

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LLOYD E. METZGER

Appeal No. 2005-1454
Application 10/315,763

ON BRIEF

Before OWENS, DELMENDO, and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-18, 21-39, and 47. A copy of each of these claims is set forth in the attached appendix.

The examiner relies on the following references as evidence of unpatentability:

Gould	4,806,475	Feb. 21, 1989
Devic	5,480,788	Jan. 02, 1996
Metzger	6,497,909	Dec. 24, 2002
Hoseney, "Cereal", <u>Principles of Science and Technology</u> , 2 nd Edition, published by the American Association of Cereal Chemists, Inc. 1986, 1984.		

Claims 1, 3-6, 10, 11, 13-17, 21-24, 30-32 and 34-39 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Devic.

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We note the examiner has withdrawn the rejection of claim 33 in this rejection.

Claims 7-9, 12, 18, 25, 33 and 47 stand rejected under 35 U.S.C. § 103 as being obvious over Devic.

Claim 2 stands rejected under 35 U.S.C. § 103 as being obvious over Devic in view of Gould.

Claims 26-29 stand rejected under 35 U.S.C. § 103 as being obvious over Devic in view of Hoseney.

Claims 1-18, 21-39 and 47 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,497,909.

With regard to the claims under consideration in this appeal, to the extent that any one claim is specifically and separately argued regarding patentability, we will consider such claim. Our consideration of any one particular claim is discussed under each heading below, corresponding to a respective rejection. See 37 CFR § 41.37(c)(1)(vii)(September 2004); formerly 37 CFR § 1.192(c)(7)(2003). Also see Ex parte Schier, 21 USPQ2d 1016, 1018 (Bd. Pat. App. & Int. 1991).

We have carefully reviewed appellant's brief, and reply brief, the examiner's answer and the evidence of record. This review has led us to the following determinations.

OPINION

I. The 35 U.S.C. § 102(b) rejection of claims 1, 3-6, 10, 11, 13-17, 21-24, 30-32 and 34-39 as being anticipated by Devic

We refer to the appellant's position and the examiner's position in connection with this rejection.

With respect to claim 1, beginning on page 8 of the brief, appellant argues that claim 1 is a method comprising the steps of treating whole grain kernels. Appellant argues that "[b]y contrast, the Devic ('788) reference is concerned with treating ground material." Brief, page 8.

In response, beginning on page 4 of the answer, the examiner disagrees and states that Devic clearly teaches that whole grains may be used, and refers to column 2, lines 60-68 of Devic. We agree. In fact, Devic teaches in column 1, beginning at line 18 that "[t]he plant materials which can be bleached according to the invention include all products of vegetable origin, which are used for nutrition, either **in their entirety** or parts thereof" [emphasis added].

Hence, while we appreciate appellant's discussion of other disclosures of Devic, regarding treatment of powdered pulp, etc., the reference is not so limited. We note that one of ordinary skill in the art would have evaluated Devic's disclosure as a whole, rather than solely the working examples or preferred embodiments, because a prior art disclosure is not limited to its

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working examples or to its preferred embodiments. Merck & Co. Inc. v. Biocraft Labs. Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); In re Fracalossi, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). We therefore are unconvinced by appellants' arguments in this regard.

Appellant also argues that the claimed method provides "minimizing exposure of the endosperm to the peroxide to provide a lightened grain kernel." Brief, pages 9-10. In response, on page 4 of the answer, the examiner notes that Devic teaches a soak time that is similar to the soak time of appellant's claimed invention. We agree. As such, minimum exposure of the endosperm of the kernel to the peroxide would likewise result in Devic.

