

FLAVOURED NOODLES

FIELD OF THE INVENTION

5 The present invention relates to the production of flavoured noodles and more particularly to a method of incorporating a savoury flavour into noodles.

BACKGROUND OF THE INVENTION

10 Instant noodles conventionally contain seasonings in paste or dehydrated form which comprise various flavour ingredients in a sachet within the noodle package. These flavour ingredients may include sources of peptides and amino acids in the form of biologically hydrolysed plant protein such as soya sauce, yeast extract, cysteine, dextrose, together with meat or vegetable extract, fat, modified starch,
15 particulated fried garnish such as shallot, onions, garlic or chilli, flavoured oil, a liquid seasoning such as soya sauce, and powdered seasonings, spices, flavours and the like. The ingredients of the noodle seasoning are kept separate from the noodles until the moment of consumption of the noodles. At the time of preparing the noodles for consumption, the consumer opens the sachet and adds the contents
20 of the sachet to the noodles and either boils the noodle and the contents of the sachet in water or adds boiling water to the noodle and the contents of the sachets.

However, the incorporation of all the flavour ingredients in the sachet is very expensive. If all of the flavour ingredients are added to the dough, it is usually
25 necessary to add more than the amount required because significant losses are incurred during heating and processing treatments, etc. In addition, after steaming and drying of the noodles, the flavour of the noodles is often not what is desired.

SUMMARY OF THE INVENTION

30 We have found that by preheating flavour ingredients to obtain a partial flavour reaction and adding the preheated flavour ingredients to the dough ingredients or applying them to the dough sheets, the desirable savoury flavour develops during the steaming and frying stages in the normal noodle manufacturing processes. By
35 applying the flavour ingredients on the dough sheets, the flavour is not diluted by



the dough material and is thus stronger than if the flavour ingredients were added to the dough.

Accordingly, the present invention provides a process for the preparation of
5 flavoured noodles which comprises blending flour and water to form a dough, sheeting the dough to form dough sheets, slitting the dough sheets into strips of noodles of the desired width, steaming the noodles to gelatinise the starch, then frying or air drying the noodles and cooling the fried or air dried noodles characterised in that flavour ingredients are preheated at a temperature of from 60°
10 to 100°C for a period of from 10 to 90 minutes and the preheated flavour ingredients are added to the dough ingredients or applied to the dough sheets.

DETAILED DESCRIPTION OF THE INVENTION

15 The process of the present invention may be applicable for fried noodles, soakable fried noodles or air dried noodles.

The flour is conveniently durum or wheat flour and is usually present in an amount of from 70 to 85% by weight based on the total weight of the dough.
20 depending on the variety and particle size. The amount of water mixed with the flour is normally from 15 to 30% by weight based on the total weight of the dough. The temperature of the water mixed with the flour may be from 5° to 30°C and more usually from 10° to 25°C. The water used may be acid or alkaline and the pH is usually from 6 to 7. The dough is conveniently mixed for from about 5
25 to 30 minutes.

The dough may advantageously contain other conventional noodle ingredients such as salt in an amount up to 2%, sodium carbonate in an amount up to 0.5% , potassium carbonate in an amount up to 0.5%, wheat gluten in an amount up to
30 10%, whole egg or egg yolk in an amount up to 5%, sodium hexametaphosphate in an amount up to 0.5%, carboxymethylcellulose in an amount up to 0.5%, and glyceryl monostearate in an amount up to 2%, all amounts being given by weight based on the total weight of the noodle dough. It is to be understood that wheat gluten, eggs, and glyceryl monostearate are optional ingredients in the dry mix
35 and are not essential in the production of the noodle. It is also possible to use propylene glycol alginate in the dry ingredient mix to obtain a noodle with an

elastic and firm texture, preferably in an amount of from 0.01 to 1.0% by weight based on the weight of the noodle dough.

5 The sheeting of the dough may be carried out by conventional methods, for example, by kneading and rolling into sheets or by laminating.

10 The preheated flavour ingredients added to the dough ingredients or applied to the dough sheets may be, for instance, a source of peptides and amino acids in the form of biologically hydrolysed plant protein such as soya sauce or wheat gluten sauce, yeast extract, cysteine, thiamine, dextrose or xylose, meat or vegetable extract, fat or flavoured oil.

15 The amount of preheated flavour ingredient added to the dough ingredients or applied to the dough sheets may be from 0.1 to 5%, preferably from 0.25 to 3% and more preferably from 0.4 to 2.5% by weight based on the total weight of the dough sheets.

20 The preheated flavour ingredients are preferably added to the dough ingredients or applied to the dough sheets in the form of a solution, suspension or dispersion, e.g. in water where the moisture content may be from 50 to 70% and preferably from 65 to 75% by weight. The preheated flavour ingredient may conveniently be applied by immersion or spraying.

25 When the preheated flavour ingredient is applied to the dough sheets it is preferably applied between two dough sheets.

30 The preheating of the flavour ingredients is preferably carried out at a temperature of from 80° to 98°C and more preferably from 85° to 95°C for a period of from 15 to 60 minutes longer periods of time conveniently being used at lower temperatures. The preheating is conveniently carried out in aqueous suspension.

The dough sheets are slit into strips of noodles preferably having a width of from 1 to 1.5mm.

