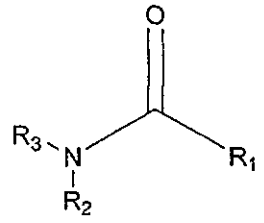
Claims:

1. A powder flavour composition comprising a compound according to the formula (I) or edible salts thereof, and at least one flavour co-ingredient

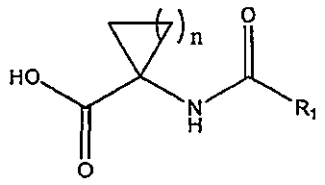


(1)

wherein

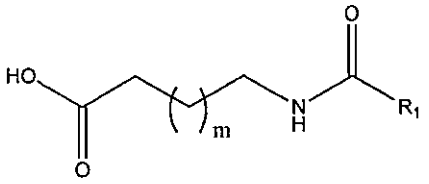
R_1 is an alkyl residue containing 6 to 20 carbon atoms, or an alkene residue containing from 9 to 25 carbon atoms with 1 to 6 double bonds, R_1 together with the carbonyl group to which it is attached is a residue of a carboxylic acid, and NR_2R_3 , in which R_3 is H or together with R_2 and the N-atom to which they are attached, a 5-membered ring, is a residue of an amino acid, in particular a proteinogenic amino acid, ornithine, gamma-aminobutyric acid or beta alanine, or a 1-amino cycloalkyl carboxylic acid.

2. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



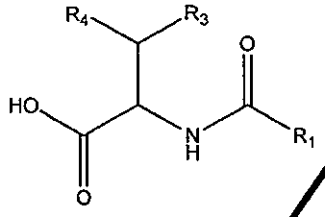
and edible salts thereof, wherein n is 1, 2, 3 or 4.

3. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



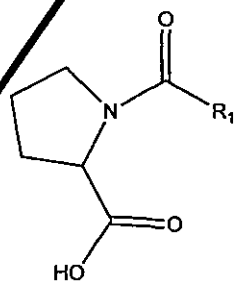
and edible salts thereof, wherein m is 0 or 1.

4. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



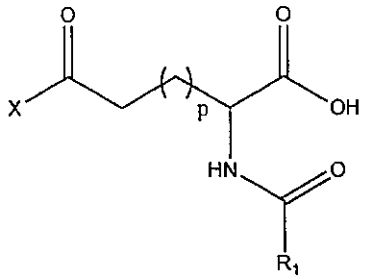
edible salts thereof, wherein R_3 is hydrogen or methyl, and R_4 is methyl, ethyl or iso-propyl.

5. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



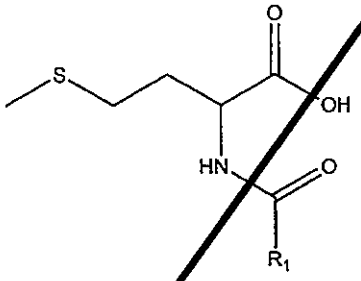
and edible salts thereof.

6. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



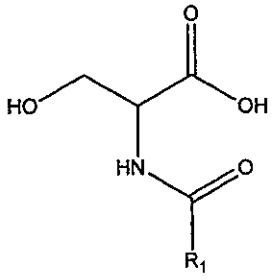
and edible salts thereof, wherein X is OH or NH_2 and P is 0 or 1.

7. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



and edible salts thereof.

