



Cooking aid of the bar type

The subject of the present invention is a cooking aid of the bar type, a process for its preparation and a plant
5 for carrying out the process.

US-A-4060645 (Risler et al.) describes a dehydrated product in the form of grains instantly soluble in water which have a continuous porous texture and a smooth
10 surface which can be obtained by extruding, in a vessel where a subatmospheric pressure exists, a food material comprising fruit, vegetable or seed extracts, starches, gums or alginates, meat, fish or yeast extracts, and/or protein hydrolysates, for example.

15 US-A-4946693 (Risler et al.) describes a food product consisting of a dehydrated mass in the form of a powder or of flakes of milk, fat, gelatinized starch, meat and vegetable extracts or protein hydrolysates, for example,
20 and of a filling of partially dehydrated vegetable, meat or pasta pieces, for example, this filling being packaged separately.

The aim of the present invention is to provide a cooking
25 aid in an attractive individual form having, in its mass, visually identifiable pieces of vegetables, meat or other filling, fat and pulverulent flavouring ingredients, for example.

30 To this effect, the cooking aid of the bar type according to the present invention has the shape of a bar with an irregular surface and comprises 8-50% by weight of visual components held in a cement consisting of 15-35% fat and 20-70% dehydrated base.

35 Likewise, the process for the preparation of a cooking aid of the bar type according to the present invention comprises the successive steps of mixing the visual components with the molten fat and the dehydrated base,

forming a rolled-out product from the mixture obtained, cutting and cooling.

5 Finally, the plant for carrying out the process for the preparation of a cooking aid of the bar type according to the present invention comprises a device for mixing the visual components with the molten fat and the dehydrated base, a device for forming a rolled-out product from the mixture obtained, a cutting device and
10 a cooling device.

The cooking aid according to the present invention effectively has all the desired ingredients in one and the same bar of attractive appearance because of the
15 identifiable visual components or pieces within its mass. The visual components are just coated with cement therein. The cooking aid has a loose structure and a capacity to break up easily which increases as a function of the percentage of visual components.

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The process and the plant according to the present invention make it possible to prepare this cooking aid in a simple manner and in a limited number of steps.

25 In the present disclosure, the expression "in the form of a bar" should be understood as having the shape of a bar of relatively small size, with a parallelepipedal section and a few cm in length, for example.

30 The expression "visual components" should be understood as components whose size is sufficiently large and whose colour exhibits sufficient contrast relative to that of the cement to be distinguished with the naked eye.

35 The term "cement" should be understood as a mass of homogeneous texture and colour capable of ensuring the cohesion of the cooking aid after cooling despite its high content of visual components.

The cooking aid according to the present invention therefore comprises 8-50% by weight of visual components held in a cement consisting of 15-35% fat and 20-70% dehydrated base.

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In this cooking aid, the visual components may be dehydrated pieces of any food product which can be taken into consideration as a filling.

10 These visual components may be in particular pieces of one or more vegetables, fruits, aromatic herbs, meats, fish and/or crustacea, spices and/or whole or crushed seeds, for example.

15 The fat may comprise at least one vegetable fat and/or one animal fat, hydrogenated or otherwise and supplemented or otherwise with an antioxidant.

This fat preferably is of a type or has a composition
20 such that it is solid at room temperature, in other words at a temperature of between about 20 and 30°C, for example. A hydrogenated palm fat which has a melting point of between 41 and 46°C is particularly suitable in this regard.

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The dehydrated base may comprise food materials in finely subdivided form chosen according to their capacity to confer adequate flavour or texture on the cooking aid, for example.

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This dehydrated base may comprise in particular
flavouring agents such as sugars, salts, spices, fruit,
vegetable or meat extracts, protein hydrolysates, yeast
autolysates, products of the Maillard reaction or
35 flavour molecules, taste-enhancing agents such as 5'-
nucleotides or glutamate, and/or binding agents such as
starches, maltodextrins, gums or alginates, for example.

The cooking aid may finally comprise technological additives such as lecithin, which is used to enhance the plasticity of the initial mixture, for example.

- 5 To carry out the process for the preparation of a cooking aid according to the present invention, it is possible to add the dehydrated base to the molten fat, to mix and to add the visual components after mixing, for example. The temperature of the molten fat may be
10 about 50-70°C, for example.

