a lower cost than natural lavender essential oil.

52. Additionally, SCA found the same samples of doTERRA’s lavender essential oil (which is marketed by doTERRA as 100% pure natural lavender) contain geranium and chamomile. See Exhibit B.

53. On information and belief, lavender essential oil is another of doTERRA’s top selling essential oils.

54. doTERRA again misleads consumers concerning the reason for the unusual aroma of doTERRA’s essential oils. With regard to the scent of doTERRA’s lavender oils, doTERRA’s website states as follows: “Try this at home. Compare the smell of doTERRA’s *100% lavender essential oil* to another lavender oil or product in your home. If your product’s fragrance is overbearing in any one note, it may contain synthetic chemical substitutes. A 100%

pure therapeutic grade essential oil should have a balanced, broad fragrance profile and should smell crystal clean.” ([www.doterra.com](http://www.doterra.com) (emphasis added).)

doTERRA Falsely Advertises the Species of  
Its Frankincense Essential Oil

55. doTERRA advertises that it sells frankincense essential oil from the species *Boswellia frereana*.

56. Testing of doTERRA’s Frankincense Essential Oil completed on or about April 10, 2013, by SCA determined that doTERRA’s frankincense essential oil is of the species *Boswellia carterii*, not *Boswellia frereana*, as advertised. The body of the report of the frankincense essential oil studies conducted by SCA is attached hereto as Exhibit C and incorporated by reference.

57. The species of frankincense essential oil is significant to consumers of frankincense essential oils because oils from the different species of frankincense have different properties, commercial value, and biological effects.

doTERRA’s “100% Birch Essential Oil”  
Is Not Distilled from Birch

58. In August of 2009, doTERRA’s blog heralded its creation of “the only 100% pure Birch Essential Oil in the world.” (<http://doterrablog.com/pre-launch-of-birch-essential-oil>).

59. On information and belief, doTERRA sold oil that doTERRA claimed was “100% pure” “birch essential oil” at least as a limited offering during its 2012 convention.

60. However, on information and belief, doTERRA’s “birch” product does not contain birch essential oil. Biomarkers of birch are not present in this product. Instead, it contains some wintergreen essential oil and synthetic methyl salicylate, as well as other

synthetics, including dimethyl 2-hydroxyterephthalate, which are not identified on the product label.

doTERRA's Balance Product Contains Synthetics,  
but Not Rosewood Essential Oil as Advertised

61. The label on doTERRA's Balance essential oil blend claims that the product includes Rosewood essential oil.

62. However, biomarkers of Rosewood essential oil are absent from the product.

63. Moreover, the product contains a synthetic linalool additive, which is not identified on the product label.

doTERRA's Citrus Bliss Contains Synthetics,  
but Not Vanilla Absolute as Advertised

64. The label on doTERRA's Citrus Bliss essential oil blend claims that it includes "vanilla absolute."

65. However, the product does not include vanillin. Instead, the product contains the synthetic ethyl vanillin, as well as synthetic linalool, and the synthetic 2-hexen-1-ol. None of these synthetics is listed on the product label.

doTERRA's Clear Skin Topical Blend Contains a Synthetic,  
but Not Rosewood Essential Oil as Advertised

66. The label on doTERRA's Clear Skin Topical Blend claims that it includes Rosewood essential oil.

67. However, biomarkers of Rosewood essential oil are absent from the product.

68. Moreover, the product contains a synthetic linalool additive, which is not identified on the product label.

doTERRA's DDR Prime and DDR Prime Liquicaps Do Not Contain  
the Species of Frankincense Advertised

69. doTERRA claims that its products DDR Prime and DDR Prime Liquicaps include frankincense essential oil of the species *Boswellia frereana*.

70. In reality, however, the frankincense included in these products is of the species *Boswellia carterii*.

doTERRA's In Tune Product Does Not Contain  
the Species of Frankincense Advertised

71. doTERRA claims that its In Tune essential oil blend product includes frankincense essential oil of the species *Boswellia frereana*.

72. In reality, however, the frankincense essential oil included in this product is of the species *Boswellia carterii*.

doTERRA's Deep Blue, Deep Blue Roll On, and Deep Blue Rub Products  
Contain a Synthetic, but Not Wintergreen Essential Oil as Advertised

73. The labels on doTERRA's Deep Blue, Deep Blue Roll On, and Deep Blue Rub products claim that these products contain Wintergreen essential oil.

74. Biomarkers of Wintergreen essential oil are not present in these products.

75. However, they contain the synthetics methyl salicylate and dimethyl 2-hydroxyterephthalate, which are not identified on the product labels.

doTERRA's PastTense Product Contains Synthetics,  
Instead of Natural Wintergreen Essential Oil as Advertised

76. The PastTense product label claims that the product contains Wintergreen essential oil.

77. However, biomarkers of Wintergreen essential oil are not present in this product.

78. Instead, the product contains the synthetics methyl salicylate and dimethyl 2-hydroxyterephthalate, which are not identified on the product label.

doTERRA's Serenity Product Contains a Synthetic,  
but Not Vanilla Bean Extract as Advertised

79. The label on doTERRA's Serenity essential oil blend claims that it includes "vanilla bean extract."

80. However, the product does not include vanillin. Instead, the product contains the synthetic ethyl vanillin, which is not listed on the product label.

doTERRA's Whisper Product Contains Synthetics,  
but Not Vanilla Absolute as Advertised

81. The label on doTERRA's Whisper essential oil blend claims that it includes "vanilla absolute."

82. However, the product does not include vanillin. Instead, the product contains the synthetic ethyl vanillin, which is not listed on the product label.

83. The product also includes the synthetics caprylin and caprin, which are not disclosed on the product label.

doTERRA's Wild Orange Product Contains Synthetics

84. doTERRA's Wild Orange essential oil product contains the synthetic 2-hexen-1-ol, which is not disclosed on the product label.

85. The product also contains synthetic linalool in addition to natural linalool, which is not disclosed on the product label.

doTERRA's Wintergreen Essential Oil Contains Synthetics,  
Instead of Natural Wintergreen Essential Oil as Advertised

86. doTERRA's Wintergreen essential oil product label claims that it contains Wintergreen essential oil.

87. However, this product does not contain biomarkers for Wintergreen essential oil.

88. Instead, it contains the synthetics methyl salicylate and dimethyl 2-hydroxyterephthalate, which are not identified on the product label.

Other doTERRA Products Contain Synthetics

89. doTERRA's Basil essential oil product contains unlabeled and synthetic linalool.

90. doTERRA's DigestZen essential oil blend product contains the synthetic ethyl vanillin, which is not identified on the product label.

91. doTERRA's On Guard essential oil blend product contains the synthetic 2-hexen-1-ol, as well as synthetic linalool, which are not identified on the product label.

92. doTERRA's Peppermint Beadlets product contains the synthetic ethyl vanillin, which is not identified on the product label.

93. doTERRA's GX Assist dietary supplement contains the synthetic ethyl vanillin, which is not identified on the product label.

94. doTERRA's Anti-Aging Moisturizer contains the synthetic benzyl acetate instead of Jasmine essential oil as claimed on the product label. This product does not contain biomarkers for Jasmine essential oil.



doTERRA's Certified Pure Therapeutic Grade (CPTG) Designation  
Is False and/or Misleading

95. doTERRA's use of the term "Certified Pure Therapeutic Grade" is also false and/or misleading and constitutes false advertising because it is used by doTERRA to represent to essential oils consumers that its essential oils are 100% pure and that the purity of doTERRA's essential oils has been certified by a regulator or an independent third party.