8. A powder flavour composition according to claim 1 wherein the compound is represented by the formula



and edible salts thereof

9. A powder flavour composition according to claim 1 wherein the compound is selected from the group consisting of N-palmitoyl 1-amino-cyclopropyl carboxylic acid (C16:0-ACCA), N-stearoyl 1-amino-cyclopropyl carboxylic acid (C18:0-ACCA),

N-linoleoyl 1-amino-cyclopropyl carboxylic acid (C18:2-ACCA), N-linolenoyl 1-amino-cyclopropyl carboxylic acid (C18:2-ACCA), N-oleoyl 1-amino-cyclopropyl carboxylic acid (C18:1-ACCA), N-(9-palmitenoyl) 1-amino-cyclopropyl carboxylic acid (C16:1-ACCA), N-decanoyl 1-amino-cyclopropyl carboxylic acid (C10:0-ACCA) and N-geranoyl 1-amino-cyclopropyl carboxylic acid (C10:2-ACCA); C10-GABA, C12-GABA, more particularly C12:1-GABA, C14-GABA, C16-GABA, more particularly C16:1-GABA, C18-GABA, more particularly C18:1-GABA, still more particularly C18:1c-GABA and C18:1t-GABA, and 18:2-GABA; C18:2-Beta Ala, N-palmitenoyl-L-leucine, N-palmitoyl-L-leucine, N-linolenoyl-L-leucine, N-linoleoyl-L-leucine and N-oleoyl-L-leucine; N-oleoyl-Ile; N-palmitenoyl-L-valine, N-palmitoyl-L-valine, N-linolenoyl-L-valine, N-linoleoyl-L-valine and N-oleoyl-L-valine; N-geranoyl-Pro, N-palmitoyl-Pro, N-palmiteneoyl-Pro, N-stearoyl-Pro, N-linoleoyl-Pro and N-linolenoyl-Pro; N-geranoyl-Glu, N-palmitoyl-Glu, N-palmitenoyl-Glu, N-stearoyl-Glu,N-linoleoyl-Glu and N-linolenoyl-Glu.; N-geranoyl-Asp, N-palmitoyl-Asp, N-palmitenoyl-Asp, N-stearoyl-Asp, N-linoleoyl-Asp and N- linolenoyl-Asp; N-geranoyl-Gln, N-palmitoyl-Gln, N-palmitenoyl-Gln, N-stearoyl-Gln, N-linoleoyl-Gln and N-linolenoyl-Gln; N-geranoyl-Asn, N-palmitoyl-Asn, N-palmitenoyl-Asn, N-stearoyl-Asn, N-linoleoyl-Asn and N- linolenoyl-Asn; N-geranoyl-Met, N-palmitoyl-Met, N-palmitenoyl-Met, N-stearoyl-Met, N-linoleoyl-Met and N-linolenoyl-Met; N-palmitoyl-Ser, N-palmitenoyl-Ser, N-stearoyl-Ser, N-linoleoyl-Ser and N-linolenoyl-Ser; N-octanoyl-L-phenylalanine, , N-eicosanoyl-L-phenylalanine, N-palmitoleoyl-L-phenylalanine, N-palmitoyl-L-phenylalanine , N-linolenoyl-L-phenylalanine , N-linoleoyl-L-phenylalanine, N-oleoyl-L-phenylalanine, N-SDA-L-phenylalanine, N-DPA-L-phenylalanine, and N-tetracosahexaenoyl-L-phenylalanine; N-palmitoyl-L-alanine, N-linolenoyl-L-alanine, N-linoleoyl-L-alanine;N-palmitoyl-L-tyrosine, N-linoleoyl-L-tyrosine, N-oleoyl-L-tyrosine, N-linolenoyl-L-tyrosine; N-palmitoyl-L-tryptophan, N-linolenoyl-L-tryptophan, N-linoleoyl-L-tryptophan; and N-linoleoyl-glycine.

10. A powder flavour composition according to any of the preceding claims comprising a flavour co-ingredient containing vanilla, chocolate, coffee, cocoa, citrus oil, selected