Appellant also argues claim 11 in this rejection. See pages 11-12 of the brief. Claim 11 requires that sufficient amounts of the peroxide solution is applied to wet substantially the entire surfaces of the grain kernels. Appellant argues, on the other hand, Devic specifically teaches that "amounts and concentration of the reactants of the alkaline aqueous hydrogen peroxide solution must be selected such that all of the solution is absorbed by the plant material over the course of the soaking". Appellant further states that Devic teaches that "this soaking must be complete, namely, all the alkaline solution must be absorbed by the material, and no aqueous phase must remain in

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contact with the plant material". Brief, page 12. Appellant argues that this arrangement is quite different from claim 11 wherein only sufficient amounts of peroxide solution to wet the surface of the grain kernels are employed. Appellant argues that Devic teaches away from the claimed invention in this regard.

Upon our review of claim 11, claim 11 provides no limit as to the amount of peroxide solution that is applied to the surface of the grain kernels. As pointed out by the examiner in the paragraph bridging pages 5 and 6 of the answer, claim 11 is not limited to wetting only the kernel surface without any penetration into the kernel core. Hence, we are not convinced by appellant's arguments in this regard.

With regard to claim 13, appellant states on page 13 of the brief, that claim 13 further limits the subject matter of claim 11 by specifying that the peroxide is applied at a specific concentration, temperature, and time.

Devic discloses that the soaking time ranges from a "few minutes to a few hours". Column 4, lines 65-67. The hydrogen peroxide is typically used in the form of an aqueous solution of 30% to 70% strength. See column 3, lines 64-65. The temperature during the soaking phase ranges from 20° to 100°C. See column 4, lines 57-58. Hence, Devic discloses three different parameters, having three respective ranges. Although Devic discloses overlapping ranges among the three parameters, a certain amount of picking and choosing would be necessary in order to anticipate

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the claimed subject matter of claim 13. Therefore we reverse the 35 U.S.C. § 102 rejection but reject, anew, claim 13 under 35 U.S.C. § 103.

With regard to claim 14, appellant sets forth arguments on pages 13 and 14 of the brief.

Claim 14 recites a method comprising applying an amount of peroxide solution which is an aqueous solution of about 1 to 5 parts H₂O₂ per 100 parts of grain.

We observe that the examiner's position (as set forth in the final Office action of June 4, 2004), with regard to the 35 U.S.C. § 102(b) rejection of claim 14, does not point to any disclosure found in Devic that anticipates this aspect of the claimed invention. Nor does the examiner respond to appellant's position with regard to the rejection of claim 14 in the answer on pages 4-7. At best, the examiner indicates at the bottom of page 2 and at the top of page 3, of the final Office action mailed June 4, 2004, that the Devic teaches that the amount of hydrogen peroxide used can vary from 1% to 20%. Claim 14 recites the amount of peroxide that can be used in parts per 100 parts of grain. We must therefore reverse the 35 U.S.C. § 102(b) rejection, but we reject claim 14, anew, under 35 U.S.C. § 103.

With regard to claims 16 and 17, appellant sets forth arguments on page 15 of the brief. Claim 16 provides that the alkaline solution is supplied for about 1% to saturation in amounts of about 10 parts to 15 parts (dry weight) of alkaline

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material per 100 parts grain. Again, the examiner does not specifically point to any disclosure of Devic that discloses the subject matter of claim 16. At best, at the top of page 3 of the final Office action mailed June 4, 2004, the examiner points out that Devic teaches that the amount of alkaline agent may vary in a range from 0.55 to 10.0% and refers to column 2, lines 20-25 of Devic. Hence, we must reverse the 35 U.S.C. § 102(b) rejection of claim 16, but we reject claim 16 anew, under 35 U.S.C. § 103.

With respect to claim 17, we note that appellant does not specifically argue the subject matter of this claim. Brief, page 15. We note that claim 17 depends upon 15 and claim 15 depends upon claim 1. Appellant does not separately argue claim 15 either. Therefore, for the same reasons that we affirmed the 35 U.S.C. § 102 rejection of claim 1, we also affirm the 35 U.S.C. § 102(b) rejection of claims 15 and 17.

