

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JEROME L. SHEN, BALAGTAS F. GUEVARA and  
FRANK E. SPADAFORA

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Appeal No. 96-2149  
Application 08/135,207<sup>1</sup>

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ON BRIEF

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Before KIMLIN, PAK and WALTZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-15, all the claims in the present application. Claims 1 and 7 are illustrative:

1. A process for producing an isoflavone enriched protein isolate comprising:

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<sup>1</sup> Application for patent filed October 12, 1993.

(a) extracting a vegetable protein material containing isoflavones with an aqueous extractant having a pH above about the isoelectric point of said vegetable protein material to produce an aqueous extract of protein material and isoflavones;

(b) adjusting the pH of said aqueous extract to about the isoelectric point of said protein material in order to precipitate said protein material; and

(c) separating said precipitated protein material and avoiding further washing of said precipitated protein material with water to provide an isoflavone enriched protein isolate.

7. A process for producing an isoflavone enriched protein isolate comprising:

(a) extracting a vegetable protein material containing isoflavone with an aqueous extractant having a pH above about the isoelectric point of said vegetable protein material to produce an aqueous extract of protein material and isoflavones;

(b) adjusting the pH of said aqueous extract to about the isoelectric point of said protein material in order to precipitate said protein material; and

(c) separating said precipitated protein material and washing said precipitated protein material with water in an amount by weight which is less than about 4 times the weight of said vegetable protein material to provide an isoflavone enriched protein isolate.

In the rejection of the appealed claims, the examiner relies upon the following references:

Carey  
Walsh

3,966,702  
4,309,344

Jun. 29, 1976  
Jan. 05, 1982

Iwamura

4,428,876

Jan. 31, 1984

Appellants' claimed invention is directed to a process for producing an isoflavone enriched protein isolate. According to page 1 of the specification, it was known in the art to remove residual isoflavones that are left in precipitated protein isolate by exhaustive washing of the isolate. Since "[i]t has been recently been recognized that the isoflavones contained in vegetable proteins such as soy beans may inhibit the growth of human cancer cells" (page 2 of the specification), appellants depart from the prior art practice of exhaustively washing the protein isolate in order that the residual isoflavones remain intact. According to the last sentence at page 6 in the specification, "[i]n the present invention, washing of the precipitated protein material is either avoided entirely or minimized in order to substantially reduce removal of the isoflavones from the protein precipitate to thereby provide an isoflavone enriched isolate."

Appellants submit five groups of claims at page four of the brief. Accordingly, the appealed claims in each of the five groups stand or fall together..

The appealed claims stand rejected under 35 U.S.C. § 102(b) as follows:

(1) Claims 1, 4 and 15 over Iwamura;

(2) Claims 1-6 and 15 over Walsh;

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(3) Claims 7-11 and 13-15 over Carey.

In addition, the examiner has finally rejected the appealed claims under 35 U.S.C.

§ 103 as follows:

(1) Claims 2, 3, 5 and 6 over Iwamura;

(2) Claim 12 over Carey.

We have carefully reviewed the respective positions advanced by appellants and the examiner. In so doing, we will sustain the examiner's § 102 and § 103 rejections over Iwamura for essentially those reasons expressed by the examiner. However, we will not sustain the examiner's § 102 rejections over Walsh and Carey nor the examiner's § 103 rejection of claim 12 over Carey. Our reasoning follows.

We consider first the examiner's § 102 and § 103 rejections over Iwamura.

It is well settled that when a claimed process or product appears to be substantially the same as a product or process disclosed by the prior art, the burden is on the applicant to prove with objective evidence that the product and process of the prior art do not necessarily or inherently possess characteristics attributed to the claimed product. In re

Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); In re Best, 562 F.2d

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1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In such cases the burden of proof on the applicant is the same whether the rejection is based on § 102 or § 103. In the present case, appellants have not factually challenged the examiner's determination that the process disclosed by Iwamura is essentially the same as the claimed process, and our review supports the examiner's factual findings. Although Iwamura does not expressly disclose that the precipitated protein material is enriched with isoflavone, appellants have not refuted that this would be the case since both appellants and Iwamura perform the same process steps. Furthermore, appealed claim 7 does not preclude contacting the isoflavone enriched protein isolate with the adsorbent resin disclosed by Iwamura and, also, it follows logically that since the adsorbent resin of Iwamura adsorbs the isoflavone from the protein isolate, the protein isolate before contact with the adsorbent resin must be enriched with isoflavone. Regarding claims 2, 3, 5 and 6, we agree with the examiner that it would have been prima facie obvious to determine the optimum values for result effective variables, such as pH and ratio of extractant to vegetable protein material.

We will not sustain the examiner's § 102 rejection of claims 1-6 and 15 over Walsh. Since Walsh employs a heating step in the extraction process to produce a bland

protein isolate, it can not be reasonably concluded that the process of Walsh inherently produces the claimed "isoflavone enriched protein isolate." Although the examiner recognizes that the Walsh process includes a heating step not performed by appellants, the examiner contradictively states "the protein isolate of Walsh is produced by the same process steps under the same conditions as are claimed by Appellants; Appellants have pointed to no differences between the prior art and the claimed process steps and conditions." (page 10 of answer). On the contrary, appellants devote the paragraph bridging pages 12 and 13 of the brief to the differences between the Walsh process and the claimed process.

We will also not sustain the examiner's § 102 and § 103 rejections based on Carey. Again, the processes of Carey and appellants are not essentially the same. The process of Carey specifically employs activated carbon to deflavorize the protein material to produce a protein isolate that lacks the characteristic "beany" flavor of soy beans. While appreciating that Carey treats the protein isolate with activated carbon, the examiner erroneously states "[b]ecause the reactants and process steps are the

same, Carey will produce an isoflavone enriched vegetable protein isolate to the same extent claimed by Applicants." (page 5 of answer). Also, although the appealed claims

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contain "comprising" language, the claims are not open to steps such as heating and treating with activated carbon which militate against producing "an isoflavone enriched protein isolate."

As a final point, this application is remanded to the examiner to consider the rejection of claims 7-14 over the admitted state of the prior art found in appellants' specification and Iwamura under 35 U.S.C. § 103. Since appellants' specification acknowledges, and Iwamura discloses, that it was known in the art that isoflavones have medicinal utility, such as inhibiting human cancer cells, the examiner should consider the obviousness of employing a mild washing step after isolating the precipitated protein material in order to minimize the removal of the desirable isoflavones from the protein precipitate (page 6 of specification, last paragraph). In our view it would be a matter of obviousness for one of ordinary skill in the art to either utilize the isoflavone enriched protein isolate, per se or perform the resin adsorption of Iwamura to further isolate the isoflavones.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed in part. In addition, the application is remanded to the

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examiner to consider a rejection of claims 7-14 under 35 U.S.C. § 103 as outlined above.

This application, by virtue of its “special” status, requires an immediate action. MPEP § 708.01(d). It is important that the Board be informed promptly of any action affecting the appeal in this case.

AFFIRMED-IN-PART

EDWARD C. KIMLIN	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
CHUNG K. PAK	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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THOMAS A. WALTZ	)	
Administrative Patent Judge	)	

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Virgil B. Hill  
Ralston Purina Company  
Checkerboard Square  
St. Louis, MO 63164