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Storable product which can be whipped up to a
dessert mousse, and a process for its preparation

The present invention relates to a storable,
preferably solid product which can be whipped up with
liquid to a dessert mousse, to a process for its prepara-
tion, and to the use of this product for the preparation
5 of a dessert mousse.

By "mousse", and especially by "dessert mousse",
there is usually understood a cold, foamed dessert, which
in some cases can also be frozen, but, in contrast to a
foamed creme, has a certain pudding-like solidity and
10 retains this structure for at least a few hours.

Chocolate mousse (Mousse au chocolat), for example, is
especially known and liked, and is a speciality of many
housewives and numerous renowned restaurants. Usually,
such a chocolate mousse is prepared a few hours before
15 consumption, by first suspending slab chocolate or cook-
ing chocolate in water or milk on a waterbath and stirr-
ing the suspension until it becomes smooth, adding egg
yolk, while stirring continuously, and finally mixing the
mass with stiffly whipped egg white and/or whipped cream
20 and leaving it to cool. This preparation requires some
time and a great degree of skill, so that the whipped
mass does not break down to an unattractive, sticky mass.

In order to make this preparation simpler and
risk-free, dried powder products, which can be whipped up
25 with cold milk to a chocolate mousse in the same way as

powdered cream for the preparation of synthetic whipped cream, have already been commercially available for a relatively long time. Such instant mousse powders generally consist of a mixture of cocoa powder, chocolate powder, sugar, powdered fat which can be whipped up, essences, emulsifiers and colorants. Although the products are very convenient to handle and therefore enjoy a certain popularity, especially in the catering industry, the sensory quality of the mousses obtainable therefrom is poorer than that of freshly prepared mousse.

The invention was therefore based on the object of providing a product which on the one hand does not have the sensory deficiencies of the powders hitherto commercially available, but on the other hand rapidly, easily and reliably produces a mousse having the desired structure and life.

The present invention provides a storable, solid product which can be whipped up with liquid to a dessert mousse, characterised in that it contains sugar or another natural or artificial sweetener, 25 to 36 per cent by weight of fat, 1.3 to 3.5 per cent by weight of binder, 1.5 to 5 per cent per weight of emulsifier; these amounts being based on the total weight of the product, and, where relevant, other constituents.

This product can either be in the form of a base mass which has a more or less neutral flavour and to which the desired flavour substances can be added when the mousse is prepared, or it can already contain all the constituents and only has to be suspended, with addition of hot liquid, whipped up and left to cool in order to give the desired mousse.

The process according to the invention for the preparation of such a product is characterised in that molten edible fat is processed to a homogeneous mass

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with sugar or another natural or artificial sweetener, an emulsifier and a binder, and, where relevant, other constituents, 25 to 36 per cent by weight of fat, 1.3 to 3.5 per cent by weight of binder and 1.5 to 5 per cent by weight of emulsifier, based on the total weight of the product, being used, and the molten mass is made into the desired shape and allowed to cool.

