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(56) Documents Cited

GB 1600536 A

GB 1074040 A

EP 0607461 A1

EP 0547551 A1

US 5225222 A

US 4681766 A

US 4645674 A

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(54) **Glazing food products**

(57) A series of cakes which are to be given a glossy surface are fed to a glazing station. Mallow rousse is heated to a temperature in the range 45° to 50°C, any colours required are added to the mixture, and then the mixture is cooled to approximately 30°C. The cooled mixture is poured over the arriving cakes at the glazing station. The shiny surface provided by the method has a distinctive high gloss finish and gives to the cakes a markedly different decorative appearance. A solution of sugar, gelatine or a gum, and water may be used in place of mallow rousse (glucose and gelatine).

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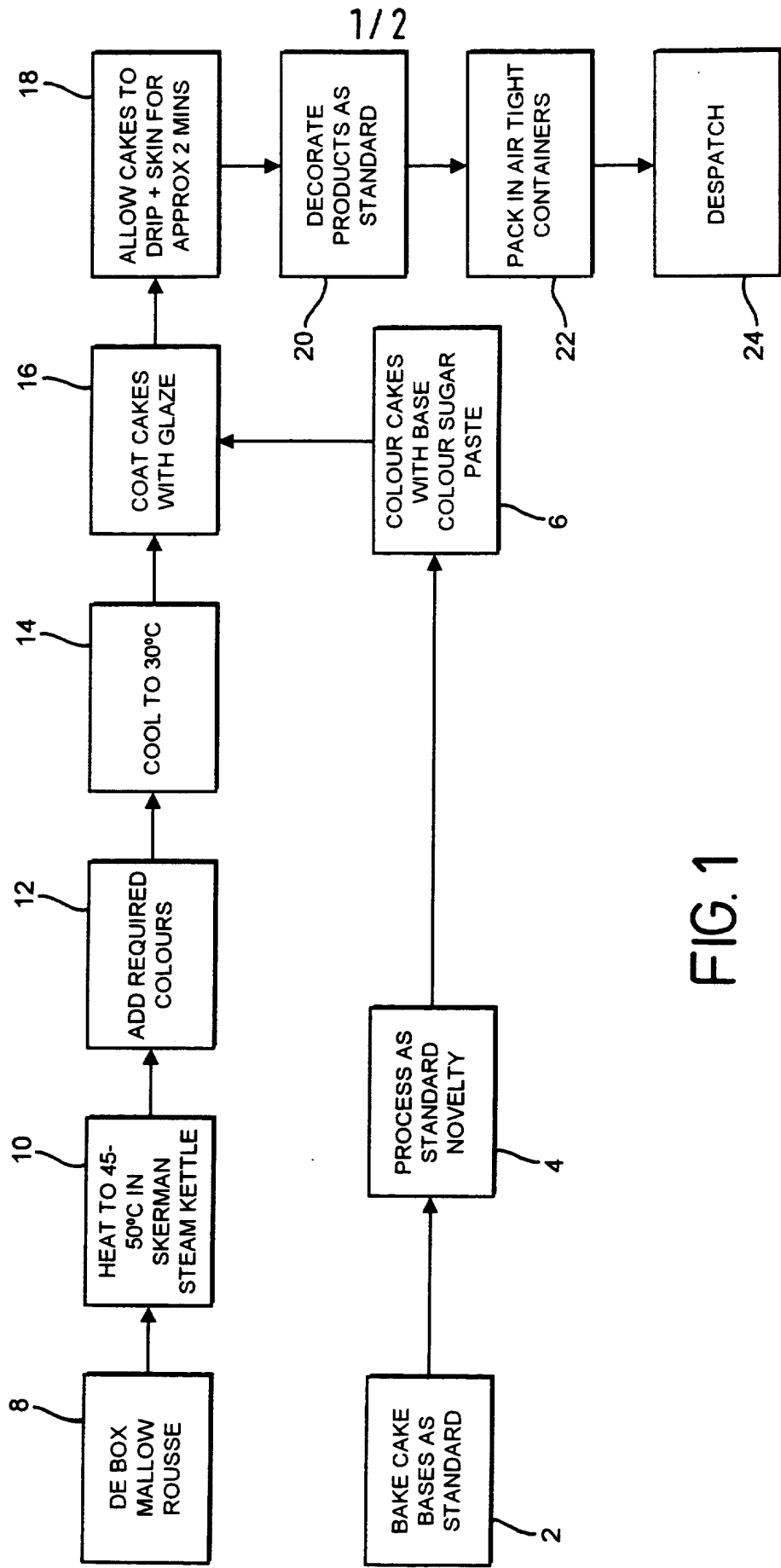