On pages 15-16 of the brief, appellant argues claim 22. Claim 22 recites that the alkaline solution and peroxide solution are combined immediately prior to application onto the grain. Appellant argues that Devic does not specify whether the alkaline solution is prepared just prior to the application of the grain, or days or weeks before application to the grain. Brief, page 15. We find that the examiner does not point to any disclosure of Devic that indicates what time the aqueous alkaline hydrogen peroxide solution is prepared prior to application of the grain. Therefore, we reverse the 35 U.S.C. § 102(b) rejection of claims

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22-24. However, we reject, anew, claims 22-24 under 35 U.S.C. § 103.

With regard to the product by process claims 30-39, appellants set forth arguments on page 17 of the brief. Appellant argues that in accordance with method claim 1, the resulting product, as covered by claim 20, is a lightened grain kernel. Appellant argues that Devic does not disclose such an end product. We are not convinced by this argument. As discussed, supra, with regard to method claim 1, we find that Devic does disclose bleaching a plant material that includes "all products of vegetable origin, which are used for nutrition, either **in their entirety** or parts thereof" [emphasis added]. See column 1, lines 19-21 of Devic. The plant materials can include whole grains of cereals. See column 2, lines 62-64 of Devic. Hence, we agree with the examiner's 35 U.S.C. § 102(b) rejection of claims 30-32 and 34-39.¹

In view of the above, we affirm the 35 U.S.C. § 102(b) rejection of claims 1, 3-6, 10, 11, 15, 17, 21, 30-32, and 34-39.

However, we reverse the 35 U.S.C. § 102(b) rejection of claims 13-16 and 22-24. We reject these claims, anew, under 35 U.S.C. § 103 as being obvious over Devic.

II. The 35 U.S.C. § 103 rejection of claims 7-9, 12, 18, 25, 33

¹We note that the examiner rejected claim 33 under 35 U.S.C. § 103 because claim 33 depends upon claim 7, which is also rejected under 35

and 47

With regard to claim 7, appellant sets forth his position on pages 10-11 of the brief. Claim 7 recites that the cereal grain is a red wheat. Appellant argues that red wheat can be treated to have the visual appearance of white wheat, while still retaining the genetic profile of the color producing gene alleles of red wheat. Appellant argues that red wheat in accordance with the present invention can be utilized with food products only previously employed in connection with white wheat.

Beginning at page 5 of the answer, the examiner states that the use of red wheat is not considered patentably distinct from the wheat used in Devic. The examiner states it would have been obvious to select any type of wheat. We agree. As stated *supra*, Devic teaches the plant materials that can be bleached include all products of vegetable origins which are used for nutrition, either in their entirety or parts thereof. Exemplary of such products are cereal grains (wheat, maize, oats, barley, rice, etc.), peels, skins, pips of fruits, bran from oil plants, such as sunflowers, bran from cereals". See column 1, lines 18-24 of Devic. In view of this disclosure, we determine that it would have been obvious to select the type of wheat recited in claim 7.

With regard to claim 12, appellant sets forth arguments on pages 12-13 of the brief. Claim 12 recites that the treatment

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with peroxide step A comprises spraying the peroxide solution onto the grain kernels. Appellant argues that the soaking disclosed in Devic is seen to be "quite distinct from spraying a peroxide solution". However, we find that Devic suggest that the alkaline peroxide solution can be continuously sprayed. See column 4, lines 51-55. Although Devic refers to the alkaline peroxide solution (the mixture), rather than separately spraying the peroxide, such is likewise deemed obvious.

With regard to claim 18, claim 18 recites that step B is practiced as a separate prior step. Claim 18 depends upon claim 15. Claim 15 recites that claim 1 additionally comprises step B, treating the whole grain kernels with an alkaline solution. On pages 3-4 of the final Office action mailed June 4, 2004, the examiner states that it would have been obvious to complete the peroxide step and the basic step within one-step or break the process down into multiple steps. We agree. Compare In re Gibson, 39 F.2d 975, 976, 5 USPQ 230, 231-232 (CCPA 1930) (the selection of any order of mixing ingredients is *prima facie* obvious).

