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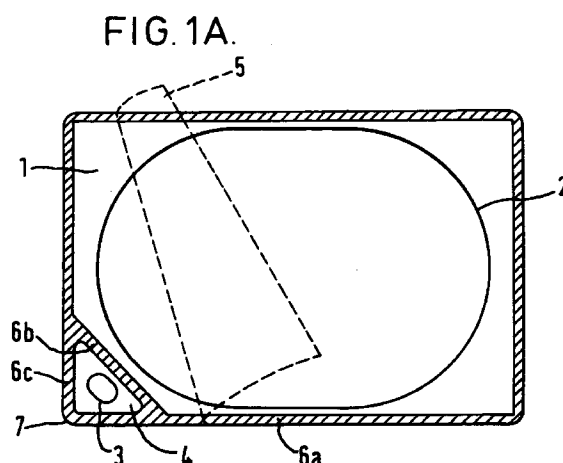
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(71) Applicant:
**SOCIETE DES PRODUITS NESTLE S.A.
1800 Vevey (CH)**

(72) Inventor: **Anderson, Bo
230 30 Oxie (SE)**

(54) **Aromatised food package**

(57) The invention relates to an aromatised food package, in particular to a food package comprising a first cavity (2) with a food product and a second cavity (3) with food-acceptable aroma, the first and second cavities being separately sealed by a cover (5) which, when removed, opens both cavities (2,3).



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Description

The present invention relates to an aromatised package which contains a food product so that, on opening the package, the consumer will smell the aroma.

In some cases it would be desirable to aromatise headspace of a food package in order to increase the smell of freshness and to stress the uniqueness of the food product so that, on opening the package, the consumer's appetite will be whetted on smelling the aroma or flavour.

A system for aromatising a headspace of a food package is disclosed in our granted European patent 0 706 944. For an injection into a headspace of a food package of this aroma dissolved in a liquid gas, the liquid gas and aroma must be dispensed e.g. by means of a spraying nozzle as described in the above cited patent or by means of a dispenser for aroma gas.

Another system for aromatising a headspace of a food package is disclosed in our co-pending European patent application 96201686.1. In this system a noble or inert gas such as Argon may be aromatised and used for introducing an aroma into the headspace of a food package to impart a desirable aroma and increase the smell of freshness on opening the package. The system allows for a direct mixing of the aromatised inert gas with gases used for modifying atmosphere such as carbon dioxide or nitrogen or mixtures thereof. The mixing can be done with a gas mixer in a pre-selected proportion. The mixed aromatised food-acceptable inert gas and the modified atmosphere is then injected into food packages using commercially available gas packing machines. The aroma used is soluble or mixable in gaseous food-acceptable inert gas.

Although the above discussed systems provide many advantages, for certain types of food products the coexistence with certain types of aroma are less appropriate. In such instances there may be a risk that the aroma will be absorbed by the food product in a few days and almost no aroma will be represent in the headspace. A reason for this is that if the aroma is dissolved in a solvent, that solvent may dissolve in the food product.

The present invention provides an alternative to the above-discussed way of giving the consumer the experience of freshness and uniqueness of the food product without the aroma being in the head space of the food package.

According to the invention it has surprisingly been found that a desirable combination of the aroma from the food product and food-acceptable aroma may be obtained by keeping the food product and the food-acceptable aroma isolated in separate compartments, until the product is to be used, and on opening of the package, the aromas will mix and provide a desirable combined aroma. It has been observed that this mixing may take place just above around the package ensuring

that the aroma reaching the person opening the package is mixed.

In a first aspect, the invention relates to a food package comprising a first cavity with a food product and a second cavity with food-acceptable aroma, the first and second cavity being separately sealed by a cover which when removed opens both cavities.

In one embodiment of the invention, the sealing is such that upon opening of the first cavity also the second cavity opens. Therefore, when a consumer removes the cover from the cavity with the food product, the aroma from the food product will be released, but as the opening of the first cavity also results in the opening of the second cavity, the food-acceptable aroma will also be released and mixed with the aroma from the food product. As an alternative, opening of the second cavity will also open the first one, or the package may be such that no matter which cavity is opened first the other one will also open.