96. doTERRA's product guide states that doTERRA is committed to "producing our essential oil products to the highest standard of quality, purity, and safety used in the industry—CPTG Certified Pure Therapeutic Grade." (doTERRA 2012-2013 Product Guide.)

97. Upon information and belief, doTERRA and its distributors have at times misrepresented and/or knowingly perpetuated a false belief among doTERRA distributors and essential oil consumers that doTERRA essential oils are FDA certified or approved.

98. In fact, "Certified Pure Therapeutic Grade" is a phrase that doTERRA has federally registered as a trademark and has used for marketing purposes.

99. doTERRA's oils are not pure and are not certified pure by the FDA or any independent third party.

doTERRA's False Advertisements Caused  
Significant Harm to Young Living

100. On information and belief, doTERRA has made other similar misrepresentations about its essential oils and the above products.

101. On information and belief, further testing of additional doTERRA products will reveal additional evidence of doTERRA's false advertising.

102. The misrepresentations and false advertisements described herein have caused significant harm to Young Living.

103. doTERRA does not compete on a fair playing field. It has solicited Young Living distributors and consumers to switch to doTERRA essential oils based on its false advertisements that doTERRA's essential oils are 100% pure and Young Living's essential oils are not.

104. Consumers and distributors of essential oils have relied on doTERRA's false advertisements, for example, concerning the purity of their products and the comparative impurity of Young Living's products when making purchasing decisions and decisions about which company to join as independent distributors.

105. These consumers and distributors have also relied on doTERRA's misrepresentations that consumers can test the purity of Young Living and doTERRA essential oils for themselves and should select the essential oils with the sweeter and more pleasing odor (doTERRA's essential oils) because a pleasing odor indicates they are "pure."

106. Through doTERRA's advertising contradicting the synthetic origin and adulterated nature of its essential oils, doTERRA has expanded its business and has obtained a significant segment of the market for essential oils.

107. doTERRA has therefore obtained substantial profits of an amount to be proven at trial at Young Living's expense. Its false advertisements have also done significant damage to Young Living's reputation and good will.

108. Young Living continues to be harmed by doTERRA's unfair competition through doTERRA's false advertisements.

**FIRST CLAIM FOR RELIEF**  
**(False Advertising, 15 U.S.C. §1125(a))**

109. Young Living realleges and incorporates by this reference the preceding paragraphs of this Complaint as if fully set forth herein.

110. doTERRA sells and offers to sell essential oils advertised as “Certified Pure Therapeutic Grade,” “100% pure,” “natural aromatic products extracted from plants,” “free of synthetic compounds or contaminants,” and containing no “fillers or artificial ingredients,” and other materially false statements.

111. doTERRA’s representations described above, which concern the purity of doTERRA’s essential oils, and its other false statements, were made in commercial advertising and/or promotion, including on their website, in their product magazines, and distributed through presentations to their distributors and a wide audience of current and potential essential oils consumers.

112. doTERRA’s representations described above, including those which concern the purity of doTERRA’s essential oils, are literally false and/or misleading and misrepresent the nature, characteristics, and/or qualities of doTERRA products and/or commercial activities.

113. doTERRA’s representations described above, which allege that Young Living’s essential oils lack purity and are therefore inferior vis a vis Young Living’s essential oils and products, are also literally false and/or misleading and misrepresent the nature characteristics, and/or qualities of Young Living products and/or commercial activities.

114. doTERRA’s representations that its essential oils meet doTERRA’s own alleged standards for certified pure therapeutic grade essential oils are also false and/or misleading.

115. doTERRA's false and/or misleading descriptions and representations of fact are made in interstate commerce.

116. doTERRA's representations concerning the natural origin and purity of its products and the comparative impurity of Young Living's products are material to the purchasing decisions of their current and potential customers and distributors in that such individuals rely on these representations when making purchasing decisions and decisions about which company to join as an independent distributor.

117. Young Living distributors also rely on these misrepresentations when they accept doTERRA's solicitations to move their distributorships from Young Living to its competitor doTERRA and begin soliciting additional distributors and customers for doTERRA.

118. As a result of doTERRA's actions in commercial advertising and promotion, there is actual deception or at least a tendency to deceive a substantial portion of the intended audience.

119. As an example of this actual deception and tendency to deceive the intended audience, doTERRA's false advertisements and misleading claims about the superior purity of doTERRA's Certified Therapeutic Grade essential oils are featured in documents published to the essential oils market by former distributors for Young Living who have been successfully solicited to act as distributors (and consumers of) doTERRA products.

120. doTERRA's actions have, among other things, caused and are likely to continue to cause injury to Young Living and/or a loss in Young Living's goodwill, thus violating 15 U.S.C. § 1125(a).

121. doTERRA's advertisements concerning its "pure" essential oils, combined with the evidence concerning its adulteration of its essential oils, gives rise to a strong inference that doTERRA's false and/or misleading advertising violations are willful and deliberate.

122. doTERRA's false and/or misleading advertising has caused Young Living actual damages in the form of lost distributors and sales in an amount to be proven at trial. Such damages should be trebled as allowed by 15 U.S.C. § 1117(a).

123. Young Living is further entitled to recover doTERRA's profits, the amount of which is currently unknown to Young Living, and which amount should be trebled as allowed by 15 U.S.C. § 1117(a).

124. This is an exceptional case pursuant to 15 U.S.C. § 1117(a), and Young Living is therefore entitled to recover its attorney fees from doTERRA.

125. Pursuant to 15 U.S.C. § 1117(a), Young Living is also entitled to recover its costs of suit.

126. Young Living is being irreparably harmed by doTERRA's false and/or misleading advertising, and Young Living has no adequate remedy at law. Young Living is therefore entitled to injunctive relief barring doTERRA from engaging in further acts that violate 15 U.S.C. § 1125(a).

**SECOND CLAIM FOR RELIEF**  
**(Violation of Utah Unfair Practices Act, Utah Code Ann. § 13-5-2.5)**

127. Young Living realleges and incorporates by this reference the preceding paragraphs of this Complaint as if fully set forth herein.

128. doTERRA's literally false and/or misleading advertising concerning the purity of its essential oils and lack of purity of Young Living's essential oils, and as otherwise alleged

more fully above, constitutes an unfair method of competition proscribed by Utah Code Ann. § 13-5-2.5.

129. doTERRA's literally false and/or misleading advertising concerning the purity of its essential oils and/or lack of purity of Young Living's essential oils, and its other misrepresentations above, caused distributors and customers to choose doTERRA essential oils over Young Living essential oils.

130. doTERRA's actions have caused Young Living damages in an amount to be proven at trial.

131. Under Utah Code Ann. § 13-5-14, Young Living is entitled to recover the greater of treble the amount of its actual damages or statutory damages as provided therein, plus its costs of suit.

132. Young Living is being irreparably harmed by doTERRA's false and/or misleading advertising, and Young Living has no adequate remedy at law. Young Living is therefore entitled to injunctive relief barring doTERRA from engaging in unfair methods of competition against Young Living.

**THIRD CLAIM FOR RELIEF**  
**(Unfair Competition, Deceptive Advertising,**  
**and Unfair Trade Practices Under Utah Common Law)**

133. Young Living realleges and incorporates by this reference the preceding paragraphs of this Complaint as if fully set forth herein.

