

CLAIMS

1. A method of assessing an impact of a test oral care flavour composition on the well-being of human subjects, by performing the steps of:
 - a) Having one or more human subjects assess their well-being before brushing their teeth and in the absence of the test oral care flavour composition by scoring a plurality of well-being attributes;
 - i. wherein the well-being attributes include "not anxious", "not sad", "not restless", "not frustrated", "not stressed", "happy", "optimistic", "excited", "satisfied", "motivated", "invigorated", "interested", "not bored", "not fatigued", "mentally alert", "calm", "relaxed", and "patient"; and
 - ii. wherein each well-being attribute has a corresponding weight;
 - b) Calculating a base well-being score before teeth brushing and in the absence of the test oral care flavour composition by multiplying the score of each well-being attribute by the corresponding weight to form a product and summing these products over all well-being attributes;
 - c) Repeating steps a) and b) after teeth brushing with a toothpaste comprising the test oral care flavour composition in order to determine a well-being score with the test oral care flavour composition; and
 - d) Determining the impact of the test oral care flavour composition on the well-being by subtracting the base well-being score from the well-being score with the test oral care flavour composition.
2. The method of claim 1, wherein the weights of the well-being attributes are as follows:

well-being attribute	weight
"not anxious"	10.65%
"not sad"	10.32%
"not restless"	9.84%
"not frustrated"	9.65%
"not stressed"	7.54%
"happy"	4.70%
"optimistic"	4.61%
"excited"	4.13%
"satisfied"	3.91%
"motivated"	3.34%
"invigorated"	3.31%
"interested"	6.12%
"not bored"	5.88%

"not fatigued"	4.59%
"mentally alert"	4.41%
"calm"	2.66%
"relaxed"	2.24%
"patient"	2.10%

3. A method of preparing or optimizing an oral care flavour composition for enhancing the well-being of a human subject, the method comprising the steps of:
 - a-d) Determining the impact of one or more oral care flavour compositions on the well-being of human subjects according to the method of claim 1 or 2; and
 - e) Selecting an oral care flavour composition with a positive impact on the well-being.
4. The method of claim 3, further comprising the steps of:
 - f) comparing the oral care flavour ingredients present in those oral care flavour compositions having a positive impact on the well-being;
 - g) identifying organoleptic attributes common to those oral care flavour compositions; and
 - h) creating a new oral care flavour composition with an increased proportion of oral care flavour ingredients with the organoleptic attributes identified in step g).
5. The method according to claim 4, wherein in step h), the proportion of one or more oral care flavour ingredients having an anise organoleptic attribute is increased, and/or the proportion of one or more oral care flavour ingredients having a peppermint organoleptic attribute is increased, and/or the proportion of one or more oral care flavour ingredients having an organoleptic attribute selected from the group consisting of eucalyptus, spearmint, wintergreen, herbal, citrus, floral, fruity, cooling, warming, spicy, and sweet is increased.
6. An oral care flavour composition comprising:
 - (i) one or more oral care flavour ingredients having an anise organoleptic attribute, wherein the total amount of oral care flavour ingredients having an anise organoleptic attribute is at least 3.0 wt% of the oral care flavour composition, more preferably at least 5.0 wt%, even more preferably at least 7.0 wt%, and most preferably at least 8.0 wt%;
 - (ii) one or more oral care flavour ingredients having a peppermint organoleptic attribute, wherein the total amount of oral care flavour ingredients having a peppermint organoleptic attribute is at least 50 wt% of the oral care flavour composition, more preferably at least 55 wt%, and most preferably at least 60 wt%; and

- (iii) at least one oral care flavour ingredient having another organoleptic attribute, wherein said other organoleptic attribute is selected from the group consisting of eucalyptus, spearmint, wintergreen, herbal, citrus, floral, fruity, cooling, warming, spicy, and sweet.
7. The oral care flavour composition according to claim 6, wherein the one or more oral care flavour ingredients having an anise organoleptic attribute are selected from the group consisting of anethole, anise star oil, anise star oil reconstitutions, tarragon oil, tarragon oil reconstitutions, aniseed oil, aniseed oil reconstitutions, fennel oil, fennel oil reconstitutions, basil oil, basil oil reconstitutions, (1-(cyclopropylmethyl)-4-methoxybenzene), and mixtures thereof.
8. The oral care flavour composition according to claim 6 or 7, wherein the one or more oral care flavour ingredients having a peppermint organoleptic attribute are selected from the group consisting of peppermint oil, peppermint oil reconstitutions, L-menthol, racemic menthol, L-isomenthone, racemic isomenthone, menthyl acetate, menthofuran, 2-butan-2-ylcyclohexan-1-one, and mixtures thereof.
9. The oral care flavour composition according to any one of claims 6 to 8, comprising at least one of (iii.1) to (iii.11) in the following amount:
- (iii.1) one or more oral care flavour ingredients having an eucalyptus organoleptic attribute, wherein the total amount of oral care flavour ingredients having an eucalyptus organoleptic attribute is at least 20 wt% of the oral care flavour composition, more preferably at least 25 wt%, and most preferably at least 30 wt%; and/or
- (iii.2) one or more oral care flavour ingredients having a spearmint organoleptic attribute, wherein the total amount of oral care flavour ingredients having a spearmint organoleptic attribute is at least 20 wt% of the oral care flavour composition, more preferably at least 25 wt%, and most preferably at least 30 wt%; and/or
- (iii.3) one or more oral care flavour ingredients having a wintergreen organoleptic attribute, wherein the total amount of oral care flavour ingredients having a wintergreen organoleptic attribute is at least 20 wt% of the oral care flavour composition, more preferably at least 25 wt%, and most preferably at least 30 wt%; and/or
- (iii.4) one or more oral care flavour ingredients having a herbal organoleptic attribute, wherein the total amount of oral care flavour ingredients having a herbal organoleptic attribute is at least 10 wt% of the oral care flavour composition, more preferably at least 12 wt%, and most preferably at least 15 wt%; and/or
- (iii.5) one or more oral care flavour ingredients having a citrus organoleptic attribute, wherein the total amount of oral care flavour ingredients having a citrus organoleptic