In the present context a cavity may be an indentation formed in the package material. However, it may also be the un-sealed area between two abutting sheets sealed together along said un-sealed area. In one embodiment of the invention the aroma is comprised in such an unsealed area while an indentation formed cavity stores the food product. In another embodiment e.g. for sliced meat products both the aroma and the sliced meat product are stored in such un-sealed areas.

The package may comprise a cover web which is peelable and sealed so as to enclose the aroma and the food product in the cavities. The position of the seal between the product cavity and the aroma cavity may be such that when peeling the cover in order to remove it, both cavities will open. The peelable material is of a conventional type. It is preferred that the first and second cavity are imperviously sealed so that no aroma passes through the sealing to the cavity containing the food product.

The food product may advantageously be a chilled product, e.g. charcuterie, packed in a modified atmosphere, for instance in a pouch, or it may be a product suitable for ambient storage, e.g. a confectionery product such as biscuits.

The food-acceptable aroma may be selected from an aroma, a flavourant, a pre-cursor of a flavourant, or a mixture thereof. Food-acceptable aroma is preferably of natural origin, and is volatile. Advantageously, the aroma is similar to that of the food product in the package, e.g. meaty aroma for a meat product such as charcuterie. Alternatively, the aroma is different from that of the food product. The aroma used need not be soluble or mixable in gaseous food-acceptable inert gas.

Preferably, the food-acceptable aroma is dissolved in a food-acceptable organic solvent before it is dosed into the aroma cavity. It is preferred that the aroma is in a solvent selected from the group consisting of oil, water, glycerine and poly-alcohols. For example, the oil is animal or a plant oil, e.g. peanut oil. The amount of

aroma dissolved in the solvent may be from 1 to 30%, for instance from 3 to 5% by weight based on the weight of the solution.

For certain types of food products such as a charcuterie product or dough, it may be desirable to pack the product in a modified atmosphere in order to prolong the life of the product. The introduction of the modified atmosphere into the headspace may be accomplished conventionally by firstly evacuating the air from the package followed by the introduction of the modified atmosphere. Evacuating air from the package is accomplished by pulling a vacuum which is a conventional process as is the introduction of the modified atmosphere which usually consists of carbon dioxide or nitrogen or a mixture thereof, e.g. 20 % CO₂ and 80% N₂.

In another aspect, the present invention relates to a method of providing a food package comprising

providing a package part defining a first and a second open cavity,
inserting a food product into the first cavity,
dosing food-acceptable aroma into the second cavity, and sealing said cavities separately by a cover which when removed opens both cavities.

The food package may e.g. comprise a chilled charcuterie product such as sliced meat, sausages, a dough or a biscuit product, or combined dough, meat and sauce product, for example pies.

It will be apparent to a person skilled in the art that the present invention is not limited to the packing of food products. The invention may also be useful in the gas packing of beverages and to containers containing beverages, thus allowing an increase of the smell of freshness of the beverage product and a stressing of the uniqueness of the beverage.

In a preferred embodiment of the invention, the package comprises a thermoformed tray defining the first and second cavity. Said cavities are covered by a peelable web. Advantageously, the first cavity is a tray with an upper flange and the second cavity is formed in the said upper flange. In an alternative embodiment, the aroma is dosed directly onto the flange, a web is then sealed around the aroma dose so as to isolate it from the food product in the package.

The material is advantageously of plastic or plastic laminate. Conveniently, thermoformable plastic of conventional type.

Packages according to the invention may conveniently be formed in commercially available gas packing machines, e.g. automatic, semi-automatic or manual vacuum/modified atmosphere packing machines (Multivac™, Tiromat™, Dixie Union™, etc. Commercially available gas mixers which are suitable and can be used for carrying out the invention are e.g. gas mixers from Alfax and Multivac.