134. Through its actions described above, doTERRA is engaged in making false and deceptive statements about the purity of its products and false and deceptive statements

concerning the purity of Young Living's products as a means to unfairly compete with Young Living.

135. doTERRA's actions as described above constitute unfair competition, deceptive advertising, and unfair trade practices proscribed by the common law of the State of Utah.

136. doTERRA's actions have caused Young Living damages in an amount to be proven at trial.

137. In light of the wanton and willful nature of doTERRA's actions, Young Living is entitled to an award of exemplary and punitive damages against doTERRA.

138. Young Living is also entitled to injunctive relief barring doTERRA from engaging in further acts of unfair competition, deceptive advertising, and unfair trade practices.

**FOURTH CLAIM FOR RELIEF  
(Tortious Interference with Existing and Prospective Economic Relations)**

139. Young Living realleges and incorporates by this reference the preceding paragraphs of this Complaint as if fully set forth herein.

140. doTERRA has interfered, and continues to interfere, with Young Living's existing and potential economic relations by making false statements about the purity of Young Living's products to Young Living's current and prospective distributors and other consumers as well as by making false statements about the alleged purity of doTERRA's products to entice distributors and other consumers to switch from Young Living's oils to doTERRA's oils.

141. The actions of doTERRA have been taken for an improper purpose of inflicting injury on Young Living, and/or have been effected through the improper means of making false statements.

142. doTERRA’s interference with Young Living’s existing and potential economic relations has caused Young Living damages in the form of lost distributors and other consumers, and sales in an amount to be proven at trial.

143. In light of the willfulness of doTERRA’s actions, Young Living is entitled to an award of exemplary and punitive damages against doTERRA.

144. Young Living is being irreparably harmed by doTERRA’s actions, and Young Living has no adequate remedy at law. Young Living is, therefore, entitled to injunctive relief barring doTERRA from further interfering with Young Living’s existing and prospective economic relations.

**FIFTH CLAIM FOR RELIEF  
(Cancellation of Federal Trademark Registrations)**

145. Young Living realleges and incorporates by this reference the preceding paragraphs of this Complaint as if fully set forth herein.

146. On information and belief, doTERRA Holdings, LLC, owns the following trademarks and United States trademark registrations, which are hereinafter collectively referred to as the “CPTG Trademark Registrations”:

<u>Registration No.</u>	<u>Registration Date</u>	<u>Trademark</u>
3,691,864	October 6, 2009	CPTG CERTIFIED PURE THERAPEUTIC GRADE
3,688,786	September 29, 2009	CPTG CERTIFIED PURE THERAPEUTIC GRADE
3,624,313	May 19, 2009	CPTG
3,617,242	May 5, 2009	CPTG



147. On information and belief, doTERRA Holdings, LLC, licensed use of the trademarks that are the subject of the CPTG Trademark Registrations to doTERRA, Inc., and/or doTERRA International, LLC.

148. On information and belief, doTERRA Holdings, LLC, has used the trademarks that are the subject of the CPTG Trademark Registrations in commerce directly and/or through these licensees.

149. The CPTG Trademark Registrations, on their face and as used by doTERRA in commerce, deceptively, falsely, and misleadingly state and/or suggest that doTERRA's products bearing such trademarks are pure; that doTERRA has developed a certification standard and that its products meet that standard; that a governmental or other third party have approved or provided the designation or otherwise "certified" the product; and/or that a governmental or other third party have created a standard that doTERRA's products supposedly meet, all of which claims are false.

150. The CPTG Trademark Registrations are deceptive, falsely suggest a connection with governmental or other third party institutions, and are deceptively misdescriptive, and therefore not subject to federal registration pursuant to 15 U.S.C. § 1052(a), (e).

151. The trademarks or the dominant features of the trademarks that the subject of the CPTG Trademark Registrations, namely the term CERTIFIED PURE THERAPEUTIC GRADE and the acronym CPTG, which is readily understood to mean and refer to CERTIFIED PURE THERAPEUTIC GRADE, describe an ingredient, quality, characteristic, function, feature, purpose, or use of doTERRA's goods.

152. As a result, the CPTG Trademark Registrations are merely descriptive of doTERRA's goods and, because the CPTG Trademark Registrations have not developed secondary meaning, they are not subject to federal registration pursuant to 15 U.S.C. § 1052(e).

153. Young Living has been and will be damaged by the continued existence on the federal register of the CPTG Trademark Registrations because, among other things, they wrongly give doTERRA an unfair and improper advantage in marketing its products and soliciting and recruiting distributors and customers.

154. Accordingly, Young Living is entitled to a declaration that the CPTG Trademark Registrations are invalid and an order cancelling these Registrations.

#### **JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Young Living demands a trial by jury of all issues so triable.

#### **PRAYER FOR RELIEF**

WHEREFORE, Young Living respectfully prays for the following relief:

1. That doTERRA, its officers, directors, members, agents, servants, employees, representatives, attorneys, related companies, successors, assigns, distributors, and all others in active concert or participation with doTERRA or any of them, be enjoined from:

- a. Directly or indirectly using or placing in commerce any advertising that misrepresents the nature, quality, or characteristics of doTERRA's products; and
- b. Unfairly competing with Young Living in any manner whatsoever.

2. That doTERRA be directed to file with the Court and serve on Young Living within thirty days after the service of any injunction order, a report in writing, under oath, setting forth in detail the manner and form in which it has complied with the injunction.

3. For an order that doTERRA promulgate advertising to correct and/or prevent any consumer confusion or false representations they have created or made in the marketplace, and/or compensate Young Living for the advertising and other expenditures necessary to dispel any such consumer confusion or false representations.

4. For an order that doTERRA cancel all pending orders for any products that were or are the subject of false and/or misleading advertising, including, without limitation, advertising that misrepresents the nature, quality, or characteristics of its products.

5. That Young Living be awarded judgment for three times its actual damages, in an amount to be determined at trial.

6. That doTERRA account to Young Living for doTERRA's profits arising from the acts complained of herein, and that Young Living be awarded treble doTERRA's profits, in accordance with the accounting demanded.

7. That Young Living be awarded applicable statutory damages, in the event it so elects, and/or actual damages are not proven.

8. That Young Living be awarded pre- and postjudgment interest.

9. That Young Living be awarded its costs of suit, including reasonable expenses and attorneys fees.

10. That Young Living be awarded exemplary and punitive damages.

11. That the Court cancel the CPTG Trademark Registrations.

12. That Young Living be awarded such other and further relief as the Court deems just and proper.

DATED this 18<sup>th</sup> day of July, 2013.

RAY QUINNEY & NEBEKER P.C.