attribute is at least 20 wt% of the oral care flavour composition, more preferably at least 25 wt%, and most preferably at least 30 wt%; and/or

5 (iii.6) one or more oral care flavour ingredients having a floral organoleptic attribute, wherein the total amount of oral care flavour ingredients having a floral organoleptic attribute is at least 5.0 wt% of the oral care flavour composition, more preferably at least 8.0 wt%, and most preferably at least 12.0 wt%; and/or

10 (iii.7) one or more oral care flavour ingredients having a fruity organoleptic attribute, wherein the total amount of oral care flavour ingredients having a fruity organoleptic attribute is at least 8.0 wt% of the oral care flavour composition, more preferably at least 10.0 wt%, and most preferably at least 12.0 wt%; and/or

(iii.8) one or more oral care flavour ingredients having a cooling organoleptic attribute, wherein the total amount of oral care flavour ingredients having a cooling organoleptic attribute is at least 1.0 wt% of the oral care flavour composition, more preferably at least 1.5 wt%, and most preferably at least 2.0 wt%; and/or

15 (iii.9) one or more oral care flavour ingredients having a warming organoleptic attribute, wherein the total amount of oral care flavour ingredients having a warming organoleptic attribute is at least 0.10 wt% of the oral care flavour composition, more preferably at least 0.15 wt%, and most preferably at least 0.20 wt%; and/or

20 (iii.10) one or more oral care flavour ingredients having a spicy organoleptic attribute, wherein the total amount of oral care flavour ingredients having a spicy organoleptic attribute is at least 10 wt% of the oral care flavour composition, more preferably at least 15 wt%, and most preferably at least 20 wt%; and/or

25 (iii.11) one or more oral care flavour ingredients having a sweet organoleptic attribute, wherein the total amount of oral care flavour ingredients having a sweet organoleptic attribute is at least 10 wt% of the oral care flavour composition, more preferably at least 15 wt%, and most preferably at least 20 wt%.

10. The oral care flavour composition according to any one of claims 6 to 9, wherein the at least one oral care flavour ingredient having another organoleptic attribute is selected from the group consisting of:

30 (iii.1) one or more oral care flavour ingredients having an eucalyptus organoleptic attribute selected from the group consisting of eucalyptus oil, eucalyptus oil reconstitutions, eucalyptol, and mixtures thereof; and/or

