
Candidate's answer**Response to Communication:**

EPO
Munich
4.3.09

Dear Sirs,

This letter is in response to the communication under A 94(3) EPC. New claims 1-12 are filed herewith, to replace all claims previously on file.

Amendments and Basis

New claims 1 and 2 have basis in old claim 5, combined with the disclosure on page 2, lines 23-24 (note that layer formation by pouring is disclosed both with and without rolling – 'and/or').

New claim 3 has basis on page 2, line 20.

New claim 4 has basis in old claim 6 and in paragraph [012].

New claim 5 has basis on page 4, lines 9-11.

New claim 6 has basis on page 4, lines 13-14.

New claim 7 has basis in old claim 1; on page 2, lines 24-25; and page 1 lines 5-6.

New claim 8 has basis on page 2, lines 25.

New claim 9 has basis on page 4, lines 22-23 and in old claim 1 ('such as meat products').

New claim 10 has basis in old claim 7.

New claim 11 has basis on page 2, lines 5 to 7 and line 9 ('both milk and water') and on page 4, line 3 (total fluid content). Note that the recited range of 35-65wt% is clearly derivable from the range given in paragraph [013], being a combination of the preferred disclosed narrower range and one of the part-ranges lying within the disclosed overall range (25-65%) on either side of the narrower range. I refer to T925/98 (30-50% unequivocally derivable from 30-60% and preferred 35-60%) and T2/81 (1-50°C derivable from 1-100°C, preferably 30-50°C).

New claim 12 has basis in the disclosed most preferred range on page 4, line 3.

The presently amended claims are clearly derivable from the application as filed as set out above. The requirements of A.123(2) are therefore satisfied.

Novelty

Claims 1-6

D1 discloses a method for preparing a fat substitute which can be used as a food coating. The method of D1 involves preparing a composition containing about 43wt% fat, 43wt% water and 14wt% gelatine, the preparation being done at temperatures of 82 to 87°C, and 65°C. The composition is placed in a container and cooled in a fridge.

D1 does not disclose a method where a composition is shaped by directly pouring out the composition as a layer.

Claim 1 is therefore novel over D1 since the claimed method requires this step.

D2 discloses a method for preparing a fat-containing coating or covering wherein a composition comprising 25-65% fat, 5.5-31% milk and/or water, 0.5-14% gelatine, 0-5% salt, 3-41% starch and 0.3-11.5 carrageenan is prepared at $T > 50^{\circ}\text{C}$, transferred to a mould, heated and then cooled in the mould before being sliced for use as a coating.

D2 does not disclose a method where a composition is shaped by directly pouring out the composition, as a layer.

Claim 1 is therefore novel over D2.

Claims 2-6 contain all the features of claim 1, being dependent thereon. Therefore, these claims are also novel over D1 and D2 (I refer to the Guidelines at C-IV 11.12).

Claim 7

Claim 7 is directed to a material obtainable by the method of claims 1 to 6.

The present inventors have found that a coating material formed by pouring to a layer ('film') is different to coating materials produced by the prior art methods. It was shown that the surface of the poured film has a different structure from that of the slabs or slices cut from a larger block (as in D2). Data from these comparative experiments could be submitted if the examiner feels that it is necessary.

It is further noted that D1 does not disclose a material formed in a layer at all, but produces a 'coating material' by re-melting the cooled composition and dipping the food-product to be coated therein.

The product as defined in claim 7 is therefore novel over D1 and D2, by virtue of the characteristic structure produced by the method of preparation.

Claims 8-10 relate to uses of the novel material of claim 7 and so are novel for the same reasons as above (GL C-IV 11.12).

Claims 11-12

Claim 11 is directed to a composition for use in the method of claim 1.

D1 discloses a composition comprising 43% fat, 43% water, 14% gelatine.

D1 does not disclose a composition containing water and milk.

The composition of claim 11 is therefore novel over D1 as claim 11 specifies the presence of milk and water.

D2 discloses a composition comprising 25-65% fat, 5.5-31% milk and/or water, 0.5-14% gelatine, 0.5% salt, 3-41% starch and 0.3-11.5% carrageenan.

D2 does not disclose any composition having a total fluid content (milk and water) of 35-65% by weight.