from lemon, orange, grape, lime and grapefruit; fruit essences selected from apple, pear, peach, strawberry, raspberry, cherry, plum, pineapple and apricot; ingredients containing the components acetaldehyde, dimethyl sulfide, ethyl acetate, ethyl propionate, methyl butyrate, and ethyl butyrate; ingredients containing volatile aldehydes or esters selected from cinnamyl acetate, cinnamaldehyde, citral, diethylacetal, dihydrocarvyl acetate, eugenyl formate, and p-methylanisole; or acetaldehyde; benzaldehyde; cinnamic aldehyde; alpha citral; beta citral; decanal; ethyl vanillin; piperonal; vanillin; alpha-amyl cinnamaldehyde; butyraldehyde; valeraldehyde; citronellal; decanal; aldehyde C-8; aldehyde C-9; aldehyde C-12; 2-ethyl butyraldehyde; trans-2 hexenal, tolyl aldehyde; veratraldehyde; 2,6-dimethyl-5-heptenal; 2-6-dimethyloctanal; and 2-dodecenal; cherry; or grape and mixtures thereof.

11. A powder flavour composition according to any of the preceding claims comprising at least one flavour co-ingredient selected from the group consisting of sugars, fats, salt, MSG, calcium ions, phosphate ions, organic acids, proteins, purines and mixtures thereof, optionally a carrier material and optionally an adjuvant.

12. A powder flavour composition according to any preceding claim wherein the adjuvant is an anti-oxidant.

13. A powder flavour composition according to any preceding claim in the form of a spray dried powder.

17. An edible composition comprising a powder flavour composition according to any of the preceding claims.

18. An edible composition according to claim 17 in the form of a powdered soft drink or a dry mix composition.

19. An edible composition according to claim 17 in the form of a snack food.

20. An edible composition according to claim 17 in the form of an alcoholic beverage.

21. An edible composition according to claim 17 in the form of an orally administrable tablet, capsule, powder or multiparticulate.

22. An edible composition according to claim 17 in the form of a caloric or non-caloric beverage containing carbohydrate sweeteners, selected from sucrose, high fructose corn syrup, fructose and glucose, or high intensity, non-nutritive sweeteners selected from aspartame, acesulfame K, sucralose, cyclamate, sodium saccharin, neotame, rebaudioside A, and/or other stevia-based sweeteners.

24. An edible composition according to claim 17 in the form of a soy-based composition.

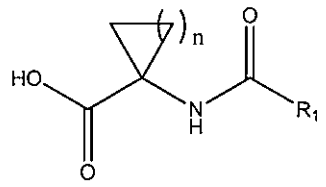
25. An edible composition according to claim 17 in the form of a clouded beverage composition.

26. An edible composition according to claim 17 in the form of composition formed by a process of ripening selected from the group consisting of chocolate, cheese, meat, soy-sauce and wine, beer, sausage, sauerkraut, chocolate tempeh and tofu.

Claims:

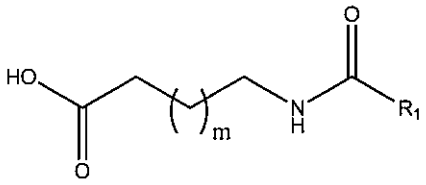
1. A powder flavour composition comprising a compound according to a formula selected from the group consisting of:

a)



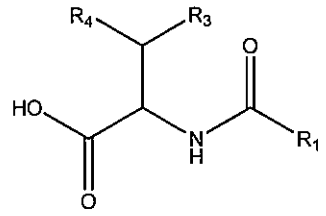
and edible salts thereof, wherein n is 1, 2, 3 or 4;

b)



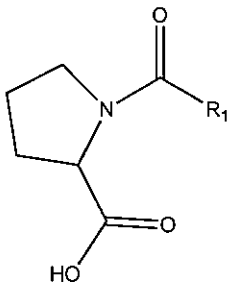
and edible salts thereof, wherein m is 0 or 1; R_1 together with the carbonyl group to which it is attached is a residue of a carboxylic acid selected from gamma amino butyric acid (GABA) and beta alanine;

c)



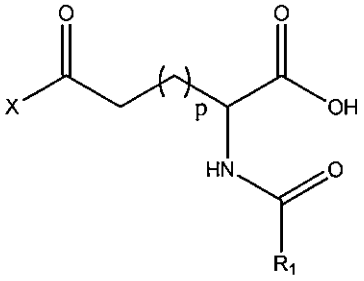
edible salts thereof, wherein R_3 is hydrogen or methyl, and R_4 is methyl, ethyl or iso-propyl;

d)