/s/ Arthur B. Berger  
Justin T. Toth  
Arthur B. Berger  
Samuel Straight  
Maria E. Heckel

*Attorneys for Plaintiff Young Living Essential Oils,  
LC*

Plaintiff's Address:

Young Living Essential Oils, LC  
3125 Executive Pkwy  
Lehi, UT 84043

**CERTIFICATE OF SERVICE**

I hereby certify that on the 18<sup>th</sup> day of July, 2013, a true and correct copy of the above AMENDED COMPLAINT was served via U. S. Mail and email on the following:

Stephen Quesenberry  
Aaron R. Harris  
DURHAM JONES & PINEGAR, PC  
RiverView Plaza, Suite 300  
4844 North 300 West  
Provo, Utah 84604-5663

/s/ Lori McGee  
Lori M. McGee

1241753

EXHIBIT A



**INSTITUT DES SCIENCES ANALYTIQUES**  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

Villeurbanne le 10 avril 2013

Informations :

Gestion de la prestation analytique

De 8h -12 h et 13h – 16h30

Tel : 04.37.42.36.36

Télécopie : 04. 37.42.36.37

Mél : bda@sca.cnrs.fr

**YOUNG LIVING**

**M. WOOLLEY**

**3125 EXECUTIVE PARKWAY**

**UT 84600 LEHI - ETATS UNIS**

**REPORT OF ANALYSIS N° 13/00196**

**OBJECT :**

*Analysis of peppermint essential oils*

**SCIENTIFIC MANAGER**

CASABIANCA Hervé

04.37.42.36.04.

h.casabianca@sca.cnrs.fr



**INSTITUT DES SCIENCES ANALYTIQUES**  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

**1. Your reference**

Order form of :

**2. Samples references for analysis**

Recording date of the request of analysis: 20/03/2013

Samples references	N° SCA :	Date reception
PEPPERMINT 1118702 (Exp 2016.07)	13/02556	20/03/2013
PEPPERMINT 1225402 (Exp 2017.09)	13/02557	20/03/2013
PEPPERMINT 130311A (Exp 2018.01)	13/02558	20/03/2013

**3. Analyses realized by**

MAITRE Dany (GC-MS analysis)  
GUIBERT Sylvie (isotopic analysis)  
ANCHISY Anthony (isotopic analysis)

**4. Operating conditions**

- GC-MS analysis :

Column HP1 50m x 320µm x 0.52µm  
Inject: 0.2µl split: 120:1  
Gradient elution 80°C to 310°C  
MS scan 30 to 450 uma  
Identification by librairies CNRS, Wiley, Nist

Column INNOWAX 60m x 320µm x 0.50µm  
Inject: 0.2µl split: 120:1  
Gradient elution 60°C to 250°C  
MS scan 30 to 350 uma  
Identification by librairies CNRS, Wiley, Nist

- Isotopic analysis δD13C by GC-C-IRMS :

Column INNOWAX 60m x 320µm x 0.50µm

**5. Résultats**

Cf following pages





INSTITUT DES SCIENCES ANALYTIQUES  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

PEPPERMINT

	1118702 (Exp 2016.07)	1225402 (Exp 2017.09)	1303117 (Exp 2018.01)	
	SCA13/02556	SCA13/02557	SCA13/02558	NORM
2 METHYL PROPANAL	0.01	<0.01	0.01	
3 METHYL BUTANAL	0.03	0.02	0.03	
2 METHYL BUTANAL	0.02	0.01	0.02	
2 ETHYL FURAN	0.01	<0.01	0.01	
3 METHYL BUTANOL	0.02	0.01	0.01	
2 METHYL BUTANOL	0.01	0.01	0.01	
HEXANAL	<0.01	<0.01	<0.01	
TRANS 2 HEXENAL	0.01	<0.01	0.01	
ETHYL 2 METHYL BUTYRATE	0.01	<0.01	0.01	
CIS 3 HEXENOL	0.01	0.01	0.01	
HEXANOL	<0.01	<0.01	<0.01	
HEPTANOL 3	<0.01	<0.01	<0.01	
2,5 DIETHYL TETRAHYDROFURAN	0.02	0.01	0.03	
3 METHYL CYCLOHEXANONE	0.02	0.02	0.01	
TRICYCLENE	<0.01	<0.01	<0.01	
ALPHA THUJENE	0.06	0.03	0.05	
ALPHA PINENE	2.52	2.17	2.32	
CAMPHERE	0.04	0.02	0.03	
VERBENENE	<0.01	<0.01	<0.01	
OCTEN 1 OL 3	0.07	0.06	0.07	
SABINENE	0.40	0.32	0.41	
BETA PINENE	2.68	2.41	2.75	
OCTANOL 3	0.18	0.15	0.16	
OCTANONE 3	0.01	0.01	0.02	
MYRCENE	0.27	0.20	0.29	
ALPHA PHELLANDRENE	0.09	0.03	0.05	
ISOPENTYL ISOBUTANOATE	<0.01	<0.01	<0.01	
ALPHA TERPINENE	0.23	0.28	0.32	
PARA-CYMENE	0.45	0.26	0.16	
4(8) MENTHENE	0.01	0.01	0.01	
LIMONENE	5.24	4.68	4.93	1< - >2.5
1,8 CINEOLE	10.32	9.81	10.03	4< - >6
CIS BETA OCIMENE	0.21	0.14	0.27	
TRANS BETA OCIMENE	0.06	0.04	0.07	
GAMMA TERPINENE	0.68	0.44	0.63	
OCTANOL-1	0.01	0.01	0.01	
TRANS THUJANOL 4	0.47	0.41	0.45	0.5< - >2.3
CIS LINALOL OXYDE	0.03	0.02	0.02	
PARA-CYMENENE	0.01	0.01	0.01	
TERPINOLENE	0.14	0.12	0.19	
LINALOL	0.21	0.19	0.20	
CIS THUJANOL 4	0.04	0.04	0.06	
2 METHYL BUTYL 2 METHYL BUTANOATE	0.07	0.05	0.08	
2 METHYL BUTYL VALERATE	0.09	0.04	0.08	
BETA THUJONE	0.01	0.01	0.01	
ALPHA FENCHOL	0.01	<0.01	0.01	
CIS PARA MENTH 2 EN 1 OL	0.05	0.05	0.03	



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## CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

OCTANOL 3 ACETATE	0.02	0.01	0.02
(4E,6Z) ALLO-OCIMENE	0.01	0.01	0.01
TRANS PARA MENTH 2 EN 1 OL	0.06	0.05	0.04
TRANS PINOCARVEOL	0.03	<0.01	<0.01
ISOPULEGOL	0.15	0.14	0.13
MENTHONE	16.07	17.07	17.40
ISOMENTHONE	2.98	3.18	3.33
DELTA TERPINEOL	0.12	0.12	0.13
MENTHOFURANE	2.68	3.12	2.76
BORNEOL	0.02	0.02	0.02
ISO-PINOCAMPHONE	0.02	0.02	0.02
NEOMENTHOL	2.76	2.99	2.79
MENTHOL	36.64	37.74	34.59
METHYL SALICYLATE	0.01	0.01	0.01
TERPINENE 4 OL	0.49	0.53	0.31
ISOMENTHOL	0.61	0.48	0.59
ALPHA TERPINEOL	0.44	0.31	0.26
NEOISOMENTHOL	0.13	0.13	0.15
MYRTENOL	0.04	0.02	0.02
CIS PIPERITOL	0.03	0.03	0.02
TRANS PIPERITOL	0.02	0.02	0.01
CITRONNELLOL	0.03	0.02	0.02
NEROL	<0.01	<0.01	<0.01
PULEGONE	1.10	1.41	0.93
CARVONE	<0.01	0.02	0.04
CIS 3 HEXENYL ISOVALERATE	0.06	0.03	0.04
MENTHYL ACETATE (other isomer)	0.02	0.02	0.01
HEXYL ISOVALERATE	0.03	0.03	0.05
PIPERITONE	0.45	0.34	0.41
ISOPULEGYL ACETATE	0.03	0.03	0.03
NEOMENTHYL ACETATE	0.31	0.26	0.26
THYMOL	0.04	0.04	0.05
BORNYL ACETATE	<0.01	0.01	<0.01
MENTHYL ACETATE	4.75	4.59	4.99
DIHYDROEDULAN I	0.06	0.05	0.07
DIHYDROEDULAN II	0.06	0.05	0.06
ISOMENTHYL ACETATE	0.29	0.21	0.25
EUGENOL	0.01	0.01	0.02
ALPHA TERPENYL ACETATE	0.03	0.01	0.01
CIS JASMONE	0.01	0.01	0.01
ALPHA YLANGENE	0.01	0.01	0.01
ALPHA COPAENE	0.04	0.03	0.04
BETA BOURBONENE	0.20	0.19	0.21
BETA CUBEBENE	0.01	0.01	0.01
BETA ELEMENE	0.10	0.11	0.09
ETHYL VANILLINE	0.27	0.17	0.18
BETA YLANGENE	0.03	0.04	0.04
TRANS BETA CARYOPHYLLENE	1.59	1.84	1.96
BETA COPAENE	0.03	0.04	0.06
AROMADENDRENE	0.02	0.01	<0.01
MINTFURANONE (1)	0.05	0.08	0.03
MINTFURANONE (2)	0.01	0.02	<0.01
(E) BETA FARNESENE	0.16	0.22	0.32
ALPHA HUMULENE	0.09	0.12	0.14
ALLO-AROMADENDRENE	<0.01	<0.01	0.08
GAMMA MUUROLENE	0.03	0.03	0.06

