CLAIMS

1. A method for purifying a crude flavor or perfumery or cosmetic ingredient or intermediate, wherein the crude flavor or perfumery or cosmetic ingredient or intermediate is in solid form, the method comprising:

washing with an aqueous acid at a temperature less than the melting point of (−)-Ambrox;

washing with an aqueous surfactant at a temperature less than the melting point of (−)-Ambrox; and

washing with an aqueous alkali at a temperature less than the melting point of (−)-Ambrox: wherein the crude flavor or perfumery or cosmetic ingredient or intermediate is made by a bioconversion process, wherein the crude flavor or perfumery or cosmetic ingredient or intermediate is separated from a bioconversion broth prior to the method of purification; and wherein the method is a method for purifying crude (−)-Ambrox, crude (−)-Ambra-oxide, crude 3a-ethyl-6,6,9a-trimethyldodecahydronaphtho[2,1-b]furan, or crude (+)-Amberketal.

2. The method of claim 1, wherein the crude flavor or perfumery or cosmetic ingredient or intermediate is in solid form.

3. The method of claim 1 or 2, wherein the crude flavor or perfumery or cosmetic ingredient or intermediate was made by a bioconversion process, for example using a SHC/HAC enzyme.

4. The method of any preceding claim, wherein the method comprises:

(a) washing the crude flavor or perfumery or cosmetic ingredient or intermediate with an aqueous acid;
(b) washing the product of step (a) with an aqueous alkali;
(c) washing the product of step (b) with an aqueous surfactant.

5. The method of any preceding claim, wherein the acid is a weak acid and/or an organic acid and/or citric acid.

6. The method of any preceding claim, wherein the temperature of the aqueous acid ranges from about 17°C to about 50°C, for example from about 17°C to about 23°C.

7. The method of any preceding claim, wherein the alkali is a strong alkali and/or a hydroxide and/or sodium hydroxide.

8. The method of any preceding claim, wherein the temperature of the aqueous alkali ranges from about 5°C to about 75°C, for example from about 35°C to about 45°C.

9. The method of any preceding claim, wherein the surfactant is an anionic surfactant, for example sodium dodecylsulfate (SDS).

10. The method of any preceding claim, wherein the temperature of the aqueous surfactant ranges from about 5°C to about 75°C, for example from about 60°C to about 70°C.

11. The method of any preceding claim, further comprising one or more steps of washing with water prior to or after the washing with aqueous acid, the washing with aqueous alkali and/or the washing with aqueous surfactant.

12. The method of any preceding claim, wherein all the washing steps take place in a single piece of equipment, for example a Nutsche-type agitating and drying filter.

13. A Nutsche-type agitating and drying filter configured to purify a crude flavor or perfumery ingredient or intermediate, for example a crude (-)-Ambrox, by the method of any one of claims 1 to 12, wherein the crude flavor or perfumery ingredient or intermediate, for example the crude (-)-Ambrox comprises from about 20 wt% to about 30 wt% water based on the wet weight of the crude flavor or perfumery ingredient or intermediate, for example the crude (-)-Ambrox.