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(54) Titre : PRODUIT FOURRAGER SEMI-HUMIDE
(54) Title: SEMIWET FEED PRODUCT

(57) **Abrégé/Abstract:**

Semiwet feed product with a wrapping coating applied by a vacuum coating method, process for the manufacture of such a product, method for packaging the same and product packed using said method.

ABSTRACT

Semiwet feed product with a wrapping coating applied by a vacuum coating method, process for the manufacture of such a product, method for packaging the same and product packed using said method.

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SEMIWET FEED PRODUCT

The present invention relates to a semiwet feed product, a process for its production, a method for its packaging and the product by the latter method.

Semiwet feeds, particularly for domestic animals such as dogs and cats, are conventionally produced by extrusion, followed by the cutting up of the extruded strand or extrudate and then frying the cut off pieces yielding products with a moisture content of approximately 17 to 22%.

The packaging of such products gives rise to problems in that, due to excessive compression of the product pieces which have a fatty outside, they stick together after a short time to form a block, which makes it difficult to separate the product for portioning on feeding after the opening of the pack and may even make it in part impossible. Thus, the vacuum packaging of such products is impossible. This results in a large amount of space being required during transportation and storage.

An object of the present invention is therefore to provide a semiwet feed product, in which the described problems can be avoided and which can in particular be packed in space and cost-saving manner.

According to one aspect of the present invention, there is provided a feed product having a final moisture content of 17 to 22%, wherein the feed product has a wrapping coating applied by a vacuum coating method.

In a preferred embodiment the wrapping coating is fat-containing and, in a preferred manner, contains further nutrients and/or supplements, particularly a trace element mixture.

According to another aspect of the present invention,

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there is provided a process for production of a feed product having a final moisture content of 17 to 22%, wherein product pieces which are extruded, cut and optionally dried to a desired moisture content in a conventional manner are provided in a vacuum coating method with a wrapping coating, which is preferably fat-containing and, in a preferred manner, contains further nutrients and/or supplements, particularly a trace element mixture.

According to another aspect of the present invention, there is provided a method for the packaging of a semiwet feed product as defined or manufactured in accordance with the present invention, wherein in a conventional manner the feed product is introduced into a plastic bag pack, and, prior to the final sealing of the pack, is compressed and shaped by exerting pressure on the feed product.

The invention finally relates to a packed feed product manufactured according to the afore-mentioned method.

It has surprisingly been found that a semiwet feed product provided with a wrapping coating applied by a vacuum coating method, unlike conventional fried products, has no block formation tendency (as described hereinbefore) when packed, accompanied by compression, in a conventional plastic bag pack. Even after storage for several weeks or months a problem-free separation and therefore portioning of the pack content is possible upon opening the pack. It is possible in this way to pack a semiwet feed product in a compressed, space-saving form. Compression leads to a distinct bulk density increase and permits an almost random shaping of the pack. In addition, such a product is very uniformly covered with the coating and, despite a similar fat content, has a less fatty feel and is therefore most pleasant for handling by the pet owner. The

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semiwet feed product wrapped by the vacuum coating method has a very flexible, soft texture, which is highly advantageous from an esthetic standpoint.

Such a product is obtained such that the product pieces
5 extruded, cut and optionally dried to the desired moisture content in the conventional manner are provided in a vacuum coating method with a preferably fat-containing wrapping coating. Such vacuum coating methods are known per se from the prior art.

10 For the application of vacuum coating methods on filling feed pieces with additional substances, reference is made to US Patents 4,371,556, 4,861,606 and 5,716,655. However, they all relate to applications in connection with dry products and make no reference to the described advantages in connection
15 with semiwet feed products.

In vacuum coating methods the product pieces are exposed to a vacuum and in this state (i.e. under a reduced pressure) are covered with a flowable coating material. In an exemplified method an extruded strand leaves the extruder at a
20 temperature of approximately 100°C. Normally the moisture content at this point is approximately 25%. Either before or after cutting, the extruded product can, if necessary, be dried to the desired final moisture content of between 17 and 22%.

Subsequently the product pieces are filled into a
25 corresponding mixer. The mixer filling opening is closed and the internal pressure is reduced within a relatively short time of e.g. approximately 15 seconds to e.g. approximately 200 millibar. Subsequently the coating material (e.g. fat with a trace element mixture) is introduced into the mixer and the
30 extruded material is mixed therewith. The pressure in the mixer is then again raised to ambient temperature, which leaves a product provided with a corresponding wrapping, which can be

subsequently supplied to a standard packaging station.

In said packaging station the product is filled in a
per se known manner into a plastic bag pack of corresponding
5 size. By exerting pressure the content is compressed and
shaped, before the pack is finally sealed in the conventional
manner.

The features of the invention disclosed in the above
description, the drawings and claims can be essential to the
10 implementation of the different embodiments of the invention,
either singly or in random combination.

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. Feed product having a final moisture content of 17 to 22%, wherein the feed product has a wrapping coating applied by a vacuum coating method.
2. The feed product according to claim 1, wherein the wrapping coating contains fat.
3. The feed product according to claim 1 or 2, wherein the wrapping coating contains further nutrients and supplements.
4. The feed product according to claim 3, wherein the wrapping coating contains a trace element mixture.
5. Process for production of a feed product having a final moisture content of 17 to 22%, wherein product pieces which are extruded, cut and optionally dried to a desired moisture content in a conventional manner are provided in a vacuum coating method with a wrapping coating.
6. The process according to claim 5, wherein the wrapping coating contains fat.
7. The process according to claim 5, wherein the wrapping coating contains further nutrients and supplements.
8. The process according to claim 5, wherein the wrapping coating contains a trace element mixture.

9. Method for the packaging of a semiwet feed product as defined in any one of claims 1 to 4 or manufactured in accordance with any one of claims 5 to 8, wherein in a conventional manner the feed product is introduced into a plastic bag pack, and, prior to the final sealing of the pack, is compressed and shaped by exerting pressure on the feed product.

10. A packed feed product manufactured in accordance with claim 9.