FIG. 1

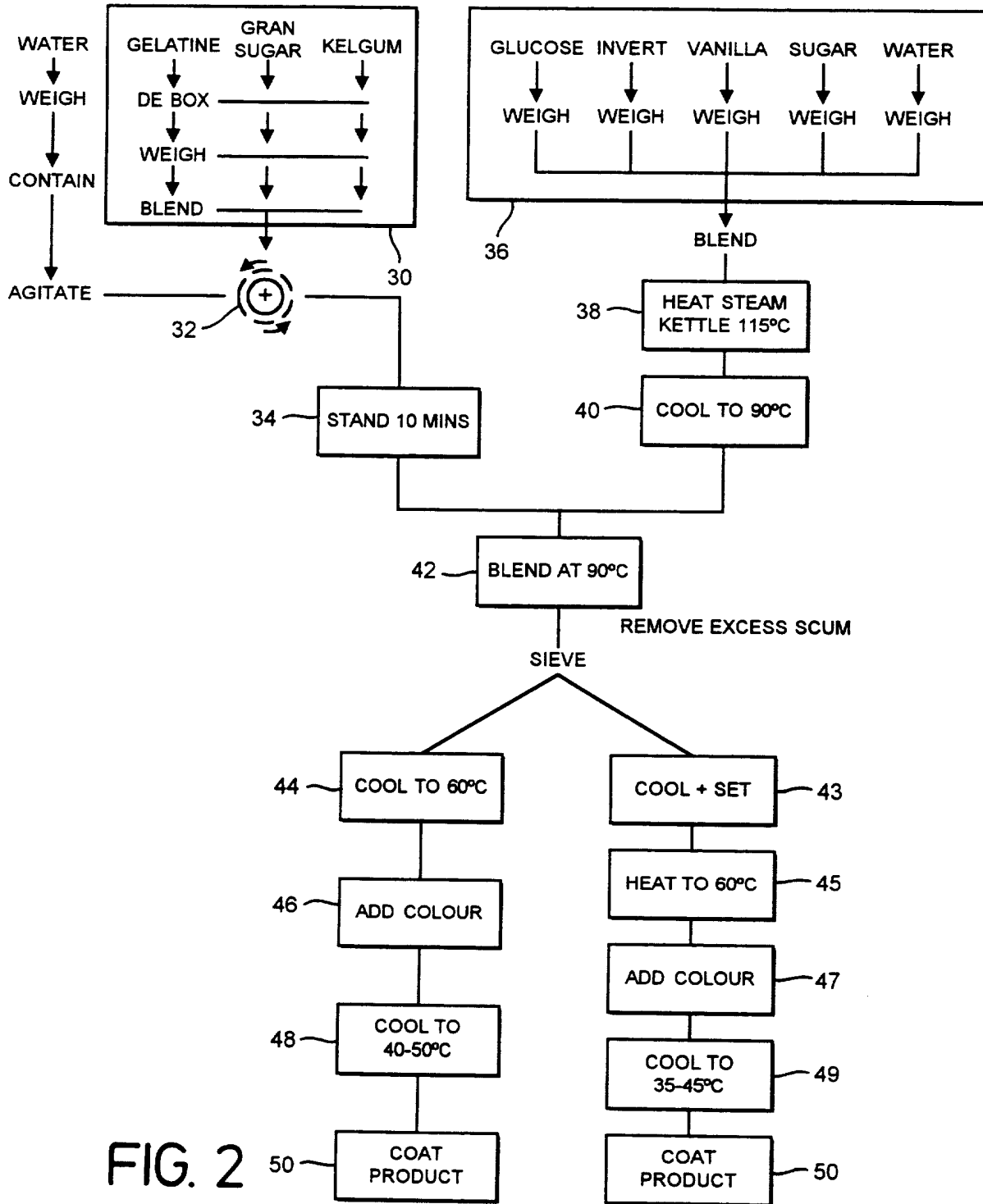


FIG. 2

IMPROVEMENTS IN OR RELATING TO FOOD PRODUCTS

The present invention relates to a method of glazing food products, and to food products which have been so
5 glazed.

Cake manufacturers have, on occasions, used varnish like glazes to decorate their products. However, such glazes have to be very carefully applied by hand.
10 Furthermore, they are, at most, only able to give a sheen or shine to the surface of the product.

According to one aspect of the present invention there is provided a method of glazing food products, the method
15 comprising the steps of heating a mixture containing one or more sugars, gelatine and/or gum, and water, to form a solution, and then applying the cooled solution onto food products to form a shiny surface.

A method according to an embodiment of the invention can be used in an automated process. More importantly, the shiny surface formed by embodiments of the invention has a distinctive high gloss finish and gives to the products a markedly different decorative appearance. The high gloss
20 effect can also be used to emulate liquid or condensation.

The food products to be glazed may be any products required. However, in a preferred embodiment, the baked products are cakes and gateaux. The cakes and gateaux may
30 be ambient, to be chilled, or to be frozen.

The mixture which is heated to form the solution may be, for example, a commercial mallow rousse, which is a glucose and gelatine based product. However, any
35 appropriate mixture may be formed and then heated to activate the gelatine and/or gum.

In a preferred embodiment the mixture has in excess of 50% by weight of sugar or of a sugar composition, 20% to 30% of water, and in excess of 3% gelatine and/or gum. Flavourings and colour are added as required.

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The sugar composition in the mixture may be a jam. In a preferred embodiment, at least a proportion of the sugar is glucose as this has been found to provide a high gloss.