36&lt; -&gt;46



# INSTITUT DES SCIENCES ANALYTIQUES

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

GERMACRENE D	1.15	1.12	1.59
BICYCLOGERMACRENE	0.20	0.19	0.28
GAMMA CADINENE	0.01	0.02	0.03
DELTA CADINENE	0.06	0.06	0.09
SPATHULENOL	0.01	0.01	0.02
CARYOPHYLLENE OXYDE	0.03	0.02	0.05
VIRIDIFLOROL	0.10	0.17	0.09
T-MUUROLOL	<0.01	<0.01	0.01
MINTSULFIDE	<0.01	<0.01	0.01
<b>TOTAL %</b>	<b>99.64</b>	<b>99.75</b>	<b>99.14</b>

## Isotopic analysis $\delta D_{13C}$ by GC-C-IRMS

	<b>1118702</b> <b>(Exp 2016.07)</b> <b>SCA13/02556</b>	<b>1225402</b> <b>(Exp 2017.09)</b> <b>SCA13/02557</b>	<b>1303117</b> <b>(Exp 2018.01)</b> <b>SCA13/02558</b>
	<b><math>\delta D_{13C}</math></b>	<b><math>\delta D_{13C}</math></b>	<b><math>\delta D_{13C}</math></b>
alpha pinene	-29.3	-26.5	-27.7
beta pinene	-29.6	-29.2	-28.9
menthone	-26.9	-27.6	-27.4
isomenthone	-28.6	-29	-29.2
menthyl acetate	-30.4	-31.1	-31.5
menthol	-28.4	-28.5	-28.5

Measurement standard deviation :  $\pm 0.03 \delta\%$

## 6. Comments and conclusion

For each sample, the composition is not in agreement with norm ISO/FDIS 856.  
Abnormal presence of ethyl vanilline (molecule of synthetic origin).

The obtained isotopic profile follows that of a peppermint of natural origin, in agreement with published datas :

GC/IRMS in the analysis of peppermint oil and its importance in the authenticity control.  
Journal of essential oil research (1995) vol 43 page 123-131

## 7. Appendices

Chromatograms, listings GC-MS

-----END OF REPORT-----

**EXHIBIT B**



**INSTITUT DES SCIENCES ANALYTIQUES**  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

Villeurbanne le 10 avril 2013

Informations :

Gestion de la prestation analytique

De 8h -12 h et 13h – 16h30

Tel : 04.37.42.36.36

Télécopie : 04. 37.42.36.37

Mél : bda@sca.cnrs.fr

**YOUNG LIVING**

**M. WOOLLEY**

**3125 EXECUTIVE PARKWAY**

**UT 84600 LEHI - ETATS UNIS**

**REPORT OF ANALYSIS N° 13/00199**

**OBJECT :**


*Analysis of lavender essential oils*

**SCIENTIFIC MANAGER**

CASABIANCA Hervé

04.37.42.36.04.

h.casabianca@sca.cnrs.fr





**INSTITUT DES SCIENCES ANALYTIQUES**  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

**1. Your reference**

Order form of :

**2. Samples references for analysis**

Recording date of the request of analysis: 20/03/2013

Référence des échantillons	N° SCA :	Date de réception
LAVENDER 1133303 (Exp 2016.11)	13/02559	20/03/2013
LAVENDER 123352A (Exp 2017.11)	13/02560	20/03/2013
LAVENDER 130431A (Exp 2018.02)	13/02561	20/03/2013

**1. Analyses realized by**

MAITRE Dany (GC-MS analysis)  
SCHIETS Frédéric (enantiomeric analysis)

**2. Operating conditions**

- GC-MS analysis :

Column HP1 50m x 320µm x 0.52µm  
Inject: 0.2µl split: 120:1  
Gradient elution 80°C to 310°C  
MS scan 30 to 450 uma  
Identification by librairies CNRS, Wiley, Nist

Column INNOWAX 60m x 320µm x 0.50µm  
Inject: 0.2µl split: 120:1  
Gradient elution 60°C to 250°C  
MS scan 30 to 350 uma  
Identification by librairies CNRS, Wiley, Nist

- Enantiomeric analysis of linalool and linalyl acetate :

Column MEGA Det TBu Sil β CDX 25m x 250µm x 0.25µm  
Inject (diluted sample): 1µl split: 50:1  
Gradient elution 65°C to 175°C

**3. Résultats**

Cf following pages



INSTITUT DES SCIENCES ANALYTIQUES  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

LAVENDER

	1133303 (Exp 2016.11) SCA13/02559	123352A (Exp 2017.11) SCA13/02560	130431A (Exp 2018.02) SCA13/02561
2 METHYL 3 BUTENE 2 OL	0.01	0.01	0.01
2 METHYL FURAN	<0.01	<0.01	<0.01
3 METHYL BUTANAL	0.01	0.01	0.01
2 METHYL BUTANAL	<0.01	<0.01	0.01
3 METHYL BUTANOL	<0.01	<0.01	<0.01
2 METHYL BUTANOL	<0.01	<0.01	<0.01
TOLUENE	0.01	<0.01	0.01
BUTYL ACETATE	0.01	0.01	0.02
HEXYL METHYL ETHER	0.04	0.11	0.07
TRANS 2 HEXENAL	<0.01	<0.01	<0.01
CIS 3 HEXENOL	0.02	0.01	0.01
HEXANOL	0.02	0.07	0.04
ISOBUTYL BUTYRATE	0.01	0.01	0.01
TRICYCLENE	0.02	0.03	0.01
ISOBUTYL METHACRYLATE	0.01	0.01	0.01
ALPHA THUJENE	0.04	0.05	0.08
BENZALDEHYDE	0.01	0.01	0.01
ALPHA PINENE	0.23	0.23	0.18
ALPHA FENCHENE	<0.01	<0.01	<0.01
CAMPHENE	0.13	0.21	0.09
VERBENENE	<0.01	0.01	<0.01
HEPTANOL-1	<0.01	<0.01	<0.01
OCTEN 1 OL 3	0.20	0.16	0.10
OCTANONE 3	1.29	2.19	2.09
SABINENE	0.03	0.04	0.04
BETA PINENE	0.06	0.06	0.03
BUTYL BUTYRATE	0.07	0.09	0.09
OCTANOL 3	0.06	0.16	0.27
MYRCENE	0.50	0.78	0.57
CIS 3 HEXENYL ACETATE	0.01	0.01	<0.01
ISOBUTYL ISOVALERATE	0.01	0.01	0.01
HEXYL ACETATE	0.23	0.47	0.55
PSEUDOLIMONENE	0.01	0.01	0.03
ALPHA PHELLANDRENE	0.03	0.04	0.04
2 METHYL BUTYL ISOBUTYRATE	0.02	0.02	0.02
BENZYL ALCOOL	0.01	<0.01	<0.01
DELTA 3 CARENE	0.21	0.16	0.07
META-CYMENE	0.04	0.05	0.02
ALPHA TERPINENE	0.03	0.05	0.05
PARA-CYMENE	0.14	0.17	0.09
LIMONENE	0.48	0.48	0.34
1,8 CINEOLE + BETA PHELLANDRENE	1.00	1.28	0.97
CIS BETA OCIMENE	2.71	3.13	2.26
BUTYL ISOVALERATE	0.23	0.22	0.14
ISOBUTYL ANGELATE	0.28	0.21	0.20
TRANS BETA OCIMENE	1.43	2.61	2.76
METHYL ALLYL ANGELATE	0.05	0.05	0.05
GAMMA TERPINENE	0.06	0.08	0.12
OCTANOL	0.01	0.01	0.01



