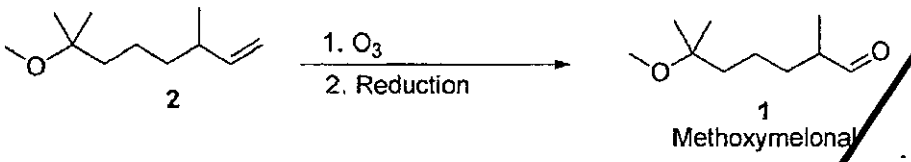
Claims

1. A process of forming methoxymelonal comprising the steps of subjecting methoxy citronellene (2) to ozonolysis, followed by a reductive work-up to give methoxymelonal, and the synthesis is set out in the scheme below:



2 1 Methoxymelonal

2. A process according to claim 1 wherein ozonolysis is carried out in a solvent selected from methanol or water.

3. A process according to claim 1 or claim 2 wherein the reductive work-up step is a hydrogenation carried out using palladium as a catalyst.

4. A process according to claim 1 or claim 2 wherein the reduction step is carried out using sulfites as reducing agents.

5. Methoxymelonal obtainable by a process according to any of the claims 1 through 4.

6. A perfume composition comprising methoxymelonal according to claim 5.

7. A method of forming a perfume composition having the impression of p.tert-butyl-alpha-methyldihydrocinnamic aldehyde, (Lilial®), comprising the step of adding to said composition methoxymelonal as defined in claim 5.

8. A perfume composition having the impression of p.tert-butyl-alpha-methyldihydrocinnamic aldehyde, (Lilial®), comprising methoxymelonal as defined in claim 5.

9. A perfume composition comprising methoxymelonal as defined in claim 5.

10. A perfume composition according to claim 8 or claim 9 additionally comprising 3-(4-tert-Butylphenyl)propionaldehyde (Bourgeonal), 2-Methyl-4-phenylbutan-2-ol (Dimethylphenylethylcarbinol), cis-4-(Isopropyl)cyclohexanemethanol (Mayol), 1-(1-hydroxyethyl)-4-(1-methylethyl)cyclohexane (Mugetanol), (4-Methyl-3-pentenyl)cyclohexenecarbaldehyde (Citrusal), 3-(p-(2-Methylpropyl)phenyl)-2-

methylpropionaldehyde (Silvial), 3-p-Cumenyl-2-methylpropionaldehyde (Cyclamenaldehyde), mixture of: cis-tetrahydro-2-isobutyl-4-methylpyran-4-ol; trans-tetrahydro-2-isobutyl-4-methylpyran-4-ol (Florol), 5,9-Dimethyl-4,8-decadienal (Geraldehyde), beta.-methyl-3-(1-methylethyl)benzenepropanal (Florhydral), Octahydro-8,8-dimethylnaphthalene-2-carbaldehyde (Cyclomyral), alpha.-Methyl-1,3-benzodioxole-5-propionaldehyde (Helional), 5-Methyl-2-(1-methylbutul)-5-propyl-1,3-dioxan (Troenan), 3-(o-Ethylphenyl)-2,2-dimethylpropionaldehyde (Floralozone), Farnesol, 3,7,11-Trimethyldodeca-1,6,10-trien-3-ol, (mixture of isomers) (Nerolidol), Cyclohexylsalicylate, Hexylsalicylate, Benzylsalicylate, Amylsalicylate, Triethylcitrate, Dipropylenglycol, n-Pentyl salicylate; Methyl-N-(7-hydroxy-3,7-dimethyloctylidene)anthranilate; Benzoic acid, 2-hydroxy-, phenylmethyl ester; 4-(1,1-Dimethylethyl)benzenepropanal; Benzoic acid, 2-hydroxy-, 3-hexenyl ester, (Z)-; Acetaldehyde, [(3,7-dimethyl-6-octenyl)oxyl-; Propanal, 3-(4-isopropylphenyl)-; Benzoic acid, 2-hydroxy-, cyclohexyl ester; Octahydro-8,8-dimethylnaphthalene-2-carboxaldehyde; dl-3,7-Dimethyl-6-octen-1-ol; trans-3,7-Dimethyl-2,6-octadien-1-ol; Cyclopentan-1-ol, 2 Pentyl-; Benzenepropanal, .alpha.-methyl-4-(1-methylethyl)-; Octahydro-4,7-methanoindanilydenebutanal; 1,6-Nonadien-3-ol, 3,7-dimethyl-; 4,8-Dimethyldeca-4,9-dienal; Benzenepropanal, .beta.-methyl-3-(1-methylethyl)-; 2-(2-Methylpropyl)-4-methyl-tetrahydro-2H-pyran-4-ol; 2-Butyl -4,6-dimethyldihydropyran (isomers); Benzoic acid, 2-hydroxy-, hexyl ester; 2-Methyl-3-(3,4-methylenedioxyphenyl)-propanal; Octanal, 7-hydroxy-3,7-dimethyl-; 1,6-Octadien-3-ol, 3,7-dimethyl-; 3-Cyclohexene-1-carboxaldehyde, 4-(4-hydroxy-4-methylpentyl)-; 2,2-Dimethyl-3-(3-methylphenyl)-propanol; Cyclohexanemethanol, 4-(1-methylethyl)-, cis-; 2-Naphthaldehyde, 1,2,3,4,5,6,7,8-octahydro-8,8-dimethyl- (mixture); 2,6-Dimethyl-5-heptenal; 1-(4-Isopropylcyclohexyl)ethanol; 3-methyl-4-phenylbutan-2-ol; Dimethyl phenyl Propanol; 1H-Indene-ar-propanal. 2,3-dihydro-1,1-dimethyl-; Lilial/methyl anthranilate Schiff base; 2-Cyclohexylidene-2-phenylacetonitrile; 3-Methyl-5-phenyl-1-pentanol; 1-methyl-3-(2-methylpropyl)cyclohexan-1-ol; 2-Methyl-3-(4-(2-methylpropyl)phenyl)propanal; 3-(4-Isobutyl-phenyl)-2-methyl-propionaldehyde; 2-Octanol, 2,6-dimethyl-; 3,7-Dimethyloctanol-3; 2-[(4-methylphenyl)methylenel-heptanal; Methyl 2-hexyl-3-oxo-cyclopentanecarboxylate; alpha-Hexylcinnamaldehyde; Cyclopentaneacetic acid, 2-oxo-2 Phenyl-, methyl ester; (3-hydroxy-2-butanone); 2,6,10-Trimethyl-9-undecenal; 2-H 1, 5-Benzodioxepin-3(4H)-one, 7 propyl-; 4H-4A, 9 Methanoazuleno (5,6 d)- 1,3-dioxole, octahydro 2,2,5,8,8,9a-hexamethyl-: 3a,6,6,9a-