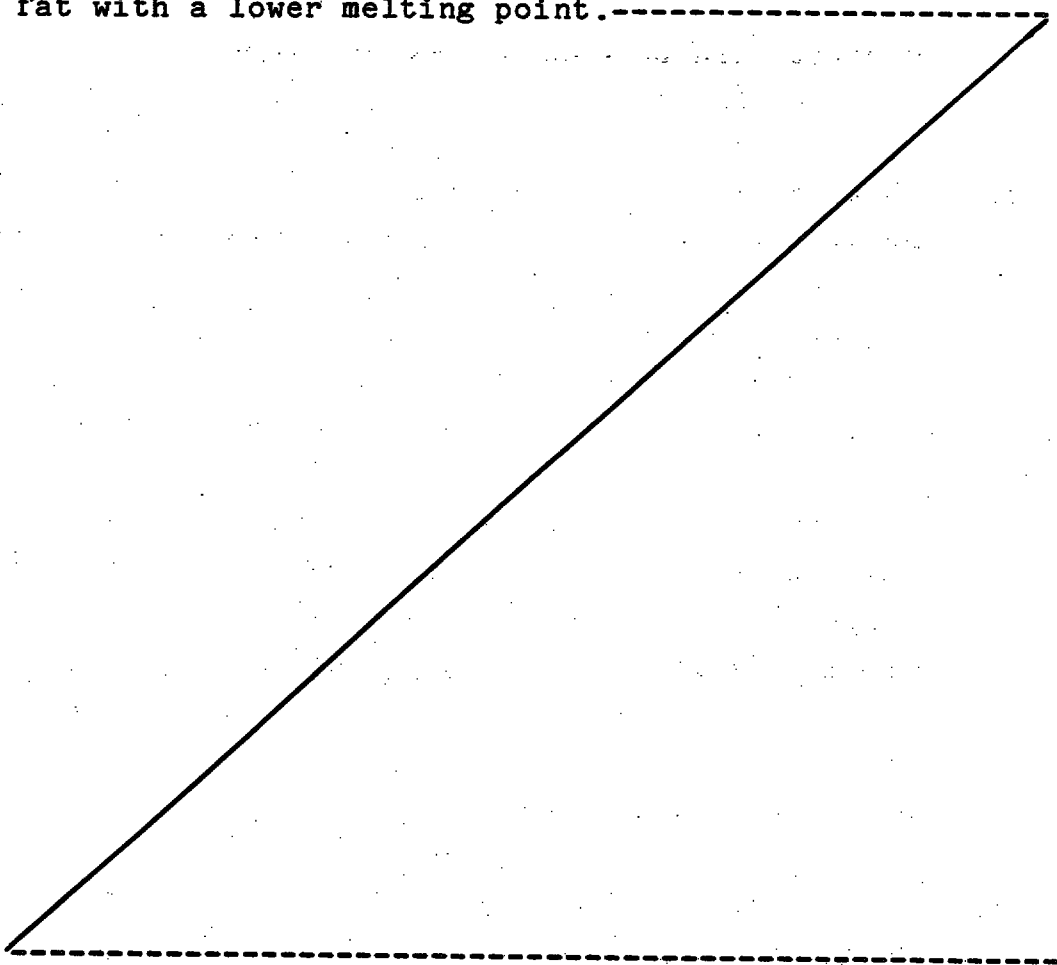
The product is preferably prepared in solid form using a fat which is solid at room temperature, and the molten mass can, for example, be cast into divisible slabs, bars, cubes, balls and the like, or extruded to crumbs and the like, or comminuted to powder. Such a form can be metered particularly easily. If desired, the product can, however, also be marketed in a semi-solid, that is to say paste-like, consistency by using fat with a lower melting point.

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All the known edible fats which are solid or, where relevant, semi-solid at room temperatures and have an appropriate or virtually no intrinsic flavour are suitable for the purpose of the present invention. Their selection depends on the one hand on the flavour of the desired product, and on the other hand on the prevailing temperatures at the place of use. Examples of preferred fats are cocoa butter, palm oil, peanut oil, coconut oil and mixtures thereof.

The usual types of sugar, such as sucrose, cane sugar, fructose, honey and the like, and also artificial sweeteners, such as saccharin, cyclamate, aspartame and the like, can be used as the sweetener.

Suitable binders are the thickeners and gelling agents on a hydrocolloid basis which are suitable for foodstuffs of this type, such as, for example, gelatin, carrageen, guar bean flour, carob bean flour, alginates, xanthan gum, modified starch and combinations thereof. Other suitable hydrocolloids are described, for example, in "Handbook of Watersoluble Gums and Resins", by Robert C. Davidson (published in 1980 by McGraw-Hill Book Company).

Products which are known to the expert and are commercially available can likewise be chosen as emulsifiers, for example monoglycerides and diglycerides of edible fatty acids (E 471) and monoglycerides and diglycerides of edible fatty acids esterified with citric acid (E 472c), or diacetyltartaric acid (E 472e), or acetic acid (E 472e), or lactic acid (E 472b), or tartaric

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acid (E 472d), or acetic acid and tartaric acid (E 472f), 1,2-propylene glycol esters of edible fatty acids (E 477), sugar-esters (sucrose esterified with edible fatty acids, E 473), sugar-glycerides (mixture
5 of sugar-esters with monoglycerides and diglycerides, E 474), lecithin (E 322), by themselves or in combination, as well as other emulsifiers permitted by foodstuff laws.

Flavour substances which may be mentioned and
10 which are particularly suitable for admixing directly to the fat mass, but in some cases also, where relevant, for later admixing to the "neutral" base product, are above all, cocoa powder, chocolate powder, lyophilised coffee or other coffee concentrates,
15 vanilla powder (natural or synthetic), caramel, croquant, honey, fruit and nut pastes, pieces or powders, spices, wine, rum, kirsch or other alcoholic drink or essence thereof. In particular admixing of fruit and nuts in pieces, and honey to the mousse
20 products hitherto obtainable was possible only to a limited extent.