The seal between the cavity with the aroma and the cavity with the food product prevents migration from the

aroma into the food product cavity.

The consideration concerning preferred embodiments of the package discussed above is also applicable to the method according to the invention.

The invention will now be described in further detail by reference to the accompanying drawing by way of example only and in which

Fig. 1A and 1B are schematic drawings of a food package according to the invention wherein the aroma is released upon removing of a cover, and Fig. 2A and 2B are schematic drawings of another embodiment of a food package according to the invention.

Fig. 1A shows a top view of a food package comprising a package part 1 defining a first cavity 2 for a food product (not shown in the drawing) and a second cavity 3 formed in an unsealed area 4. The second cavity is for a food-acceptable aroma (not shown in the drawing). The first cavity 2 and second cavity 3 are separately sealed by a cover 5 by means of sealings 6a, 6b, and 6c. In Fig. 1 the cover 5 is partly removed from the package part 1 opening the cavities so that the food-acceptable aroma is released together with the aroma from the food product. The sealings 6a, 6b, and 6c are such that when the cover is peeled from the corner 7 firstly the first cavity 2 and secondly the second cavity 3 are opened. In this embodiment of the invention the cover 5 is a peelable web. Fig. 1B shows a side view of the package without the cover 5 being peeled off.

The aroma, in a form as discussed above, is preferably dosed into the cavity by means of a peristaltic pump. Advantageously, the dose per cavity is about 50 µl. The dose is deposited and the cavity covered with a top web 5 and sealed onto the package part 1 to seal the cavities individually.

In another embodiment of the invention, shown in Fig. 2A and 2B, a first cavity 2 is formed in a package part 1. A second cavity 3 is an un-sealed area 8 between an upper flange of the packing part 1 and a cover 5. The packing part 1 and the cover being joined by sealings 6a, 6b, and 6c. In said un-sealed area the aroma is deposited on the upper flange and the cover 5 sealed thereto. Another un-sealed area 9 may be gripped by hand and this allows for an easy releasing of the cover 5 from the packing part 1 by pulling.

Claims

1. A food package comprising a first cavity with a food product and a second cavity with food-acceptable aroma, the first and second cavity being separately sealed by a cover which, when removed, opens both cavities.
2. A food package according to claim 1, wherein the sealing is such that upon opening of the first cavity

the second cavity also opens.

3. A food package according to either claim 1 or claim 2, wherein the cover is a peelable sealed web. 5
4. A food package according to any of claims 1 to 3, wherein the first and second cavities are imperviously sealed.
5. A food package according to any of claims 1 to 4, wherein the cavity with the food product comprises a food-acceptable protective gas. 10
6. A food package according to any of claims 1 to 5, wherein the aroma in the second cavity is in a solvent selected from the group consisting of oil, water, glycerin or poly-alcohols. 15
7. A food package according to any of claims 1 to 6, wherein the package comprises a thermoformed tray defining the first and second cavity. 20
8. A food package according to any of claims 1 to 7, wherein the first cavity has the form of a tray with an upper flange and the second cavity is formed in said upper flange. 25
9. A food package according to any of claims 1 to 7, wherein the first cavity has the form of a tray with an upper flange and the second cavity is between the flange and the cover sealed onto said flange. 30
10. Method of providing a food package comprising

providing a package part defining a first and a second open cavity, 35

inserting a food product into the first cavity,

dosing food-acceptable aroma into the second cavity, and sealing said cavities separately by a cover which, when removed, opens both cavities. 40

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FIG. 1A.