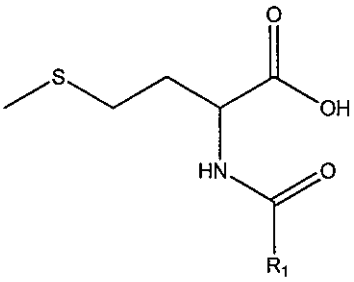
and edible salts thereof; selected from N-geranoyl-Pro, N-palmiteneoyl-Pro, N-stearoyl-Pro, N-linoleoyl-Pro and N-linolenoyl-Pro.

e)



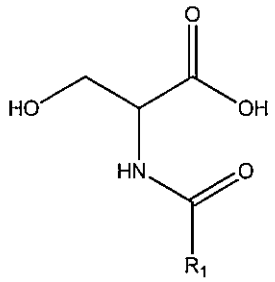
and edible salts thereof, wherein X is OH or NH_2 and P is 0 or 1;

f)



and edible salts thereof; selected from N-geranoyl-Met, N-palmitoyl-Met, N-palmitenoyl-Met, N-stearoyl-Met, N-linoleoyl-Met and N-linolenoyl-Met and

g)



and edible salts thereof; and at least one flavour co-ingredient;

wherein

R_1 is an alkyl residue containing 6 to 20 carbon atoms, or an alkene residue containing from 9 to 25 carbon atoms with 1 to 6 double bonds, R_1 together with the carbonyl group to which it is attached is a residue of a carboxylic acid, and NR_2R_3 , in which R_3 is H or together with R_2 and the N-atom to which they are attached, a 5-membered ring, is a residue of an amino acid, in particular a proteinogenic amino acid, ornithine, gamma–aminobutyric acid or beta alanine, or a 1-amino cycloalkyl carboxylic acid.

2. A powder flavour composition according to claim 1 wherein the compound is selected from the group consisting of N-palmitoyl 1-amino-cyclopropyl carboxylic acid (C16:0-ACCA), N-stearoyl 1-amino-cyclopropyl carboxylic acid (C18:0-ACCA), N-linoleoyl 1-amino-cyclopropyl carboxylic acid (C18:2-ACCA), N-linolenoyl 1-amino-cyclopropyl carboxylic acid (C18:2-ACCA), N-oleoyl 1-amino-cyclopropyl carboxylic acid (C18:1-ACCA), N-(9-palmitenoyl) 1-amino-cyclopropyl carboxylic acid (C16:1-ACCA), N-decanoyl 1-amino-cyclopropyl carboxylic acid (C10:0-ACCA) and N-geranoyl 1-amino-cyclopropyl carboxylic acid (C10:2-ACCA); C10-GABA, C12-GABA, more particularly C12:1-GABA, C14-GABA, C16-GABA, more particularly C16:1-GABA, C18-GABA, more particularly C18:1-GABA, still more particularly C18:1c-GABA and C18:1t-GABA, and 18:2-GABA; C18:2-Beta Ala; N-palmitenoyl-L-leucine, N-palmitoyl-L-leucine, N-linolenoyl-L-leucine, N-linoleoyl-L-leucine and N-oleoyl-L-leucine; N-oleoyl-Ile; N-palmitenoyl-L-valine, N-palmitoyl-L-valine, N-linolenoyl-L-valine, N-linoleoyl-L-valine and N-oleoyl-L-valine; N-geranoyl-Pro, N-