INSTITUT DES SCIENCES ANALYTIQUES  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

TRANS 4 THUJANOL	0.04	0.03	0.06
CIS LINALOL OXIDE	0.12	0.12	0.09
TRANS LINALOL OXIDE	0.18	0.18	0.15
TERPINOLENE	0.12	0.15	0.09
ROSE FURAN	0.01	0.01	0.01
HEXYL PROPIONATE	0.01	0.02	0.02
LINALOL	25.79	27.19	28.96
CIS THUJANOL 4	0.03	0.03	0.04
2 METHYL BUTYL 2 METHYL BUTANOATE	0.31	0.23	0.23
OCTEN 1 YL 3 ACETATE	0.71	1.01	0.69
CIS ROSE OXIDE	0.01	0.02	0.02
ALPHA FENCHOL	0.01	0.02	0.01
OCTANOL 3 ACETATE	0.03	0.18	0.16
CIS PARA MENTH 2 EN 1 OL	0.02	0.06	0.04
TRANS ROSE OXIDE	0.01	<0.01	<0.01
ALLO-OCIMENE (4E,6Z)	0.08	0.07	0.07
CAMPHRE	0.22	0.23	0.11
TRANS PARA MENTH 2 EN 1 OL	0.01	0.01	0.01
TANS PINOCARVEOL	0.06	0.06	0.05
(E) ISOAMYL ANGELATE	0.03	0.18	0.09
HEXYL ISOBUTYRATE	0.07	0.09	0.18
(Z) ISOAMYL ANGELATE	0.10	0.10	0.10
NEROL OXIDE	0.01	0.01	<0.01
PINOCARVONE	0.03	0.03	0.03
MENTHONE	0.09	0.08	0.08
LAVANDULOL	0.84	0.74	0.90
BORNEOL	0.76	0.70	0.49
LINALOL (E) PIRANIC OXIDE	0.02	0.02	0.02
CRYPTONE	0.20	0.27	0.24
PARA-CYMENE 8 OL	0.04	0.05	0.03
(E,Z) UNDECATRIENE 1,3,5	0.03	0.05	0.07
TERPENDIOL	0.02	0.02	0.01
TERPINENE 4 OL	1.52	1.29	2.46
MYRTENAL	0.01	0.01	0.01
ALPHA TERPINEOL	1.08	1.15	1.00
HEXYL BUTYRATE	0.20	0.26	0.36
METHYL CHAVICOL	0.01	<0.01	0.01
TRANS PIPERITOL	0.01	<0.01	0.01
OCTYL ACETATE	0.02	0.02	0.01
TRANS CARVEOL	0.02	0.02	0.01
ALPHA FENCHYL ACETATE	0.01	<0.01	0.01
CITRONNELLOL	1.14	0.39	0.35
NEROL	0.23	0.19	0.15
CUMINALDEHYDE	0.06	0.10	0.10
NERAL	0.02	0.02	0.02
CARVONE	0.03	0.04	0.03
HEXYL 2 METHYL BUTYRATE	0.05	0.04	0.06
HEXYL ISOVALERATE	0.04	<0.01	<0.01
PIPERITONE	0.01	0.01	0.01
CIS ACETOXY LINALOL OXIDE	0.03	0.01	0.01
GERANIOL	1.13	0.61	0.50
LINALYL ACETATE	42.81	36.14	34.58
GERANIAL	0.05	0.03	0.03
PELLANDRAL	0.03	0.04	0.05
TRANS ACETOXY LINALOL OXIDE	0.25	0.12	0.13





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CITRONNELLYL FORMATE	0.11	0.10	0.10
CUMINOL	0.04	0.04	0.04
BORNYL ACETATE	0.24	0.32	0.23
LAVANDULYL ACETATE	4.39	4.12	2.92
GERANYL FORMATE	0.06	0.04	0.04
HEXYL TIGLATE	0.04	0.02	0.03
LINALYL ACETATE (6,7) OXIDE (1)	0.03	0.01	0.02
LINALYL ACETATE (6,7) OXIDE (2)	0.03	0.01	0.02
ALPHA TERPENYL ACETATE	0.03	0.02	0.02
NERYL ACETATE	0.43	0.38	0.26
ALPHA CUBEBENE	<0.01	<0.01	<0.01
GERANYL ACETATE	0.77	0.68	0.46
HEXYL HEXANOATE	0.05	0.05	0.15
ALPHA COPAENE	0.02	0.03	0.02
DAUCENE	0.02	<0.01	<0.01
COUMARINE	0.07	0.05	0.04
BETA BOURBONENE	0.03	0.05	0.06
7 EPI-SESQUITHUJENE	0.01	0.02	0.06
BETA ELEMENE	0.01	0.01	0.01
SESQUITHUJENE	0.02	0.02	0.03
CIS ALPHA BERGAMOTENE	0.03	0.03	0.04
TRANS BETA CARYOPHYLLENE	2.00	3.19	3.85
ALPHA SANTALENE	0.25	0.32	0.34
BETA COPAENE	0.01	0.01	0.01
TRANS ALPHA BERGAMOTENE	0.09	0.10	0.12
SESQUISABINENE A	0.01	0.01	0.01
EPI BETA SANTALENE	0.02	0.02	0.02
TRANS BETA FARNESENE	0.96	2.43	4.41
SESQUISABINENE B	0.03	0.03	0.03
ALPHA HUMULENE	0.10	0.13	0.17
BETA SANTALENE	0.01	<0.01	0.01
GAMMA MUUROLENE	0.03	0.02	0.03
GERMACRENE D	0.32	0.59	0.74
(Z,E) ALPHA FARNESENE	0.04	0.04	0.06
BICYCLOGERMACRENE	0.04	0.02	0.03
geranyl ester unknow	0.04	0.01	0.01
(E,E) ALPHA FARNESENE	0.01	0.01	0.01
BETA BISABOLENE	0.05	0.05	0.06
GAMMA CADINENE	0.15	0.13	0.11
CALAMENENE	0.02	0.02	0.02
DELTA CADINENE	0.04	0.05	0.05
GERANYL BUTYRATE	0.01	0.01	0.01
TRANS NEROLIDOL	<0.01	0.01	0.01
2 PHENYL ETHYL TIGLATE	0.02	0.02	0.02
SPATHULENOL	0.01	0.01	0.01
EPOXY ISOCARYOPHYLLENE	0.01	0.01	0.01
CARYOPHYLLENE OXIDE	0.19	0.22	0.17
GAMMA EUDESMOL	0.07	0.06	0.06
T-CADINOL	0.07	0.07	0.08
ALPHA BISABOLOL	0.02	<0.01	<0.01
GERANYL TIGLATE	0.03	0.02	0.02
<b>TOTAL %</b>	<b>99.62</b>	<b>99.38</b>	<b>99.47</b>