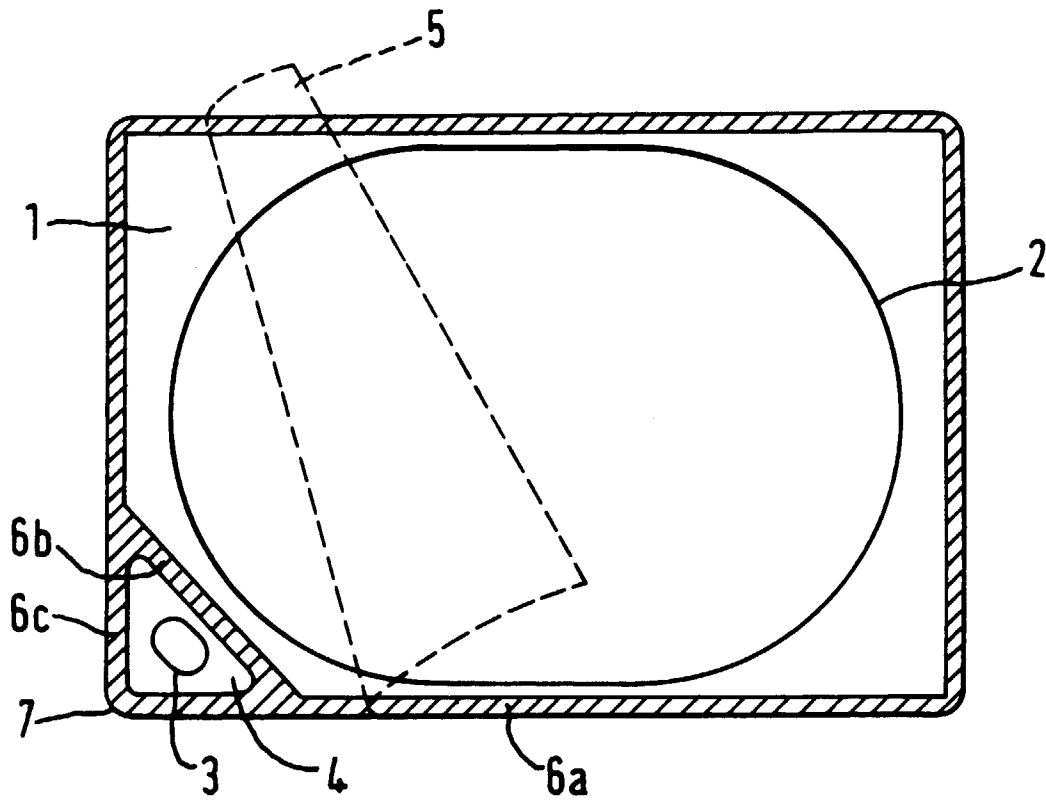


FIG. 1B.

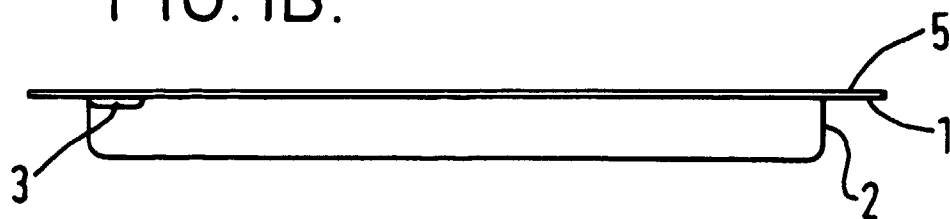


FIG. 2A.