- (iii.2) one or more oral care flavour ingredients having a spearmint organoleptic attribute selected from the group consisting of spearmint oil, spearmint oil reconstitutions, trans-carveol, cis-carveol, L-carvone, and mixtures thereof; and/or
- 5 (iii.3) one or more oral care flavour ingredients having a wintergreen organoleptic attribute selected from the group consisting of wintergreen oil, wintergreen oil reconstitutions, ethyl salicylate, methyl salicylate, and mixtures thereof; and/or
- 10 (iii.4) one or more oral care flavour ingredients having a herbal organoleptic attribute selected from the group consisting of camomile oil, camomile oil reconstitutions, juniper berry oil, juniper berry oil reconstitutions, lavandin oil, lavandin oil reconstitutions, lavender oil, lavender oil reconstitutions, rosemary oil, rosemary oil reconstitutions, sage oil, sage oil reconstitutions, thyme oil, thyme oil reconstitutions, thymol, and mixtures thereof; and/or
- 15 (iii.5) one or more oral care flavour ingredients having a citrus organoleptic attribute selected from the group consisting of bergamot oil, bergamot oil reconstitutions, citral, grapefruit oil, grapefruit oil reconstitutions, lemongrass oil, lemongrass oil reconstitutions, lemon oil, lemon oil reconstitutions, D-limonene, L-limonene, lime oil, lime oil reconstitutions, mandarin oil, mandarin oil reconstitutions, orange oil, orange oil reconstitutions, orange bitter oil, orange bitter oil reconstitutions, orange blood oil, orange blood oil reconstitutions, tangerine oil, tangerine oil reconstitutions, and mixtures thereof; and/or
- 20 (iii.6) one or more oral care flavour ingredients having a floral organoleptic attribute selected from the group consisting of citronellol, geranium oil, geranium oil reconstitutions, geranyl acetate, geraniol, hydroxycitronellal, ionone alpha, ionone beta, jasmin oil, jasmin oil reconstitutions, linalol, phenyl ethyl alcohol, a mixture of 3,7-dimethyloct-6-en-1-ol and 3,7-dimethyloct-7-en-1-ol, tetrahydro geraniol, rose oil, rose oil reconstitutions, terpineol alpha, ylang ylang oil, ylang ylang oil reconstitutions, and mixtures thereof; and/or
- 25 (iii.7) one or more oral care flavour ingredients having a fruity organoleptic attribute selected from the group consisting of cassyrane, cis-3-hexenyl acetate, damascenone, damascone beta, decalactone gamma, dimethyl sulphide, dodecalactone gamma, ethyl 2-methyl butyrate, ethyl acetate, ethyl butyrate, ethyl heptanoate, ethyl hexanoate, ethyl iso-butyrate, ethyl lactate, hexyl acetate, iso-amyl acetate, iso-amyl butyrate, iso-amyl propionate, raspberry ketone, trans-2-hexenal, and mixtures thereof; and/or
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- (iii.8) one or more oral care flavour ingredients having a cooling organoleptic attribute selected from the group consisting of N-(4-cyanomethylphenyl) p-menthane carboxamide, 2-isopropyl-5-methyl-N-(2-(pyridin-2-yl)ethyl)cyclohexane carboxamide, 3-(5-methyl-2-propan-2-ylcyclohexyl)oxypropane-1,2-diol, (1R,2R,5S)-5-methyl-2-prop-1-en-2-ylcyclohexan-1-ol, ethyl 2-[[[(1R,2S,5R)-5-methyl-2-propan-2-ylcyclohexanecarbonyl]amino]acetate, (1R,2S,5R)-N-(4-methoxyphenyl)-5-methyl-2-(1-methylethyl)cyclohexanecarboxamide, N-ethyl-5-methyl-2-propan-2-ylcyclohexane-1-carboxamide, N,2,3-trimethyl-2-propan-2-ylbutanamide, (2E)-3-(1,3-benzodioxol-5-yl)-N,N-diphenylacrylamide, 2-(p-tolyloxy)-N-(1H-pyrazol-5-yl)-N-((thiophen-2-yl)methyl)acetamide, [(1R,2S,5R)-5-methyl-2-propan-2-ylcyclohexyl] 2-hydroxypropanoate, 2-isopropyl-5-methylcyclohexyloxycarbonyloxy-2-hydroxypropane, 2-hydroxypropyl (5-methyl-2-propan-2-ylcyclohexyl) carbonate, 9-methyl-6-(1-methylethyl)-1,4-dioxaspiro-[4,5]decan-2-methanol, menthyl lactate, mono-menthyl succinate, menthyl methyl ether, 1-methyl-3-hydroxybutyrate, 2-[[5-methyl-2-(propan-2-yl)cyclohexyl]oxy]ethanol, 2-(2-hydroxypropan-2-yl)-5-methylcyclohexan-1-ol, and mixtures thereof; and/or
- (iii.9) one or more oral care flavour ingredients having a warming organoleptic attribute selected from the group consisting of capsaicine, capsicum oleoresin, gingerol, nonivamide, piperine, vanillyl butyl ether, and mixtures thereof; and/or
- (iii.10) one or more oral care flavour ingredients having a spicy organoleptic attribute selected from the group consisting of cassia oil, cassia oil reconstitutions, cinnamic aldehyde, clove bud oil, clove bud oil reconstitutions, clove leaf oil, clove leaf oil reconstitutions, eugenol, ginger oil, ginger oil reconstitutions, ginger oleoresin, black pepper oil, black pepper oil reconstitutions, cardamom oil, cardamom oil reconstitutions, nutmeg oil, nutmeg oil reconstitutions, cinnamon leaf oil, cinnamon leaf oil reconstitutions, cinnamon bark oil, cinnamon bark oil reconstitutions, safranine, and mixtures thereof; and/or
- (iii.11) one or more oral care flavour ingredients having a sweet organoleptic attribute selected from the group consisting of acetyl methyl carbinol, benzaldehyde, cinnamic alcohol, decalactone delta, ethyl maltol, fenugreek oil, fenugreek oil reconstitutions, furaneol, hexalactone gamma, heliotropin, isobutavan, nonalactone gamma, octalactone gamma, p-methyl acetophenone, maltol, myrrh oil, myrrh oil reconstitutions, vanilla oil, vanilla oil reconstitutions, vanillin, and mixtures thereof.
11. An oral care consumer product comprising the oral care flavour composition according to any one of claims 6 to 10 and a suitable base.

12. Use of the oral care flavour composition according to any one of claims 6 to 10 to enhance the well-being of a human subject.