The temperature of the mixture of the visual components with the molten fat and the dehydrated base is preferably adjusted to a value such that it has
15 adequate plastic properties for the formation of a rolled-out product, without being either too liquid or too hard. A temperature of about 35-45°C can be recommended in this regard.

- 20 It is possible to form a rolled-out product from the mixture by lamination and/or extrusion, for example, the main consideration being that little pressure should be exerted on the mixture during the operation.

- 25 It is possible to form a rolled-out product from the mixture by causing it to pass between two or three contiguous rollers and/or between a transfer table and one or two successive rollers, the rollers and/or the table being preferably smooth and capable of being
30 regulated in terms of temperature, for example. The temperature of the rollers may be adjusted to a value of between 35 and 50°C, and that of the table to a value of between 10 and 40°C, for example.

- 35 It is thus possible to form a rolled-out product from the mixture which is 5 to 30 mm thick, preferably 8 to 20 mm thick, for example.

It is possible to cut the strip longitudinally in order to form bands having the desired width of the bar, especially a width of 5-50 mm, preferably 15-30 mm, for example. It is also possible to cut the bands transversely, in order to obtain individual bars, especially bars 30-120 mm long, for example.

In a specific embodiment of the present process, a tendency of the bar to break up is reduced by spraying or coating liquid fat or remelting fat at the surface of the bar.

It is then possible to cool the bars, especially by causing them to pass through a cooling tunnel in which air at 5-10°C is circulated, for example.

In the plant for carrying out the process for the preparation of a cooking aid according to the present invention, the device for mixing the visual components with the molten fat and the dehydrated base may comprise a jacketed mixer, in particular a band mixer, for example.

A jacketed mixer can serve simultaneously as a device for adjusting the temperature of the mixture to an appropriate value, in particular by circulating a cooling fluid at about 30-70°C, for example.

The mixing device may be connected to the device for forming a rolled-out product through transporting means, preferably thermoregulated, such as a belt conveyor or an Archimedean screw, the belt or the screw ending above a hopper for supplying the device for forming a rolled-out product, for example.

The device for forming a rolled-out product may be of the laminating machine and/or extruder type and may comprise two or three contiguous rollers and/or a transfer table surmounted by one or two successive

rollers, the rollers and the table being preferably smooth and thermoregulated, for example.

5 The cutting device may comprise longitudinal cutting means comprising in particular rotating knives mounted on a rotating transverse axis, these knives rotating in longitudinal slits provided in a cutting table provided in the extension of the transfer table, for example.

10 These knives may comprise self-cleaning blades rotating at very high speeds, in particular at more than 3000 revolutions per min, for example. The spacing of the knives or the distance between successive knives on the axis may be adjusted as a function of the width which
15 it is desired to give the bars.

The cutting device may comprise, in addition, transverse cutting means comprising in particular a guillotine or a water jet cutting system.

20 Finally, a cooling device may be provided in the form of a tunnel featuring cold air circulation through which the cooking aids may be transported by a conveyor belt which collects them at the outlet of the cutting
25 device, for example.

The plant for carrying out the process for the preparation of a cooking aid according to the present invention is described below with reference to the
30 accompanying drawing in which:

- Figure 1 is a schematic side view of an embodiment of the plant.

35 In the embodiment represented in Figure 1, the present plant comprises a mixing device (1,2), a device for forming a rolled-out product (5-9), a cutting device (10-14) and a cooling device (15).

The mixing device comprises a jacketed band (2) mixer (1). It is connected to the device for forming a rolled-out product through an Archimedean screw (3) ending above a feed hopper (4).

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The device for forming a rolled-out product is of the laminating machine type and comprises two contiguous rollers (5,6) followed by a transfer table (7) surmounted by two successive rollers (8 and 9). The
10 gaps between the two contiguous rollers and then between the rollers and the table decrease gradually so as to form a rolled-out product having a gradually reduced thickness to a desired final value.

15 The cutting device is provided in an extension of the transfer table after the last laminating roller (9) and it comprises longitudinal cutting means (10) and transverse cutting means (12).