In the preparation of a product for chocolate mousse, a so-called chocolate paste (white or dark) can at least be partly used directly as a substitute for
25 the fat and the cocoa or chocolate paste or powder. Such pastes, which are commercially available, generally contain cocoa butter and cocoa paste, as well as sugar and/or milk constituents. Suitable masses have, for example, a fat content of about 35 per cent
30 by weight.

In addition to the abovementioned constituents, the products according to the invention can contain egg

white, which leads to better stabilisation of the foam, as well as colorants and other additives and auxiliaries used in foodstuffs of this type.

5 A product for a mousse advantageously contains, for example, the following amounts of the individual constituents:

	Fat	25 to 36% by weight
	Sugar	35 to 60% by weight preferably 40 to 50% by weight
10	Binder	1.3 to 3.5 by weight
	Emulsifiers	1.5 to 5% by weight
15	Egg white	0 to 20% by weight preferably 1 to 3% by weight
	Cocoa, dry weight	0 to 30% by weight preferably 10 to 20% by weight
	Milk constituents	0 to 20% by weight

20 The cocoa dry weight here designates the amount of fat-free cocoa constituents in the cocoa or chocolate pastes. The milk constituents may be absent from very dark chocolate mousse products, whilst a certain amount of milk constituents is of considerable importance in
25 white chocolate mousse products, but the cocoa powder is omitted.

If another sweetener is used instead of sugar, the amount thereof depends on its sweetening power.

If, instead of a product for chocolate mousse, a

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product for a mousse with a different flavour is prepared, the expert has no difficulty in substituting the cocoa or chocolate components by an appropriate amount of other flavour substances, and, where
5 necessary, adapting the remaining amounts of constituents.

As mentioned above, the product of the invention may be prepared according to a process wherein molten edible fat is processed to a homogeneous mass with
10 sugar or another natural or artificial sweetener, an emulsifier and a binder and, where relevant, other constituents, and the molten mass is made into the desired shape and allowed to cool. Cocoa or chocolate powder or paste, coffee concentrate, vanilla powder,
15 caramel, honey, fruit or nut pieces, pastes or powder, spices, wine, rum, kirsch or other alcoholic drink or essence thereof, may be added to the mixture before or after its processing to a homogeneous mass.

According to a preferred embodiment of the
20 invention, a chocolate mousse product may be prepared by a process wherein the fat is melted and mixed with the sugar or sweetener, the emulsifier and the binder, after which the mixture is allowed to cool and is then grated and mixed intimately with grated chocolate
25 paste.

The constituents are preferably stirred or mixed with one another in a heatable mixing device under the influence of heat until the desired homogeneity of the mass is achieved.

30 In most of the examples which follow, a Moltomat apparatus was used, and the following sequence of additions was chosen:

The fat, for example cocoa butter, was first comminuted and warmed, together with the emulsifier, to
35 the melting temperature of the fat, for example to 50 to 55°C for cocoa butter. The mixture was cooled and

then mixed intimately with cocoa paste which has been
comminuted or liquefied by warming, the temperature
being kept at about 32°C . About two-thirds of the
amount of chocolate paste envisaged were then admixed,
5 followed by addition of the sugar or sweetener. After
a uniform mixture had been achieved, first further
essences and then the dry binder were incorporated and
were intimately mixed with the remainder of the mass.
The last third of the chocolate paste was then added to
10 this mixture, the cooling of the mixture which occurred
being cancelled out