With regard to claim 25, appellant sets forth arguments on page 16 of the brief. Claim 25 recites that a portion of the supplemental heating is supplied by microwave heating. The examiner's position as set forth on page 3-4 of the prior Office action mailed June 4, 2004 does not discuss this aspect of the claimed invention as set forth in claim 25. On page 6 of the

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answer, the examiner states that this aspect of the claimed invention "is a conventional type of heating, is a viable alternative to the heating used in Devic and is not critical to appellant's process". We observe that Devic does not indicate how the heating is conducted. The examiner does not support how microwave heating is a viable alternative, especially since the type of heating in Devic is not disclosed. We therefore reverse the 35 U.S.C. § 103 rejection of claim 25.

With regard to claim 33, appellant argues this claim on page 17 of the brief. Appellant states that because Devic is silent with regard to treating a grain kernel, claim 33 is patentable. However, as discussed, supra, we find that Devic teaches bleaching whole grains. Therefore, we affirm the 35 U.S.C. § 103 rejection of claim 33.

With regard to claim 47, appellant argues the subject matter of this claim on pages 17-19 of the brief. Claim 47 recites a method of bleaching cereal grains, comprising the steps of: applying whole cereal grains with an alkaline solution of sodium bicarbonate or sodium hydroxide at a concentration of about 1% to 10% and a temperature of about 50° to 165°F in a weight ratio of alkaline solution to grain ranging from about 10:100 to about 15:100 for about 30 seconds to three minutes, and then applying a peroxide solution at a concentration of about 5% to 40% peroxide to the cereal grains for about 30 seconds to three minutes at a temperature of about 50° to 165°F to provide bleached cereal

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grains.

The examiner states on page 4 of the final Office action mailed June 4, 2004, that it would have been obvious "to optimize the time and temperature of the process as the time and temperature affect the whiteness and stability of the product". In the paragraph bridging pages 3 and 4 of this final Office action, the examiner states that it would have been obvious to complete the peroxide step and the basic step within one-step or break the process down into multiple steps. We agree. Appellant has not shown criticality in connection with the concentration of the hydroxide, the temperature range, the weight ratio of alkaline solution to grain, the soaking time, the concentration of the peroxide, and the soaking time of the peroxide solution. Absence such evidence, we affirm the 35 U.S.C. § 103 rejection of claim 47.

In view of the above, we affirm the 35 U.S.C. § 103 rejection of claims 7-9, 12, 18, 33 and 47 as obvious over Devic.

However, we reverse the 35 U.S.C. § 103 rejection of claim 25 as being obvious over Devic.

III. The 35 U.S.C. § 103 rejection of claim 2 as being obvious over Devic in view of Gould

On page 6 of the brief appellant concedes to the obviousness of claim 2.

Accordingly, we affirm this rejection.

IV. The 35 U.S.C. § 103 rejection of claims 26-29 as being obvious over Devic in view of Hoseney

With regard to claims 26, 28, and 29, appellant argues that claim 26 is concerned with tempering the grain after it is treated. Appellant argues that there is no discussion of any tempering step in Devic. Appellant argues that "it is seen that the combination presented by the Examiner appears to set forth tempering prior to the treatment with the alkaline peroxide solution in Devic". This is incorrect. On pages 4-5 of the final Office action mailed June 4, 2004, it is clear that the examiner's position is that Devic is silent about tempering the grain before processing. However, the examiner relies upon Hoseney for teaching that tempering is desirable for cereal grains because tempering makes the product easier to grind and toughens the bran so that the bran does not fall into small pieces. This teaching does not mean that the tempering step must occur before the grain is treated. The combination suggests that tempering the grain is beneficial because it makes the product easier to grind and toughens the bran so that the bran does not fall into small pieces. This teaching can apply at a time after the grain is bleached, when grinding is desirable, for example.