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Enantiomeric analysis :

	LINALOOL		LINALYL ACETATE	
	(%) R	(%) S	(%) R	(%) S
<b>1133303</b> <b>(Exp 2016.11)</b> <b>SCA13/02559</b>	95.18	4.82	90.76	9.24
<b>123352A</b> <b>(Exp 2017.11)</b> <b>SCA13/02559</b>	94.65	5.35	92.04	7.96
<b>130431A</b> <b>(Exp 2018.02)</b> <b>SCA13/02559</b>	96.80	3.20	95.04	4.96

#### 4. Comments and conclusion

For each sample, the composition is in agreement with norm NF-ISO 3515 for lavender "other origins".  
But some molecules (in red) indicate presence of geranium pelargonium and chamomilla nobilis.

Enantiomeric ratios obtained for linalyl acetate do not correspond to our datas for a lavender of natural origin.  
Synthetic linalyl acetate was added to these oils.

#### 5. Appendices

Chromatograms, listings GC-MS

-----END OF REPORT-----

**EXHIBIT C**



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Villeurbanne le 10 avril 2013

Informations :

Gestion de la prestation analytique

De 8h -12 h et 13h – 16h30

Tel : 04.37.42.36.36

Télocopie : 04. 37.42.36.37

Mél : bda@sca.cnrs.fr

YOUNG LIVING

M. WOOLLEY

3125 EXECUTIVE PARKWAY

UT 84600 LEHI - ETATS UNIS

**REPORT OF ANALYSIS N° 13/00200**

**OBJECT :**

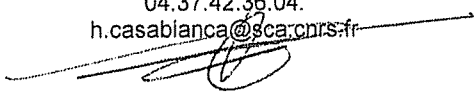
*Analysis of frankincense essential oils*

**SCIENTIFIC MANAGER**

CASABIANCA Hervé

04.37.42.36.04.

h.casabianca@sca.cnrs.fr





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**1. Your reference**

Order form of :

**2. Samples references for analysis**

Recording date of the request of analysis: 20/03/2013

Référence des échantillons	N° SCA :	Date de réception
FRANKINCENCE 1220504 (Exp 2017.07)	13/02562	20/03/2013
FRANKINCENCE 1225802 (Exp 2017.09)	13/02563	20/03/2013
FRANKINCENCE 123521A (Exp 2017.12)	13/02564	20/03/2013

**3. Analyses realized by**

MAITRE Dany (GC-MS analysis)  
SCHIETS Frédéric (enantiomeric analysis)

**4. Operating conditions**

- GC-MS analysis :

Column HP1 50m x 320µm x 0.52µm  
Inject: 0.2µl split: 120:1  
Gradient elution 80°C to 310°C  
MS scan 30 to 450 uma  
Identification by librairies CNRS, Wiley, Nist

Column INNOWAX 60m x 320µm x 0.50µm  
Inject: 0.2µl split: 120:1  
Gradient elution 60°C to 250°C  
MS scan 30 to 350 uma  
Identification by librairies CNRS, Wiley, Nist

- Enantiomeric analysis of  $\alpha$ -pinene:

Column  $\beta$  DEX 30m x 250µm x 0.25µm  
Inject (diluted sample): 1µl split: 50:1  
Gradient elution 50°C to 185°C

**5. Résultats**

Cf following pages



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FRANKINCENSE

	122054 (Exp 2017.07) SCA13/02562	1225802 (Exp 2017.09) SCA13/02563	123521A (Exp 2017.12) SCA13/02564
TOLUENE	0.01	0.01	0.02
5,5-DIMETHYL-1-VINYLBICYCLO-[2.1.1] HEXANE	0.19	0.08	0.15
TRICYCLENE	0.12	0.12	0.12
ALPHA THUYENE	4.96	5.21	5.20
ALPHA PINENE	29.28	28.17	27.98
2,4(10) THUJADIENE	0.02	0.05	0.12
ALPHA FENCHENE	0.01	0.02	0.02
CAMPHENE	0.29	0.37	0.38
VERBENENE	0.10	0.10	0.12
1,3,5 CYCLOHEPTATRIENE	0.02	0.04	0.03
SABINENE	2.41	2.54	2.63
BETA PINENE	4.09	4.01	3.80
Not identified terpene	0.05	0.02	0.03
2,3 DEHYDRO 1,8 CINEOLE	0.02	0.02	0.02
MYRCENE	1.80	1.77	1.90
2,7 DIMETHYL 1,6 OCTADIENE	0.02	0.01	0.01
ORTHO METHYL ANISOLE	0.02	0.02	0.02
1,3,8 PARA MENTHATRIENE	0.11	0.11	0.11
ALPHA PHELLANDRENE	0.28	0.61	0.70
ORTHO-CYMENENE	0.01	<0.01	0.01
DELTA 3 CARENE	0.23	0.28	0.26
ALPHA TERPINENE	0.25	0.20	0.24
PARA-CYMENE	2.55	2.34	2.33
OCTYL METHYL ETHER	0.12	0.16	0.04
LIMONENE	9.85	9.55	9.02
1,8 CINEOLE + BETA PHELLANDRENE	0.28	0.28	0.24
CIS BETA OCIMENE	0.22	0.09	0.11
TRANS BETA OCIMENE	0.06	0.04	0.04
GAMMA TERPINENE	0.39	0.35	0.35
OCTANOL-1	0.17	0.11	0.10
TRANS THUJANOL 4	0.01	0.01	0.02
PARA-CYMENENE	0.05	0.05	0.05
TERPINOLENE	0.06	0.06	0.06
LINALOL	0.07	0.04	0.05
PERILLEN	0.02	0.03	0.04
ALPHA THUJONE	0.01	0.03	0.09
ALPHA PINENE OXIDE	0.03	0.04	0.02
ALPHA CAMPHOLENE ALDEHYDE	0.06	0.06	0.08
(E) 4,8 DIMETHYL NONATRIENE	0.01	0.01	0.01
ALLO-OCIMENE	0.02	0.02	0.01
NONYL METHYL ETHER	0.01	0.02	<0.01
CAMPBRE	<0.01	0.01	0.01
TRANS PINOCARVEOL	0.15	0.17	0.24
TRANS VERBENOL	0.13	0.17	0.17
ALPHA PHELLANDREN 8 OL	0.08	0.06	0.11
PINOCAMPHONE	0.02	0.02	0.03
BETA PHELLANDREN 8 OL	0.16	0.13	0.25
BORNEOL	0.03	0.05	0.09



