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(54) Titre : PATES ALIMENTAIRES COMPORTANT DE LA FARINE DE MAIS
(54) Title: ALIMENTARY PASTA COMPRISING INDIAN CORN FLOUR

(57) **Abrégé/Abstract:**

Alimentary pasta in the form of spaghetti, noodles, bucatini, orecchiette, penne and/or pennette, and any other convenient shape, characterized by the fact that its basic component is Indian corn flour in the cooked or pre-cooked state before the respective shaping of dough.



ABSTRACT

Alimentary pasta in the form of spaghetti, noodles, bucatini, orecchiette, penne and/or pennette, and any other convenient shape, characterized by the fact that its basic component is Indian corn flour in the cooked or pre-cooked state before the respective shaping of dough.

DESCRIPTIONALIMENTARY PASTA COMPRISING INDIAN CORN FLOURTechnical Field

5 This invention has alimentary pasta as an object.

Background Art

10 In prior art pre-cooked alimentary pasta is well known and is marketed in alternative to raw alimentary pasta always dried and packaged in normal packaging in either plastic or cardboard.

 The technique of the pre-cooking consists however in firstly making the raw pasta with a flour dough of raw wheat and water and then market it like this after drying always in the raw state, or pre-cook it and subsequently dry it for marketing in the pre-cooked state (this second solution is only found in pasta sheets for lasagne and the like).

15 The marketing at the pre-cooked state however is therefore very limited both as the flavour is not appreciated, and because it maintains the taste of "overcooked" pasta.

 For this reason the substantial diffusion and consumption of raw pasta remains, however this has the drawback of the cooking time.

20 The type of alimentary pasta which this patent refers to is the pasta ready in the form, already dried, like spaghetti, bucatini, orecchiette, noodles, penne and pennette, etc. designed for the more or less quick cooking time, with the immission into boiling water.

 It is known from present art that the traditional type of alimentary pasta is made with the flour dough of tender and/or hard grain or a mixture of these, with water.

1 Other eventual additives like salt, eggs, etc., do not modify
2 the substantial basic preparation which is flour at its raw state
3 and water.

4 The drawback of this type of pasta derives also from the fact
5 that it has substantially only one flavour, that is that of the wheat
6 flour.

7 Alternating flavours cannot be obtained, because the use of
8 other flour as for example that of Indian corn does not have the
9 necessary gluten conglomeration and would require for this
10 reason either dough with wheat flour or dough with other
11 agglutination and/or sticky products.

12

13 One of these solutions is disclosed in DATABASE WPI Section
14 Ch, Week 8637, Derwent Publications Ltd. London GB; Class D11, AN
15 86-243523 XP002000006 & GP,A, 56051962 (MAMA MACARONI KK), 9
16 May 1981; abstract & Patent Abstracts of Japan vol.005, no. 114 (C-
17 064) 23 July 1981), which disclose a "Macaroni manufacture mix
18 indian corn alphastarch macaroni powder to give 5-40 per cent
19 corn and converting starch with hot water".

20

21 In particular J86035816, discloses a method to produce macaroni
22 that comprises mixing yellow indian corn powder with alpha-
23 starch of 20-50% with raw powder of macaroni so that the corn
24 powder content is 5-40.

25

26 For this reason pasta factories have always continued to
27 produce wheat pasta even if varying it with the addition of colours
28 and different flavours for example the green pasta (with for

1 example spinach extract), the yellow (E.g., with egg yolks), the red, the black,
2 etc.

3 Other known variations are for example the pasta of other types of wheat
4 like rye, barley and also wholemeal, however they all bring us to the basic
5 component, wheat flour.

6 There remains consequently, according to the purpose of the present
7 invention, the necessity to find alternative pasta possibilities which please the
8 palate, and therefore the consumer, that maintain the concept of "pasta al dente"
9 (not over-cooked) but with much shorter cooking times, which can only be given
10 from pre-cooked pasta, but without the aspect and the flavour of "pasta scotta"
11 (over-cooked pasta) but always with the flavour of "pasta al dente".

12 The aim of this invention is to avoid to the above-mentioned drawbacks
13 making possible the realization of an alimentary pasta with a new and very
14 appreciated and well tested flavour.