palmiteneoyl-Pro, N-stearoyl-Pro, N-linoleoyl-Pro and N-linolenoyl-Pro; N-geranoyl-Glu, N-palmitoyl-Glu, N-palmitenoyl-Glu, N-stearoyl-Glu,N- linoleoyl-Glu and N-linolenoyl-Glu.; N-geranoyl-Asp, N-palmitoyl-Asp, N-palmitenoyl-Asp, N-stearoyl-Asp, N-linoleoyl-Asp and N- linolenoyl-Asp; N-geranoyl-Gln, N-palmitoyl-Gln, N-palmitenoyl-Gln, N-stearoyl-Gln, N-linoleoyl-Gln and N- linolenoyl-Gln; N-geranoyl-Asn, N-palmitoyl-Asn, N-palmitenoyl-Asn, N-stearoyl-Asn, N-linoleoyl-Asn and N-linolenoyl-Asn; N-geranoyl-Met, N-palmitoyl-Met, N-palmitenoyl-Met, N-stearoyl-Met, N-linoleoyl-Met and N-linolenoyl-Met; N-palmitoyl-Ser, N-palmitenoyl-Ser, N-stearoyl-Ser, N-linoleoyl-Ser and N-linolenoyl-Ser; N-octanoyl-L-phenylalanine, , N-eicosanoyl-L-phenylalanine, N-palmitoleoyl-L-phenylalanine, N-palmitoyl-L-phenylalanine , N-linolenoyl-L-phenylalanine , N-linoleoyl-L-phenylalanine, N-oleoyl-L-phenylalanine, N-SDA-L-phenylalanine, N-DPA-L-phenylalanine, and N-tetracosahexaenoyl-L-phenylalanine; N-palmitoyl-L-alanine, N-linolenoyl-L-alanine, N-linoleoyl-L-alanine;N-palmitoyl-L-tyrosine, N-linoleoyl-L-tyrosine, N-oleoyl-L-tyrosine, N-linolenoyl-L-tyrosine; N-palmitoyl-L-tryptophan, N-linolenoyl-L-tryptophan, N-linoleoyl-L-tryptophan; and N-linoleoyl-glycine.

3. A powder flavour composition according to claim 1comprising a flavour co-ingredient containing vanilla, chocolate, coffee, cocoa, citrus oil, selected from lemon, orange, grape, lime and grapefruit; fruit essences selected from apple, pear, peach, strawberry, raspberry, cherry, plum, pineapple and apricot; ingredients containing the components acetaldehyde, dimethyl sulfide, ethyl acetate, ethyl propionate, methyl butyrate, and ethyl butyrate; ingredients containing volatile aldehydes or esters selected from cinnamyl acetate, cinnamaldehyde, citral, diethylacetal, dihydrocarvyl acetate, eugenyl formate, and p-methylanisole; or acetaldehyde; benzaldehyde; cinnamic aldehyde; alpha citral; beta citral; decanal; ethyl vanillin; piperonal; vanillin; alpha-amyl cinnamaldehyde; butyraldehyde; valeraldehyde; citronellal; decanal; aldehyde C-8; aldehyde C-9; aldehyde C-12; 2-ethyl butyraldehyde; trans-2 hexenal, tolyl aldehyde; veratraldehyde; 2,6-dimethyl-5-heptenal; 2-6-dimethyloctanal; and 2-dodecenal; cherry; or grape and mixtures thereof.

4. A powder flavour composition according to claim 1 comprising at least one flavour co-ingredient selected from the group consisting of sugars, fats, salt, MSG, calcium ions, phosphate ions, organic acids, proteins, purines and mixtures thereof, optionally a carrier material and optionally an adjuvant.

5. A powder flavour composition according to claim 4 wherein the adjuvant is an anti-oxidant.

6. An edible composition comprising a powder flavour composition according to claim 1.

7. An edible composition according to claim 6 in the form of a caloric or non-caloric beverage containing carbohydrate sweeteners, selected from sucrose, high fructose corn syrup, fructose and glucose, or high intensity, non-nutritive sweeteners selected from aspartame, acesulfame K, sucralose, cyclamate, sodium saccharin, neotame, rebaudioside A, and/or other stevia-based sweeteners.

8. An edible composition according to claim 6 in the form of a soy-based composition.