With regard to claim 27, appellant sets forth arguments on page 17 of the brief. Appellant simply argues that claim 27 is

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patentable for the same reasons provided for claim 26. Appellant also argues that because claim 27 depends upon claim 15, the combination of claims 1, 15, and 27 are seen to be separately patentable. For the reasons we affirmed the rejection of claims 1, 15 and 26, we likewise affirm the rejection of claim 27.

In view of the above, we affirm the 35 U.S.C. § 103 rejection of claims 26-29 as being obvious over Devic in view of Hoseney.

V. The rejection of claims 1-18, 21-39 and 47 under the judicially created doctrine of obviousness-type double patenting as being obvious over claims 1-22 of U.S. Patent No. 6,497,909²

Appellant argues this rejection on page 19 of the brief. The examiner's position for this rejection is set forth on page 6 of the final Office action mailed June 4, 2004. The examiner states that "although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to treat the kernels with the peroxide and alkali in any particular order as well as in a single step". We agree. We additionally note that claim 1 of U.S. Patent No. 6,497,909 is directed to:

A method of bleaching cereal grain, comprising the steps of:

² On page 3 of the reply brief, appellant indicates the submittal of a terminal disclaimer. Upon return of this application to the jurisdiction of the examiner, we instruct proper handling of this paper.

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A. treating whole grain kernels having at least an exterior bran layer and an inner endosperm with peroxide to decrease the color of the bran layer, while minimizing exposure of the endosperm to the peroxide, to provide a lightened grain kernel

B. treating the whole grain kernels with an alkaline solution, wherein step B is practiced as a separate prior step; and

wherein said method additionally comprises a drying stop intermediate step B and A.

The above method claim suggests a method comprising the steps of A and B. Hence, we are not convinced by appellant's position as set forth on page 19 of the brief regarding the prosecution history of the parent application. The issue involves a comparison of the patent claims with the instant pending claims.

In view of the above, we affirm the obviousness-type double patenting rejection of claims 1-18, 21-39, and 47 as being obvious over claims 1-22 of U.S. Patent No. 6,497,909.

VI. Conclusion

The 35 U.S.C. § 102(b) rejection of claims 1, 3-6, 10, 11, 15, 17, 21, 30-32, and 34-39 is affirmed.

However, the rejection of claims 13-16 and 22-24 under 35 U.S.C. § 102(b) is reversed. However, these claims are rejected, anew, under 35 U.S.C. § 103 as being obvious over Devic.

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The 35 U.S.C. § 103 rejection of claims 7-9, 12, 18, 25, 33 and 47 under 35 U.S.C. § 103 as being obvious over Devic is affirmed. However, the rejection of claim 25 under 35 U.S.C. § 103 is reversed.

The 35 U.S.C. § 103 rejection of claim 2 as being obvious over Devic in view of Gould is affirmed.

The 35 U.S.C. § 103 rejection of claims 26-29 as being obvious over Devic in view of Hoseney is affirmed.

The judicially created doctrine of obviousness-type double patenting rejection of claims 1-18, 21-39 and 47 as being obvious over claims 1-22 of U.S. Patent No. 6,497,909 is affirmed.