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The gelatine and/or gum is provided to hold the shiny surface in place. Any gum may be used, for example, a pectin based gum and the gum may be provided alone or in combination with gelatine. Similarly any gelatine may be used, for example, animal gelatine or a vegetarian

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gelatine. The mixture containing the gelatine and/or gum is heated and then cooled, or allowed to cool, before it is poured over the food products to form the glazed surface.

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In one embodiment, all of the ingredients of the mixture are heated, for example, to a temperature in the range 45° to 90°C. Subsequently, the heated mixture is cooled to be in the range 30° to 50°C. When in this cooled temperature range, the mixture is poured over the food products. Preferably, any colouring agents are added during or after the mixture has been cooled.

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In an alternative embodiment, most of the sugars are blended with most of the water and heated, for example, to above 100°C. The sugar solution so formed is then cooled to a temperature in the range 45° to 90°C. The gelatine and/or gum is mixed with the remaining water and the remaining sugar at room temperature and is then added to the heated sugar solution and blended therewith. The resultant heated solution is then allowed to cool.

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In an embodiment, the blended heated solution is allowed to cool to set. When it is required to glaze the food products, the set solution is then re-heated to a temperature in the range 45° to 60°C, allowed to cool, and then poured over the food products.

According to a further aspect of the present invention there is provided a food product which has been glazed by a method as defined above.

The present invention also extends to a food product having a shiny surface layer, said shiny surface layer having been formed from a solution of one or more sugars, gelatine and/or gum, and water, which solution has been poured over the food product.