35 The steaming of the noodles may be carried out using saturated steam or steam at atmospheric condition, e.g. at a temperature from 85° to 100°C and conveniently

from 95° to 100°C for a period of from 1 to 5 minutes, preferably from 1.5 to 3.5 minutes. The steaming cooks or gelatinises at least part of the surface of the noodles, e.g. at least 50% and preferably substantially all the surface of the noodles. After steaming, the noodles may be folded to fit a mould of the desired size.

Frying of the steamed noodles to give fried noodles may be performed in a fryer at 125° to 170°C and preferably from 135° to 160°C. The duration of the frying may be from 20 to 100 seconds and preferably from 40 to 80 seconds. One advantage of frying the noodles is that new or different flavour notes are developed from the preheated partially reacted flavour ingredients during the frying process.

Air drying of the steamed noodles to give air dried noodles may be performed in a dryer, e.g. a belt dryer or an impingement dryer, for a period of from 5 to 30 minutes and preferably from 10 to 20 minutes. The temperature of the drying may be from 85° to 200°C and preferably from 125° to 175°C.

Finally, the fried or air dried noodles are cooled to a temperature below 40°C and then packaged.

The noodle package may or may not contain a seasoning in a separate sachet within the noodle package. By preparing the noodles according to the process of this invention in which preheated flavour ingredients are added to the dough ingredients or applied to the dough sheets, it is possible to reduce the amount of flavour in the seasoning in the separate sachet, e.g. it need only contain solid flavouring ingredients such as salt, pepper or chilli, etc.

In the absence of a seasoning in a separate sachet, it is possible to consume the flavoured noodles as a dry snack.

The noodles may be prepared for consumption by either boiling in water for a few minutes, e.g. 1-5 minutes or by soaking in boiled water for a few minutes, e.g. 1-5 minutes.

EXAMPLES

The following Examples further illustrate the present invention. Parts and percentages are expressed by weight.

Example 1

A dough mixture is prepared from the following ingredients:

10	Ruman Api Flour	78.45 parts
	Salt	1.38 parts
	Sodium carbonate	0.04 parts
	Potassium carbonate	0.05 parts
15	Sodium Hexametaphosphate	0.07 parts
	CMC	0.14 parts
	Deionised water	19.87 parts

2 parts of flavour ingredients containing wheat gluten sauce powder, cysteine and dextrose are preheated at 95°C for 30 minutes. An aqueous dispersion of the preheated flavour ingredients is prepared and added to the dough ingredients.

The above dough mixture and the aqueous dispersion of the flavour ingredients are mixed in a Fuji Horizontal Mixer for 15-20 minutes and the dough is sheeted to a thickness of about 5mm.

The dough sheets are reduced in stages to a thickness of 3mm, 2mm and then 1mm, cut to the desired length for a target weight of 80-85g and slit to give noodles having a width of 1.15mm in a Kiriha No. 26 Slitter. The noodles are steamed at 100°C with saturated steam for 120 seconds, folded to fit a mould of 110 x 110 x 25mm, fried in a fryer at 132°C for 50 seconds, air cooled to less than 40°C and packaged.

A seasoning containing salt, pepper and chilli is sealed in a sachet and placed in the noodle package.

The noodles are prepared for consumption by boiling in 420ml of water for 2-3 minutes. The noodles have a very desirable savoury taste.

Example 2

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A similar procedure to that described in Example 1 is followed except that, instead of frying the folded steamed noodles, the folded steamed noodles are air dried for 5 minutes at 150°C before being air cooled and packaged.

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The noodles are prepared for consumption by adding the noodles and seasoning to 450ml of boiled water, cooking for 3 minutes with occasional stirring, removing from the heat and allowing to stand for 1 minute before tasting. The noodles have a very desirable savoury taste.



CLAIMS

1. A process for the preparation of flavoured noodles which comprises blending flour and water to form a dough, sheeting the dough to form dough sheets, slitting
5 the dough sheets into strips of noodles of the desired width, steaming the noodles to gelatinise the starch, then frying or air drying the noodles and cooling the fried or air dried noodles characterised in that flavour ingredients are preheated at a temperature of from 60° to 100°C for a period of from 10 to 90 minutes and the preheated flavour ingredients are added to the dough ingredients or applied to the
10 dough sheets.
2. A process according to claim 1 wherein the preheated flavour ingredient added to the dough ingredients or applied to the dough sheets is a source of peptides and amino acids, yeast extract, cysteine, thiamine, dextrose, xylose, meat extract,
15 vegetable extract, fat or flavoured oil
3. A process according to claim 1 wherein the preheated flavour ingredient added to the dough ingredients or applied to the dough sheets is soya sauce.
- 20 4. A process according to claim 1 wherein the amount of preheated flavour ingredient added to the dough ingredients or applied to the dough sheets is from 0.1 to 5 by weight based on the total weight of the dough sheets.
- 25 5. A process according to claim 1 wherein the preheated flavour ingredient is added to the dough ingredients or applied to the dough sheets in the form of a solution or dispersion.
6. A process according to claim 1 wherein the preheated flavour ingredient is applied between two dough sheets.
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7. A process according to claim 1 wherein the preheating of the dough ingredients is carried out at a temperature of from 80° to 98°C.
- 35 8. A process according to claim 1 wherein the preheating of the dough ingredients is carried out at a temperature of from 85° to 95°C.



9. A process according to claim 1 wherein the preheating of the dough ingredients is carried out for a period of from 15 to 60 minutes.
10. A flavoured noodle having preheated flavour ingredients added to the dough ingredients or applied to the dough sheets obtainable by a process according to any of the preceding claims.