Tetramethyl-dodecahydronaphtho[2,1-blfuran; 7(3-methyl butyl) -1,5-Benzodioxepin-3-one; 2-Ethyl-4-(2,2,3-trimethylcyclopent-3-enyl-1)-2-buten-1-ol; 3,4-Dioxy(cycloacetonyl)toluene; 3a,6,6,9a-Tetramethyl-dodecahydronaphtho[2,1-blfuran; 2-Propenol-1,3-phenyl-; 3,7-Dimethyl-2,6-octadienal; Hexahydro-4,7-methanoinden5(6)yl isobutyrate; Hexahydro-4,7-methanoinden-5(6)-yl acetate; Hexahydro-4,7-methanoinden-5(6)-yl propionate; Cyclohexadecanolide; 8-Cyclohexadecen-l-one; Cyclopentadecanone; 4-(2,6,6-Trimethyl-3-cyclohexen-1-yl)-but-3-en-4-one; 3-Methyl-5-(2,2,3-trimethyl-3-cyclopenten-1-yl)-4-penten-2-ol (& isomers); 1,6-Octadiene, 3-(1-ethoxyethoxy)-3,7-dimethyl-; Benzaldehyde, 3-ethoxy-4-hydroxy-; 1,4-Dioxacycloheptadecane-5,17-dione; 4-Cyclopentadecen-l-one, (Z)-; Oxacyclohexadecan-2-one; alpha,alpha-Dimethyl-p-ethylphenylpropanal; 1,4, Cyclohexanedicarboxylic acid, diethyl ester; gamma-Decalactone; Oxacyclohexadecen-2-one; 1-Propanol, 2-[1-(3,3-dimethyl-cyclohexyl) ethoxyl-2-methyl-propanoate; 1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethyl-cyclopenta-(g)-2-benzopyran; Cyclododecaneethanol, .beta.-methyl-; 3-Acetyl-3,4,10,10-tetramethylbicyclo[4.4.01decane; Isohexenyl cyclohexenyl carboxaldehyde; 4-Acetoxy-3-pentyl-2H-tetrahydropyran and isomers; (1-Methyl-2-(1,2,2-trimethylbicyclo[3.1.01-hex-3-ylmethyl)cyclop- ropyl)methanol (Mixture of diastereoisomers); Dodecanal; gamma-Methyl benzenepentanal; 5-Cyclopentadecen-1-one, 3 Methyl; 7-Acetyl-1,1,3,4,4,6-hexamethyltetralin; 2-(2(4-Methyl-3-cyclohexen-1-yl)propyl)-cyclopentanone; 1-(2,2,6-Trimethylcyclohexyl)hexanol-3; 1-(1,1-dimethylpropyl)-4-ethoxycyclohexane (mixture of cis & trans isomers); 4-(4-Hydroxyphenyl)butanone-2; 2-Norpinene-2-Propionaldehyde,6,6-Dimethyl; Acetic Acid, (1-oxopropoxy)-1-(3,3-dimethylcyclohexyl) ethyl ester; 2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-l-ol; Cyclohexadecanolide and Cyclopentadecanone mixture; Terpineol (alpha,beta,gamma); Benzaldehyde, 4-hydroxy-3-methoxy-; and 5-Cyclohexadecenone-1.

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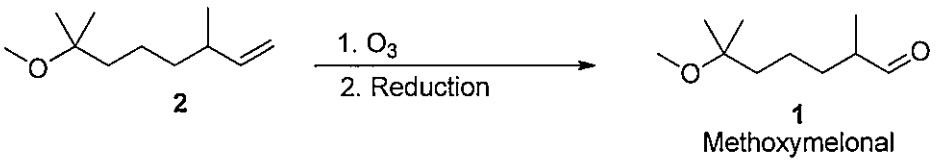

2 **1**
Methoxymelonal

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