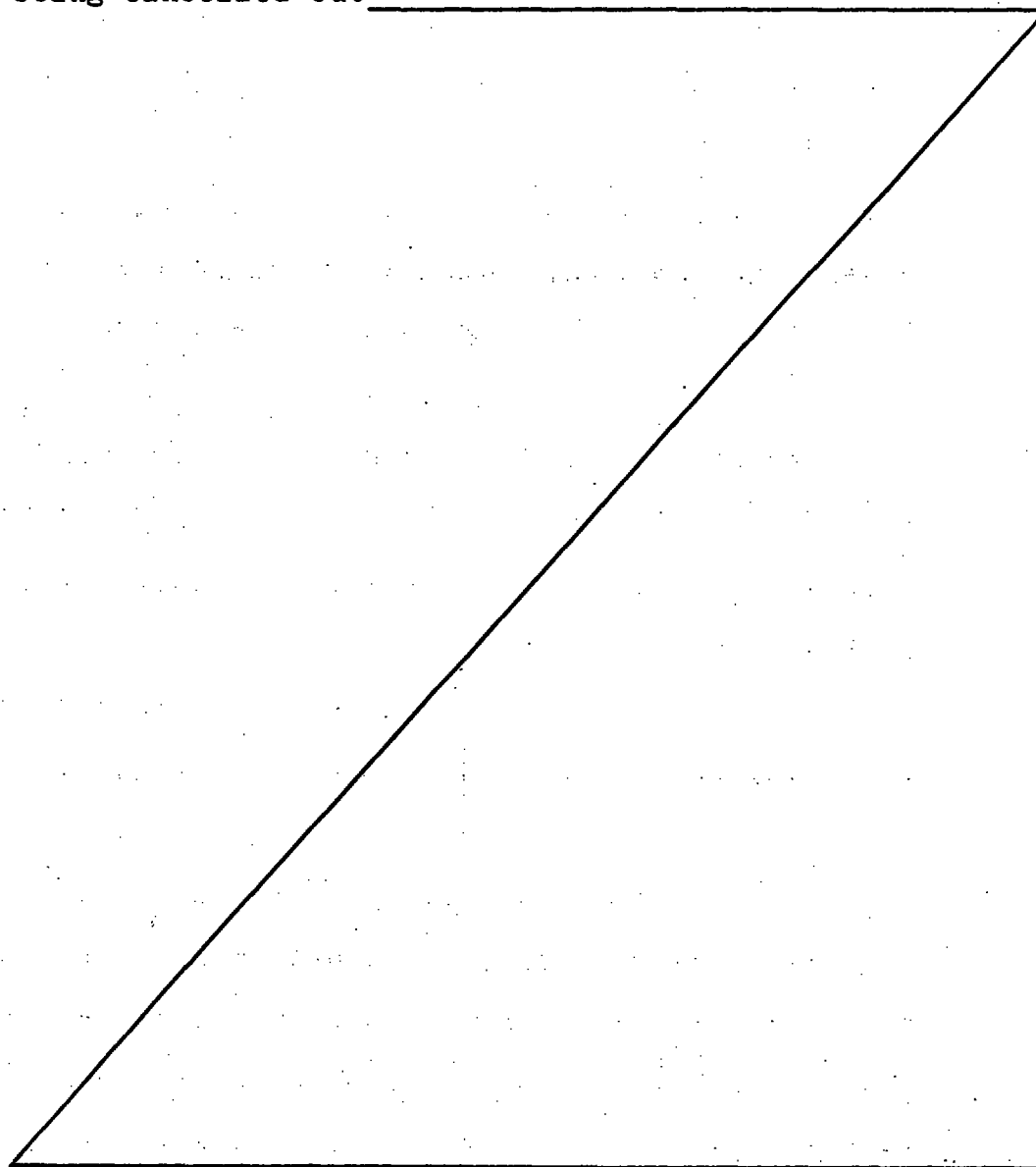
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by powerful heating, so that a temperature of about 32°C was again reached and was maintained. Finally, the larger additives, such as fruit, nuts and the like, were admixed, and the warm homogeneous mass was cast or
5 moulded into shape and cooled.

To prepare a base mass without flavour substances, fat, emulsifier, sugar, milk constituents and binder are processed with one another to a homogeneous mass in the same manner. Instead of the cocoa and chocolate paste,
10 the corresponding flavour substances for other mousses were admixed.

All the examples below can be carried out, however, using the two other processes mentioned above.

After being suspended in liquid, for example
15 water, skimmed milk, a milk/water mixture, fruit juice, tea, coffee and the like, and where relevant after subsequent mixing with milk and/or cream and whipping up of the mass, preferably at about room temperature, that is to say about 20 to 30°C, the products according to the
20 invention give a dessert mousse of outstanding quality, which can be kept for several hours without a change in texture and can be frozen without problems.

The product is suspended in the liquid by, for example, "dissolving" the product in about one-quarter
25 of the total amount of liquid desired, while stirring, the liquid used for this having a temperature of at least 80°C, in general 80 to 95°C. This suspension can then be admixed to the remainder of the liquid in the cold state, whereupon a mixture of about 20 to 30°C which can

be whipped up to the mousse is formed.

However, it is also possible to mix the entire amount of liquid with the product in the cold state and to warm the mixture slowly, with occasional stirring, until the product is completely suspended in the liquid or, expressed in technical terms, "has dissolved", which usually takes place at about 33 to 35°C, after which the suspension is whipped up, after cooling slightly.

10. A further possibility for suspending the product comprises heating the coarsely comminuted product with about one quarter of the cold liquid on a waterbath until the components can be mixed to a suspension, which is then mixed with the remaining cold liquid and is whipped up.