In addition to affirming the examiner's rejections of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

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(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the appellant elect to prosecute further before the examiner pursuant to 37 CFR § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

AFFIRMED &
37 CFR § 41.50(b)

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TERRY J. OWENS)	
Administrative Patent Judge)	
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ROMULO H. DELMENDO)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
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)	
BEVERLY A. PAWLIKOWSKI)	
Administrative Patent Judge)	

BAP/vsh

APPENDIX
Claims Appealed

1. A method of bleaching cereal grains, comprising the steps of:
 - A. treating whole grain kernels having at least an exterior bran layer and an inner endosperm with peroxide to decrease the color of the bran layer, while minimizing exposure of the endosperm to the peroxide to provide a lightened grain kernel.
2. The method of claim 1 wherein the cereal grain is cleaned to provide milling quality grain prior to treatment with peroxide.
3. The method of claim 1 wherein the cereal grain is selected from the group consisting of wheat, rice, barley, corn (maize), oats, triticale, amaranth, and soybeans.
4. The method of claim 3 wherein the cereal grain is selected from the group consisting of wheat, rice, barley and soybeans.
5. The method of claim 4 wherein the cereal grain is selected from the group consisting of wheat and rice.
6. The method of claim 1 wherein the cereal grain is wheat.
7. The method of claim 6 wherein the cereal grain is a red wheat.
8. The method of claim 6 wherein the cereal grain is a white wheat.
9. The method of claim 8 wherein the white wheat is a hard wheat.

10. The method of claim 1 wherein the treatment with peroxide step A comprises applying a peroxide solution to the cereal grain.

11. The method of claim 10 comprising applying sufficient amounts of the peroxide solution to wet substantially the entire surfaces of the grain kernels.

12. The method of claim 11 wherein the treatment with peroxide step A comprises spraying the peroxide solution on to the grain kernels.

13. The method of claim 11 wherein step A includes applying an aqueous solution of about 6% to 40% H₂O₂ at a temperature of about 50° to 165°F for about 30 seconds to three minutes.

14. The method of claim 13 further comprising applying about 1 to 5 parts H₂O₂ per 100 parts of grain.

15. The method of claim 1 additionally comprising the step of:

B. treating the whole grain kernels with an alkaline solution.

16. The method of claim 15 wherein the alkaline solution is supplied from about 1% to saturation in amounts of about 10 parts to 15 parts (dry weight) of alkaline material per 100 parts grain.

17. The method of claim 16 wherein step B is practiced at a temperature of about 130° to 165°F.

18. The method of claim 15 wherein step B is practiced as a separate prior step.

21. The method of claim 15 wherein step B is practiced simultaneous with step A.

22. The method of claim 21 wherein the alkaline solution and peroxide solution are combined immediately prior to application onto the grain.

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23. The method of claim 22 wherein the treatment is practiced at temperature of 100° to 165°F.
24. The method of claim 23 wherein the treatment step is practiced with supplemental heating during the step.
25. The method of claim 24 wherein at least a portion of the supplemental heating is supplied by microwave heating.
26. The method of claim 1 additionally comprising the step of tempering the treated grain to provide a tempered grain.
27. The method of claim 15 additionally comprising the step of tempering the treated grain to provide a tempered grain.
28. The method of claim 26 additionally comprising the step of milling the tempered grain to provide a whole grain flour.
29. The method of claim 28 wherein the milling step is practiced to provide a whole grain flour without a germ fraction.
30. The product prepared by the method of claim 1.
31. The product prepared by the method of claim 3.
32. The product prepared by the method of claim 5.
33. The product prepared by the method of claim 7.
34. The product prepared by the method of claim 10.
35. The product prepared by the method of claim 15.
36. The product prepared by the method of claim 16.
37. The product prepared by the method of claim 18.

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38. The product prepared by the method of claim 22.

39. The product prepared by the method of claim 29.

47. A method of bleaching wheat grains, comprising the steps of:

applying whole cereal grains with an alkaline solution of sodium bicarbonate or sodium hydroxide at a concentration of about 1% to 10% and a temperature of about 50° to 165°F in a weight ratio of alkaline solution to grain ranging from about 10:100 to about 15:100 for about 30 seconds to three minutes, and then applying a peroxide solution at a concentration of about 5% to 40% H₂O₂ to the cereal grains for about 30 seconds to the three minutes at a temperature of about 50° to 165°F to provide bleached cereal grains.

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