20 The longitudinal cutting means comprise rotating knives (10) mounted on a rotating transverse axis (11). These knives rotate in longitudinal slits provided in a cutting table made in the extension of the transfer table (7). The spacing of the knives is adjustable
25 according to the width which it is desired to give the bands cut out of the rolled-out product.

The transverse cutting means comprise a guillotine (12).

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The individual bars (13) cut out of the bands by the guillotine fall on a conveyor belt (14) which transports them through a cooling tunnel (15) featuring cold air circulation.

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The cooking aid of the bar type according to the present invention is intended to be used as a seasoning for cooking any dish such as meat, vegetable or pasta. It is particularly well suited to commercialization as

an accompanying dish for pasta or rice, in particular
as an accompanying dish for oriental pasta, in the very
packet containing these types of pasta. Finally, it is
also suitable for the preparation of clear broths
5 enriched with a coloured filling.

The cooking aid according to the present invention and
the process for its manufacture are illustrated below
with the aid of examples in which the percentages are
10 indicated by weight.

Example 1

A cooking aid is prepared with the aid of a plant
15 similar to that represented in Figure 1, except for the
fact that in place of the laminating machine type
device as represented, a press with smooth rollers is
used which is marketed under the name FORMPRESS type GP
by the German company BEPEX-HUTT.

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The following ingredients are mixed in a band mixer, in
% by weight of the mixture:

Hydrogenated palm fat	30%
(melting point 44-46°C)	
Fine salt	43%
Sodium glutamate	2%
Ground white onion	9%
Flavouring agent giving a meat-like flavour	3%
Glucose syrup	1%
Dehydrated carrots (6×6×2 mm)	6%
Freeze-dried onion (3×3×3 mm)	4%
Dehydrated parsley leaf	2%

25 To prepare this mixture, the hydrogenated palm fat is
melted and heated beforehand to a temperature of
58.5°C. The temperature of the mixer jacket is

maintained at 50°C. The band rotates at 12 revolutions per min. The ingredients are thus mixed for 12 min.

5 A sandy but cohesive mass having a temperature of 41.5°C is obtained as mixture.

10 A rolled-out product 12 mm thick is formed from the mixture. It is longitudinally cut into bands 25 mm wide. The bands are then cut into bars 35 mm long and they are cooled to room temperature.

15 The cooking aid thus obtained has the shape of a bar of rectangular section and with an irregular surface in which the coloured vegetables come out well on a pale yellow cement background.



Claims

1. Cooking aid having the shape of a bar with an irregular surface and comprising 8-50% by weight of visual components held in a cement consisting of 15-35% fat and 20-70% dehydrated base.
2. Cooking aid according to Claim 1, in which the visual components are dehydrated pieces of one or more vegetables, fruits, aromatic herbs, meats, fish and/or crustacea, spices and/or whole or crushed seeds.
3. Cooking aid according to Claim 1, in which the fat comprises at least one vegetable fat and/or one animal fat, hydrogenated or otherwise and supplemented or otherwise with an antioxidant, and it is solid at room temperature.
4. Cooking aid according to Claim 1, in which the dehydrated base comprises food materials in finely subdivided form.
5. Process for the preparation of a cooking aid according to one of Claims 1-4, comprising the successive steps of mixing the visual components with the molten fat and the dehydrated base, forming a rolled-out product from the mixture obtained, cutting and cooling.
6. Process according to Claim 5, in which the temperature of the mixture of the visual components with the molten fat and the dehydrated base is adjusted to a value such that it exhibits suitable plastic properties for the formation of a rolled-out product.
7. Process according to Claim 6, in which the dehydrated base is added to the molten fat, mixed,



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the visual components are added after mixing, and the temperature of the mixture is adjusted to 35-45°C.

- 5 8. Plant for carrying out the process for the
preparation of a cooking aid according to one of
Claims 5-7, comprising a device for mixing the
visual components with the molten fat and the
10 dehydrated base, a device for forming a rolled-out
product from the mixture obtained, a cutting device
and a cooling device.
9. Plant according to Claim 8, in which the device for
forming a rolled-out product is of the laminating
15 machine and/or extruder type with smooth rollers.
10. Plant according to Claim 8, in which the cutting
device comprises longitudinal cutting means and
transverse cutting means.