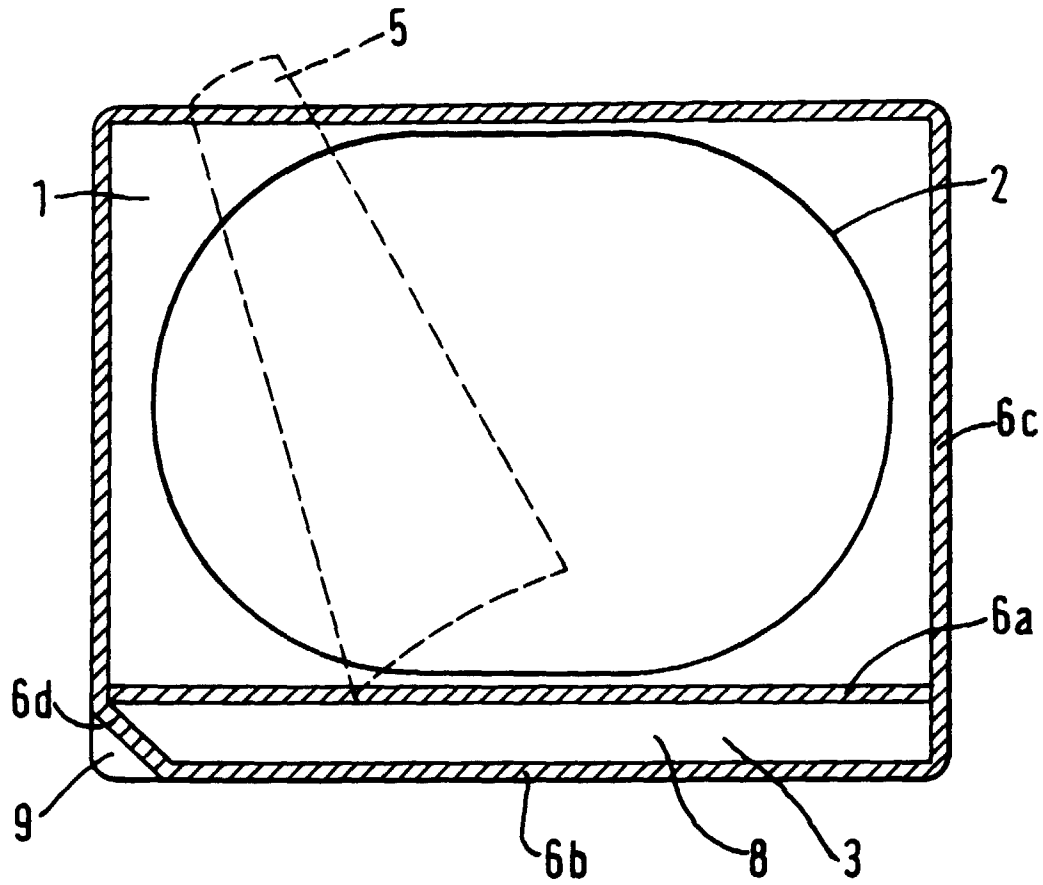
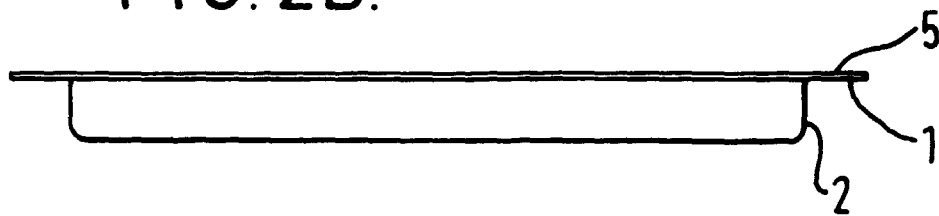


FIG. 2B.





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EUROPEAN SEARCH REPORT

Application Number
EP 97 20 1578

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 448 410 A (TUCKER FOODS LTD) 25 September 1991 * page 2, column 2, line 1 - page 2, column 2, line 14 * * page 3, column 3, line 16 - page 3, column 4, line 19 * * figures 1-3 *	1-4,7-10	B65D81/32
Y	---	6	
X	DE 31 10 847 A (LUFTHANSA SERVICE GMBH) 30 September 1982 * page 8, line 19 - page 9, line 31 * * figure 3 *	1,5	
X	---		
X	EP 0 283 621 A (PHILIP MORRIS) 28 September 1988 * page 3, column 3, line 1 - page 3, column 3, line 30 *	1,2,4,10	
D,Y	---		
D,Y	EP 0 706 944 A (NESTLE SA) 17 April 1996 * page 2, column 2, line 1 - page 2, column 2, line 5 * -----	6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B65D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		15 October 1997	Farizon, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document			

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