Embodiments of the present invention will hereinafter be described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 shows schematically a process for baking cakes and providing them with a glossy surface layer, and

Figure 2 shows an alternative process for providing a cake with a glossy layer.

The process of the invention may be used to give a gloss effect to any food product. However, it is particularly effective when used to provide a glossy surface layer on baked products such as cakes, for example, ambient cakes. The method is therefore described below as applied to cakes. The process utilises a mixture containing sugars together with gelatine or gum to provide the gloss effect for the cake in the form of a shiny surface held in place on the cake. The sugar can be in the form of a sugar composition such as jam, but generally, it

is preferred that the gloss giving sugar is glucose. The shiny layer may be held in place by gelatine or by gum, or by a mixture of both. In this respect, commercially available mallow rousse may be utilised in the process and a process using mallow rousse is illustrated in Figure 1.

As is shown in Figure 1, cakes are baked as indicated at step 2 in any standard manner and may be processed, for example, to provide required shapes at step 4. At step 6 the cakes are coated with a base colour sugar paste. Of course, the steps 2, 4 and 6 may be altered or augmented as required. The output from the station at which step 6 takes place will be a series of cakes to each of which it is required to apply a glossy surface.

At step 8 mallow rousse is removed from its packaging and is placed in a Skerman steam kettle. At process step 10 the mallow rousse is heated to a temperature in the range 45° to 50°C. Any colours required are added to the mixture at a following step 12, and the mixture is then cooled to approximately 30°C at step 14. The cooled mixture is then poured over arriving cakes as indicated at step 16. The production line has a station 18 at which cakes are allowed to drip for approximately two minutes so that a skin is formed, the skin providing a glossy surface layer for the cake. The completed cakes are then decorated, as indicated at 20, packed, as indicated at 22, and despatched as indicated at step 24.

These further final processing steps 20 to 24 are normal processing steps and obviously can be augmented or altered as required. For example, the cooled mallow rousse mixed may additionally and/or alternatively be sprayed onto the cake, and/or applied by different techniques to emulate pools of liquid, form emulsions of liquid drops, and provide other distinctive decorative effects.

Whilst it is useful to undertake the glazing process using a commercially available product such as mallow rousse, in one preferred embodiment a customised mixture is provided. For example, this mixture may comprise the following ingredients by weight:-

EXAMPLE

10	WATER	20.90%
	GELATINE (130BL)	3.98%
	GRANULATED SUGAR	39.80%
	KELGUM	0.10%
	INVERT SUGAR	4.98%
15	FLAVOUR	0.40%
	GLUCOSE	<u>29.84%</u>
		100.00%

Obviously, the precise quantities of all of the ingredients can be chosen as is required.

Figure 2 indicates one method of utilising the customised mixture of the above example to provide a gloss effect finish on cakes. As can be seen at a station 30 the gelatine, granular sugar and kelgum are weighed out and blended. At processing station 32 these dry ingredients are mixed into, and agitated with, some of the water, for example, less than half of the water. The resultant solution is then allowed to stand at station 34, for example, for about 10 minutes.

At a further processing station 36 the remaining ingredients are weighed and mixed with the remaining water. The resultant solution, having been blended is heated in a steam kettle, at step 38, to approximately 115°C. The solution is then allowed to cool to 90°C at step 40. The

gelatine mixture and the heated sugar solution are then blended together at station 42, this blending taking place at the 90°C temperature of the sugar solution. Any excess scum is skimmed from the solution which is then sieved.

5

If the sieved solution is to be used substantially immediately it is cooled to approximately 60°C at station 44, colour is added thereto as indicated at 46, and the solution is further cooled to approximately 40° to 50°C as indicated at step 48. The cooled solution may then be poured over the product to be coated as indicated at 50.