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PARA-CYMEN 8 OL	0.03	0.04	0.07
TERPINEN-4-OL	0.24	0.22	0.38
MYRTENAL	0.06	0.04	0.08
ALPHA TERPINEOL	0.11	0.15	0.15
MYRTENOL	0.05	0.08	0.12
VERBENONE	0.15	0.09	0.16
ALPHA PHELLANDRENE EPOXIDE	0.03	0.08	0.06
OCTYL ACETATE	7.57	7.15	7.45
TRANS CARVEOL	0.06	0.08	0.09
DODECANE	0.02	0.01	0.01
CIS CARVEOL	0.02	0.03	0.03
CUMINALDEHYDE	0.01	0.01	0.02
CARVONE	0.02	0.05	0.05
DECYL METHYL ETHER	0.38	0.29	0.17
CARVOTANACETONE	<0.01	0.04	0.03
LINALYL ACETATE	0.02	0.02	0.04
ORCINIC DIMETHYL ETHER	0.03	0.03	0.05
PHELLANDRAL	0.01	0.02	0.02
DECANOL-1	0.01	0.01	0.01
CUMINOL	0.01	0.01	0.01
THYMOL	0.01	0.01	0.01
BORNYL ACETATE	0.17	0.15	0.15
CARVACROL	0.04	0.06	0.07
MYRTENYL ACETATE	0.02	0.01	0.02
ETHYL DIHYDROCINNAMATE	0.03	0.02	0.02
EUGENOL	<0.01	<0.01	0.01
ALPHA TERPENYL ACETATE	<0.01	0.02	0.02
DELTA ELEMENE	0.11	0.04	0.07
ALPHA CUBEBENE	0.08	0.16	0.18
GERANYL ACETATE	0.06	0.02	0.04
CYCLOSATIVENE	0.01	<0.01	0.02
ALPHA YLANGENE	0.02	0.03	0.03
ALPHA COPAENE	0.85	0.77	0.77
BETA BOURBONENE	0.20	0.08	0.27
BETA CUBEBENE	0.08	0.09	0.10
BETA ELEMENE	0.18	0.40	0.31
DECYL ACETATE	0.02	0.02	0.02
CYPERENE	0.04	0.04	0.04
ISOCARYOPHYLLENE	0.01	0.01	0.02
ALPHA GURJUNENE	0.07	0.06	0.08
TRANS BETA CARYOPHYLLENE	6.95	6.95	5.84
BETA COPAENE	0.06	0.04	0.08
TRANS ALPHA BERGAMOTENE	0.19	0.13	0.38
GUAIADIENE 6,9	0.17	0.05	0.14
SELINA 4(15),6 DIENE	0.11	0.12	0.13
ALPHA HUMULENE	1.24	1.11	0.88
ALLO-AROMADENDRENE	0.15	0.16	0.16
7 $\alpha$ H,10 $\beta$ H CADINA 1(6),4 DIENE	0.02	0.02	0.05
GAMMA MUUROLENE	0.27	0.51	0.45
GERMACRENE D	0.42	0.22	0.42
TRANS BETA BERGAMOTENE	0.04	0.04	0.03
BETA SELINENE	0.08	0.24	0.37
DELTA SELINENE	0.02	0.02	0.02
TRANS MUUROLA 4(14),5 DIENE	0.09	0.16	0.08
EPI-CUBEBOL	0.06	0.12	0.09
ALPHA SELINENE	0.10	0.24	0.20



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LEDENE	0.36	0.11	0.14
BICYCLOGERMACRENE	0.04	0.04	0.04
ALPHA MUUROLENE	0.14	0.21	0.14
BETA BISABOLENE	0.08	0.10	0.22
GAMMA CADINENE	0.19	0.34	0.39
CUBEBOL	0.02	0.02	0.04
CALAMENENE	0.05	0.08	0.08
7 EPI ALPHA SELINENE	0.01	0.02	0.02
DELTA CADINENE	0.69	1.07	0.93
ZONARENE	0.08	0.07	0.04
TRANS CADINA 1,4 DIENE	0.05	0.07	0.06
TRANS ALPHA BISABOLENE	0.02	0.02	0.04
ALPHA CALACORENE	0.03	0.05	0.04
ALPHA CADINENE	0.03	0.04	0.05
ALPHA ELEMOL	0.07	0.08	0.07
LIGULOXIDE	0.08	0.09	0.07
ALPHA CARYOPHYLLENE ALCOOL	0.03	0.06	0.05
PALUSTROL	0.04	0.03	0.04
SPATHULENOL	0.03	0.08	0.06
EPOXY ISOCARYOPHYLLENE	0.03	0.04	0.03
CARYOPHYLLENE OXYDE	0.21	0.42	0.37
VIRIDIFLOROL	1.55	0.67	0.91
CUBEBAN 11 OL	0.14	0.09	0.05
LEDOL	0.05	0.04	0.05
HUMULENE EPOXYDE	0.07	0.09	0.09
GAMMA EUDESMOL	0.10	0.13	0.10
1,10 EPI-CUBENOL	0.07	0.13	0.09
T-CADINOL	0.25	0.49	0.52
ALPHA CADINOL	0.05	0.05	0.06
ALPHA MUUROLLOL	0.05	0.08	0.07
CUBENOL	0.04	0.07	0.05
BETA EUDESMOL	0.07	0.08	0.08
T-MUUROLLOL	0.12	0.15	0.13
ALPHA EUDESMOL	0.05	0.08	0.07
CARYOPHYLLEN 14 HYDROXY 9 EPI	0.02	0.05	0.05
ALPHA PHELLANDRENE DIMER	0.08	0.09	0.09
CADALENE	0.01	0.01	0.01
M-CAMPHORENE	0.03	0.02	0.03
NEOCEMBRENE	0.20	0.21	0.18
CEMBRENE	<0.01	<0.01	<0.01
P-CAMPHORENE	<0.01	<0.01	<0.01
CEMBRENE C	0.06	0.07	0.06
VERTICILLA 4(20),7,11 TRIENE	0.10	0.10	0.11
CEMBRENOL	0.33	0.35	0.34
INCENSOLE	0.64	0.74	0.70
not identified compound MM290	3.04	2.78	2.67
24-NORURSA-3,9(11),12-TRIENE	0.81	0.85	0.86
24-NOROLEANA-3,12-DIENE	0.91	0.96	2.03
24-NORURSA-3,12-DIENE	1.76	1.89	1.00
24-NORURSA-3,12-DIEN-11-ONE	2.91	2.82	3.06
BETA AMYRINE ACETATE	0.49	0.49	0.54
ALPHA AMYRINE	1.83	1.82	1.76
BETA AMYRINE	0.24	0.27	0.26
TOTAL %	98.00	96.94	96.94





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Enantiomeric analysis :

	$\alpha$ -pinene	
	(%) isomer (-)	(%) isomer (+)
<b>122054</b> (Exp 2017.07) SCA13/02562	78.78	21.22
<b>1225802</b> (Exp 2017.09) SCA13/02563	79.70	20.30
<b>123521A</b> (Exp 2017.12) SCA13/02564	76.95	23.05

#### 6. Comments and conclusion

The profile is in accordance with the frankincense type *boswellia carterii* according to the works of thesis: Comparative studies on the essential oils, pyrolysates and boswellic acids of *boswellia carterii*, *boswellia serrata*, *boswellia frereana*, *boswellia neglecta*, *boswellia rivae*.  
Thesis by Simla Basar-Istanbul (Turkey) Hamburg 2005.

No presence of abnormal molecule.

Enantiomeric ratios obtained correspond to our datas for a frankincense of natural origin.

#### 7. Appendices

Chromatograms, listings GC-MS

-----END OF REPORT-----