The composition of claim 11 is therefore novel over D2, as claim 11 specifies that the composition contains a total liquid content of 35-65%.

Claim 12 is a dependent claim containing all the features of claim 11 and is therefore novel by dependency.

Inventive Step

Claims 1-6 and 7-10

Claim 1 is directed to a method of preparing an edible covering/coating material for food products.

Both D1 and D2 are in the same broad technical field of food products and both relate to the provision of coating materials for foods such as meat products.

However, D2 seems to address the same purpose as the present invention, namely to provide a coating material suitable for meat products (e.g. paté, sausage) with desirable properties of good adherence, especially in cutting, and reduced discolouration (see e.g. paragraph [003] of D2; c.f. paragraph [004] of the present application).

Therefore, D2 can be considered to be the closest prior art for the purpose of assessing inventive step.

As set out above, D2 discloses a method of preparing an edible coating material comprising the preparation, at a temperature above 50°C, of a composition containing fat, milk and/or water, gelatine, starch and carrageenan and salt, in proportions which are similar to those recited in present claim 1. However, D2 fails to disclose that said composition is shaped by pouring directly into a layer then cooling – in D2 the shaping and cooling is performed in a mould and the material is cut into layers or slices.

The difference between the methods of claim 1 and D2 is therefore that shaping is performed by pouring into a layer.

The technical effects of this difference are that:

1) the material can be used directly once cooled for covering and coating food products with no need to cut it into the desired thickness – see paragraph [008] of the application and

2) the surface of the poured material has a different structure which has been shown in comparative tests to result in improved adhesion to the food product (data from these comparative tests will be submitted later, if needed – for now, I enclose a letter from the applicant, describing the results of their tests). See also paragraph [015] of the application ('good adherence') which shows that this effect was already suggested and is now supported by the experimental evidence (GL C-IV 11.10).

The problem to be solved by the present invention may therefore be formulated as the provision of a coating material with improved adhesion to the food product.

The solution provided by the present invention is to prepare the coating material by pouring a layer of the composition and cooling.

D2 does not suggest that the compositions therein could be shaped by pouring. In fact, given the high fat content (51% in the example) and low total liquid volume (21.8% in the example – maximum of 31%) it is unlikely that the composition would be pourable. The skilled person would therefore not consider this option absent any specific teaching to do so.

D1 likewise provides no hint that a composition should be shaped by pouring into a layer. Neither D1 nor D2 would motivate the skilled person seeking improved adherence to use a method involving pouring as there would be no expectation, from the disclosures of these documents, that such a property would result.

The results showing that better adherence is obtained are therefore an unexpected technical effect.

The method of claim 1, involving pouring into a layer, is therefore not obvious from D2 either alone or in combination with D1. Claim 1 is therefore inventive.

It follows that dependent claims 2-6 are also inventive (GL C-IV 11.12).

The novel product obtained by this method, being the better-adhering material, is evidently also inventive for the same reasons, as are the resultant uses of that product. Therefore, claims 7-10 must also be acknowledged as involving an inventive step.

As an additional indicator of inventive step, it is notable that the materials produced by the present 'pouring' method have enjoyed considerable commercial success. The enclosed letter from the applicant explains that sales have been impressive (20 tons in half a year) and the 'film-like' product produced by the inventive method (see e.g. application page 4, line 14; and old claim 2) are very successful and popular.

I refer to the Guidelines at C-IV 11.9.4 which indicate that immediate commercial success can be taken into account.

Claims 11-12

Claim 11 is directed to a composition which is especially suitable for use in the method of claim 1. The composition of claim 11 has a high total liquid volume compared to the compositions of D2 and contains both milk and water (c.f. D1).

As set out on page 2, lines 9-11 a composition containing milk and water has improved pouring properties and solidifies rapidly on cooling making it particularly suitable for directly forming the material in layer form. Similarly, on page 4, lines 5-6 it is explained that a high total liquid content results in a composition with the same improved pouring properties and rapid solidification.

D2 can still be considered as closest prior art, as the purpose of the composition of claim 11 (production of a coating material with the desirable properties previously discussed) is the same as the composition of D2.

D2 does not disclose a composition having a high total liquid content of 35-65wt%, as discussed earlier. The technical effect of this difference is discussed above (pouring properties and rapid solidifying).