10

Where immediate use of the coating mixture is not required it can alternatively be allowed to cool and set as indicated at step 43. When it is required to coat cakes with the set solution it is first all heated to approximately 60° as indicated at 45 and then colour can be added thereto as indicated at 47. The solution is then cooled, for example, to 35° to 45°C as set out at step 49 and this cooled solution is used to coat the product as indicated at 50.

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It will be appreciated that variations and modifications may be made to the ingredients used and to the process steps as described. Indeed, modifications and variations may be made to the invention described and illustrated within the scope of this application.

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CLAIMS

1. A method of glazing food products, the method comprising the steps of heating a mixture containing one or more sugars, gelatine and/or gum, and water, to form a solution, and then applying the cooled solution onto food products to form a shiny surface.
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2. A method as claimed in Claim 1, wherein the food products to be glazed are baked products.
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3. A method as claimed in Claim 2, wherein the baked products to be glazed are cakes and gateaux.
4. A method as claimed in any preceding claim, wherein the mixture which is heated to form the solution is a commercial mallow rousse.
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5. A method as claimed in any of Claims 1 to 3, wherein the mixture has in excess of 50% by weight of sugar or of a sugar composition, 20% to 30% of water, and in excess of 3% gelatine and/or gum.
20
6. A method as claimed in Claim 5, wherein the sugar composition in the mixture is a jam.
7. A method as claimed in any preceding claim, wherein at least a proportion of the sugar in the mixture is glucose.
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8. A method as claimed in any preceding claim, wherein the gum is a pectin based gum.
9. A method as claimed in any preceding claim, wherein the gelatine is animal gelatine or a vegetarian gelatine.
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10. A method as claimed in any preceding claim, wherein the mixture containing the gelatine and/or gum is heated and then cooled, or allowed to cool, before it is poured over the food products to form the glazed surface.
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11. A method as claimed in Claim 10, wherein all of the ingredients of the mixture are heated to a temperature in the range 45^o to 90^oC, and subsequently, the heated mixture is cooled to be in the range 30^o to 50^oC.

5 12. A method as claimed in Claim 10, wherein most of the sugars are blended with most of the water and heated to above 100^oC, and the sugar solution so formed is then cooled to a temperature in the range 45^o to 90^oC, and wherein the gelatine and/or gum is mixed with the remaining water and the remaining sugar at room temperature and is then added to the heated
10 sugar solution and blended therewith.

13. A method as claimed in Claim 12, wherein the blended heated solution is allowed to cool to set, and wherein, when it is required to glaze the food products, the set solution is re-heated to a temperature in the range of 45^o to
15 60^oC, allowed to cool, and then poured over the food products.

14. A food product which has been glazed by a method as claimed in any preceding claim.

20 15. A food product having a shiny surface layer, said shiny surface layer having been formed from a solution of one or more sugars, gelatine and/or gum, and water, which solution has been poured over the food product.

25 16. A method of glazing food products substantially as hereinbefore described with reference to the accompanying drawings.

17. A glazed food product substantially as hereinbefore described with reference to the accompanying drawings.



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Claims searched: 1-17

Examiner: Keith Kennett
Date of search: 5 June 1997

**Patents Act 1977
Search Report under Section 17**

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.O): A2A (A2); A2B (BMB11, BMB39)
Int Cl (Ed.6): A21D 13/00, 13/08, 15/08; A23G 3/00
Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 1600536 (SOLLICH) see page 1 lines 16-23	1,2,15
X	GB 1074040 (BAUDOT) see page 2 lines 4-17 & Examples	1,7,9,15
X	EP 0607461 A1 (FUJI) see Examples 1,2,4 and 5	1,5,9,15
X	EP 0547551 A1 (NATIONAL STARCH) see page 4 line 50	1,2,7,9,15
X	US 5225222 (CHA) see column 2 line 16 & Example 1	1-3,10,15
X	US 4681766 (HUZINEC) see column 2 lines 55-57	1,7,15
X	US 4645674 (LANG) see column 1 lines 50-53	1,15

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.