Claims

1. Method for the detoxification of gluten proteins from grains of cereals, characterized by the following phases:

A. hydration with water of the cereal grains;

B. removal of water from the cereal grains;

C. microwave treatment of the cereal grains;

D. cooling of the cereal grains.

2. Method for the detoxification of gluten proteins according to claim 1, characterized in that the step of hydration of the grains is performed in a time frame between 30 minutes and 3 hours and involves the use of 500 ml of water for every 100 grams of grains.

3. Method for the detoxification of gluten proteins according to claim 2 characterized in that the time frame is of approximately one hour.

4. Method for the detoxification of gluten proteins according to claim 1, characterized in that the removal of water phase is performed by drainage by means of a sieve.

5. Method for the detoxification of gluten proteins according to claim 1, characterized in that the phase of microwave treatment of the grains is performed in a time frame between one and three minutes, using a power between 750 and 1500 watts.

6. Method for the detoxification of gluten proteins according to claim 5 characterized in that the time interval is of preferably two minutes and the used power is of 1000 watts.

7. Method for the detoxification of gluten proteins according to claim 1 characterized in that the cooling phase of the grains is performed at a temperature between 18 ° C and 24 ° C.

8. Application of the method according to claims from 1 to 7 for the detoxification of wheat from gluten toxic epitopes.

9. Utilization of wheat obtained according to claim 8 for the production of semolina and flour for people with celiac disease and for people suffering from Diabetes Mellitus Type 1.

10. Application of the method according to claims from 1 to 7 for the detoxification of barley from toxic epitopes of gluten.

11. Utilization of the barley obtained according to claim 10 for the production of beer free from toxic ordeine.

12. Application of the method according to claims from 1 to 7 for the detoxification of oats from toxic epitopes of gluten.

13. Utilization of the oats obtained according to claim 12 for the production of products free from toxic avenine.

14. Utilization of the flour made of cereal grains, detoxified from toxic epitopes of gluten according to the method described in claims from 1 to 7, for the preparation of foodstuff suitable for people with celiac disease and equivalent, in taste and appearance, to foodstuff commonly used in the Mediterranean diet.

CLAIMS

1. A method for the detoxification of gluten proteins from grains of cereals, characterized by the following phases:

A. hydration with water of the cereal grains, performed in a time frame between 30 minutes and 3 hours by using 500 ml of water for every 100 grams of grains;

B. removal of water from the cereal grains;

C. microwave treatment of the cereal grains, performed in a time frame between one and three minutes, using a power between 750 and 1500 watts;

D. cooling of the cereal grains.

2. Method for the detoxification of gluten proteins according to claim 1characterized in that the time frame of step A is of approximately one hour.

3. Method for the detoxification of gluten proteins according to claim 1 characterized in that the time interval is of two minutes and the used power is of 1000 watts.

4. Method for the detoxification of gluten proteins according to claim 1 characterized in that the cooling phase of the grains is performed at a temperature between 18 ° C and 24 ° C.

5. Method according to anyone of the preceding claims, wherein the grains of cereal are selected between wheat, barley and oats.

6. Grains selected in the group of wheat, barley and oats obtainable according to the method as defined in claims 1-5 characterised in that they are detoxified from toxic epitopes of gluten.

7. A product obtainable from the grains of claim 6 selected in the group of semolina, flours, foodstuff, beer.

8. Grains and products according to claims 6-7 for use to feed people with celiac disease and for people suffering from Diabetes Mellitus Type 1.

9**.** Use of wheat according to claim 6 for the production of semolina and flour for people with celiac disease and for people suffering from Diabetes Mellitus Type 1.

10. Use of the barley according to claim 6 for the production of beer free from toxic ordeine.

11. Use of the oats according to claim 6 for the production of products free from toxic avenine.

12. Use of the flour according to claim 7, for the preparation of foodstuff suitable for people with celiac disease and equivalent, in taste and appearance, to foodstuff commonly used in the Mediterranean diet.