The problem to be solved is therefore the provision of a composition with improved pouring properties and rapid solidification.

The solution is a composition with liquid content 35-65wt%.

D2 teaches a maximum liquid content of 31%. The example used in D2 has only 21.8% total liquid. As the disclosure of D2 does not relate to pouring compositions into layers (see earlier), the skilled person would have no hint from D2 how to modify the composition of D2 to improve its pouring and solidification properties.

D1 likewise provides no suggestion as to how a good pouring composition for forming layers should be formulated.

The composition of claim 11 is therefore not obvious from D2 alone or in combination with D1.

Claim 11 (and hence dependent claim 12) therefore has inventive step.

Unity of Invention

As discussed above, the composition of claim 11 is especially suitable for use in the method of claim 1, having good pouring properties and solidifying rapidly on cooling which facilitates layer formation.

The claims all share the overriding inventive concept of forming layers of a composition in order to produce coating materials with good adherence properties.

The requirements of A.82 EPC are therefore met.

Conclusion

The objections raised in the examination report all being dealt with, I submit that the application is in order for allowance. The description will be amended in due course if the examiner agrees.

As a precaution, I request oral proceedings if refusal of the application is contemplated.

Yours faithfully,

Mr Wurst
Authorised Representative

Encs: letter from applicant relating to comparative tests on the new materials
New claims 1-12 (4 pages)

Annex 5 (Letter from the applicant)

Dear Mr Wurst,

Having heard the objections raised by the EPO, we have a comment. They probably do not understand how far-reaching our invention is. At first glance it might look very trivial, but it is far from that. First with the present invention it has become possible to actually provide the coating material as an independent product which can be marketed on its own. In the last half year, we have sold 20 tons of coating film. When the product, as explained in our application, paragraph [008], is poured into a film and optionally rolled to reduce its thickness, it can be wound up into a coil. The coil is kept cool until needed. When we filed the application we did not realise the value of the film. It has become a very popular product in the meat processing industry.

We have carried out a comparison between a product that has been poured to a film according to the invention and a product that has been formed by cutting into slabs from larger blocks formed as in the prior art. It could be shown that the surface of the poured film has a different structure from that of the cut slabs or slices. The adhesion of the so-formed coating to the food product is also improved because of this structure.

Yours sincerely,

Mr Bacon
FatInnovation

Claims:

1. *Method for preparing an edible covering or coating material for food products comprising preparing a composition at a temperature above 50°C consisting of 10-50% beef or pork fat, 25-65% milk and/or water, 5-30% gelatine, 0-25% binders and/or thickeners and 0-5% salt, whereafter the obtained material undergoes shaping and is cooled, wherein said shaping takes place by directly pouring out the composition as a layer.*
2. Method of claim 1 wherein said shaping takes place by directly pouring out the composition as a layer and by rolling.
3. Method of claim 1 or claim 2 wherein the composition is prepared at a temperature above 60 °C.
4. Method of any of claims 1 to 3 wherein the composition is prepared by *mixing the beef or pork fat in a molten state with the gelatine and then adding milk and/or water.*
5. Method of any of claims 1 to 4 wherein the composition is poured out in layer form on a conveyor belt and cooled immediately thereafter on the same conveyor belt, the partially cooled paste subsequently being rolled to a thickness of 1.5 to 2.5 mm.
6. Method according to claim 5 wherein a plastic foil is arranged on the composition prior to cooling.
7. An edible covering or coating material for food products obtainable using a method according to any of claims 1 to 6.
8. Use of an edible covering or coating material according to claim 7 for covering or coating a food product.
9. Use according to claim 8 wherein the food product is meat or a meat product.
10. A food product such as meat or a meat product covered or coated with the edible material of claim 7.
11. A composition for use in the method of any of claims 1 to 6 comprising:
milk and water in a total liquid content of 35-65% by weight;
10-50 wt% beef or pork fat;
5-30 wt% gelatine;
0-25 wt% binders and/or thickeners; and
0-5 wt% salt;
the ratio of milk to water being 90:10 to 10:90.
12. A composition according to claim 11 comprising milk and water in a total liquid content of 35-60 wt%.