15 This and other aims are reached as claimed by means of the realization of
16 a pasta of the type conformed in the various shapes of the common alimentary
17 pasta of wheat, but substantially characterized by being realized with Indian corn
18 flour rather than that of wheat and furthermore characterized by the fact that the
19 Indian corn flour used for the dough is pre-cooked.

3(a)

In a broad aspect, therefore, the present invention relates to alimentary pasta in the form of spaghetti, noodles, bucatini, orecchiette, penne, pennette, or other conventional pasta shape, characterized by the fact that: it is made with maize meal Indian corn flour, as its sole source of starch, said Indian corn flour used in it, is in the cooked or pre-cooked
5 state before the respective shaping of dough whereby the alimentary pasta contains no other starchy material and is in a pre-cooked state.

In another broad aspect, therefore, the present invention relates to a process of making alimentary pasta, comprising the steps of: i) mixing only Indian corn flour and water together to obtain a dough; ii) forming portions of said dough into individual pasta
10 pieces having a conventional pasta shape; and iii) drying said individual pasta pieces.

In this way all the above-mentioned drawbacks are avoided, for the fact that while the raw flour of Indian corn does not have an agglutinating effect, that is, if kneaded with water is not able to

1 form a sticky dough such to be able to be formed or shaped before
2 drying therefore needing other products like wheat flour or other
3 agglutination products, cooked or pre-cooked Indian corn flour
4 fully explicates such agglutinating effect, therefore it mixes
5 perfectly with the water like the raw wheat flour.

6 In other words, the desired dough effect is obtained in
7 exactly the opposite way to the present technique of preparing
8 pasta (use of raw wheat flour) instead with the use of Indian corn
9 flour not raw but cooked or pre-cooked.

10 The process for making it is therefore:

- 11 • cook the raw Indian corn flour or use pre-cooked Indian corn
12 flour;
- 13 • use the dough in water of cooked or pre-cooked Indian corn
14 flour for the forming and/or shaping of the pasta in the desired
15 shapes (spaghetti, noodles, orecchiette, penne, etc.)
- 16 • dry the product obtained;
- 17 • pack the dry product for marketing.

18 The product obtained will be an alimentary pasta with the
19 typical flavour of polenta but with the shape and the
20 characteristics of wheat pasta in a completely new flavour,
21 alimentarily healthy and inviting and always "al dente".

22 Further advantage derives obviously that a pasta of this
23 pre-cooked type needs an extremely short amount of time to cook
24 (less than half) if compared to the time required for cooking the
25 traditional raw pasta cooking of a wheat flour base and
26 notwithstanding always maintaining the pleasant flavour of the
27 "al dente" pasta because of the unusual characteristics of dried

1 Indian corn flour, even in the pre-cooked state.

2 Therefore with this solution in a simple way and
3 surprisingly unthought of until now, all the desired scopes are
4 obtained, fully avoiding the problems of complaint and with a
5 flour (Indian corn) of easy reach, cheap and by all means of
6 largest diffusion for its appreciated consumption.

7 Naturally the dough for pasta can also contain wheat flour,
8 this does not invalidate the substance of the patent provided as it
9 contains Indian corn flour in the pre-cooked state as its basic
10 element.

We claim:

1. Alimentary pasta in the form of spaghetti, noodles, bucatini, orecchiette, penne, pennette, or other conventional pasta shape, characterized by the fact that:

5 it is made with maize meal Indian corn flour, as its sole source of starch,
said Indian corn flour used in it, is in the cooked or pre-cooked state before the
respective shaping of dough whereby the alimentary pasta contains no other starchy
material and is in a pre-cooked state.

10 2. A process of making alimentary pasta, comprising the steps of:

i) mixing only Indian corn flour and water together to obtain a dough;

ii) forming portions of said dough into individual pasta pieces having a
conventional pasta shape; and

iii) drying said individual pasta pieces.

15

3. A process as claimed in claim 2, wherein said Indian corn flour is in a pre-cooked
state before being mixed with water.

4. A process as claimed in claim 2 or 3, wherein said conventional pasta shape is
20 selected from the group consisting of spaghetti, bucatini, noodles, orecchiette, penne and
pennette.