In general, the ratio of product to liquid is about 1 to 1.5 parts by weight of product to 2 parts by weight of liquid.

20 The products obtained by the examples which follow all give, after being suspended in liquid and where relevant subsequent addition of milk and/or cream, and vigorous whipping up, a mousse of faultless texture and an outstanding flavour which can hardly be differentiated from that of a freshly prepared mousse.

25 This mousse could also be frozen without any impairment of its quality.

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Example 1

A product for a white chocolate mousse was prepared from the following constituents and gave a product with a fat content of about 34.5%:

5	Cocoa butter	14.85	per	cent	by	weight
	Chocolate paste white (41% fat)	60.09	"	"	"	"
	Sugar	17.62	"	"	"	"
	Gelatin 200 Bl	2.40	"	"	"	"
	Emulsifier E 472a	3.20	"	"	"	"
10	Egg white powder	0.40	"	"	"	"
	Guar bean flour	0.24	"	"	"	"
	Whole milk powder	1.20	"	"	"	"
		100.00	per	cent	by	weight

An outstanding mousse with a very subtle flavour was formed from 125 g of this product with 50 ml of water and 150 ml of a milk/cream mixture (1 : 1). The molten mass can be aromatised as desired, and where relevant coloured.

Example 2

20 A product for an orange mousse was prepared from the following constituents:

	Cocoa butter	14.33	per	cent	by	weight
	Emulsifier	3.49	"	"	"	"
	Foodstuff colorant	0.02	"	"	"	"
25	Chocolate paste, white	39.50	"	"	"	"
	Sugar	15.49	"	"	"	"
	Egg white powder	0.40	"	"	"	"
	Fruit powder	2.32	"	"	"	"
	Aromas	1.86	"	"	"	"

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Citric acid	0.62 per cent by weight
Instant gelatin	2.32 " " " "
Guar flour	0.23 " " " "
Chocolate paste, white	<u>19.42 " " " "</u>
5	100.00 per cent by weight

130 g of this product were processed with 50 ml of water and 150 ml of a milk/cream mixture (1 : 1) as described above to give an outstanding orange mousse.

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CLAIMS

1. A storable, solid product which can be whipped up with liquid to a dessert mousse, characterised in that it contains sugar or another natural or artificial sweetener, 25 to 36 per cent by weight of fat, 1.3 to 3.5 per cent by weight of binder, 1.5 to 5 per cent per weight of emulsifier; these amounts being based on the total weight of the product, and, where relevant, other constituents.
2. A product according to Claim 1, characterised in that it contains chocolate paste.
3. A product according to Claim 1 or Claim 2, characterised in that it contains cocoa or chocolate powder, coffee concentrate, vanilla powder, caramel, honey, fruit or nut pieces, pastes or powders, spices, wine, rum, kirsch or other alcoholic drink or essence thereof.
4. A product according to any one of Claims 1 to 3, characterised in that it contains egg white.
5. A product according to any one of the preceding claims characterised in that it contains milk constituents.
6. A product according to any one of the preceding claims, characterised in that it contains cocoa butter as the fat.
7. A product according to any one of the preceding claims, characterised in that it is in the form of slabs, cubes, bars, balls, crumbs or powder.



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8. A product according to Claim 1 characterized in that it comprises

25 to 36% by weight fat
40 to 50% by weight sugar
1.3 to 3.5% by weight binder
1.5 to 5.0% by weight emulsifier
1 to 3% by weight egg white
10 to 20% by weight cocoa (dry weight)
0 to 20% by weight milk constituents.

9. A process for the preparation of a product according to any one of the preceding claims, characterised in that molten edible fat is processed to a homogeneous mass with sugar or another natural or artificial sweetener, an emulsifier and a binder, and, where relevant, other constituents, and the molten mass is made into the desired shape and allowed to cool.

10. A process according to Claim 9, characterised in that, cocoa or chocolate powder or paste, coffee concentrate, vanilla powder, caramel, honey, fruit or nut pieces, pastes or powders, spices, wine, rum, kirsch or other alcoholic drink or essence thereof, is added to the mixture before or after its processing to a homogeneous mass.

11. A process according to Claim 10 for the preparation of a chocolate mousse product, characterised in that the fat is melted and is mixed with the sugar or sweetener, the emulsifier and the binder, the mixture is allowed to cool and is grated and mixed intimately with grated chocolate paste.

12. The use of a product according to any one of Claims 1 to 8 for the preparation of a dessert mousse, characterised in that the product is suspended in liquid, milk or cream is added, where relevant, and the mass is whipped up to a mousse, preferably at about room temperature.