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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A23B 5/00, 5/06, 5/005	A1	(11) International Publication Number: WO 96/32019 (43) International Publication Date: 17 October 1996 (17.10.96)
(21) International Application Number: PCT/BE96/00038 (22) International Filing Date: 12 April 1996 (12.04.96) (30) Priority Data: 9500336 12 April 1995 (12.04.95) BE (71)(72) Applicant and Inventor: PEERS, Philippe [BE/BE]; Galgestraat 1, B-8910 Wervik (BE). (74) Agents: VOSSWINKEL, P. et al.; Gevers Patents, Holi- daystraat 5, B-1831 Diegem (BE).		(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> <i>In English translation (filed in Dutch).</i>
(54) Title: A METHOD FOR THE PREVENTION OF THE SECRETION OF THE YELLOWISH LIQUID WITH PEELED COOKED EGGS (57) Abstract A method for the prevention of the secretion of the yellowish liquid with peeled cooked eggs characterized in that the eggs are provided with an eatable elastic coating.		

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"A method for the prevention of the secretion of the
yellowish liquid with peeled cooked eggs"

The invention relates to a method for the prevention of the secretion of the yellowish liquid with peeled cooked eggs.

To clarify the problems that arise upon
5 putting peeled cooked eggs on the market in comparison with fresh eggs the difference between the physical properties of both products and the consequences thereof on their conservation has to be pointed out in the first place.

10 A fresh egg dries out so that for the conservation of fresh eggs use is sometimes made of coatings that protect the shell in such a manner that the "respiration" of the eggs is countered. Such a coating can be composed of a dry film that covers the shell on the
15 surface and prevents the "breathing" of fresh eggs, thus the drying out thereof.

Peeled cooked eggs do not on the contrary secrete any humidity in the atmosphere but secrete a yellowish liquid.

20 This phenomenon appears very clearly because upon packaging in thereto suitable transparent film material for peeled cooked eggs under a modified atmosphere, the disturbing effects of this phenomenon are strongly remarked.

25 Because peeled cooked eggs are an elastic material with very specific physical properties, it appears that until now no effective treatment has been proposed to counter the above discussed phenomenon.

The secretion of the above discussed yellowish liquid makes the commercialising of peeled cooked eggs impossible.

5 In order to solve this problem according to the invention, the peeled cooked eggs are provided with an eatable elastic coating.

In an especially attractive embodiment use is made of a material based on proteins as eatable elastic coating.

10 Excellent results were obtained with coatings made of a composition based on water with about 15% gel and 3% glycerin.

15 No method is known neither in the literature, nor in the practical experience for the prevention of humidity loss with peeled cooked eggs. This phenomenon is very disturbing since such eggs are dispatched and sold, each separately, in a transparent plastic package.

20 The method according to the invention provides a technically remarkably feasible and astonishing solution to the hereabove discussed problems.

25 According to the invention the eggs are provided with an eatable elastic coating. As eatable elastic coating are suitable: protein. To these proteins belong substances issued from corn, wheat, soya beans or collagen (gelatin) as well as milk (casein) or peas.

Advantages of the above mentioned composition of proteins are amongst others
a good mechanical strength with which essentially the elasticity is aimed,
30 good sensorial properties,
easy and rapid film formation,
high water diffusion capacity,
possibility to form an intact coating on a humid surface.

35 Eatable elastic coatings that are proposed in the scope of this invention are resistant to temperatures in the range of 50 to 60°C. They can be brought onto

the eggs by atomising or submerging what renders the desired industrial application possible. The coatings discussed here are resistant during 3 to 4 weeks against the activity of certain enzymes present in the egg.

5 In order to obtain a good elastic and eatable coating, use can be made of a composite coating, wherein numerous additives can be used.

 To these additives belong amongst others sodium alginate, potash alginate, ammonium alginate, 10 calcium alginate, agar-agar, Irish moss, Saint John's bead seed flower, guar seed flower, tragacanth, Arabic rubber, xanthene rubber, tara rubber, gellan rubber, glycerol, pectines, acetyl monoglyceride, polyethylene glycol and their derivatives.

15 The eatable elastic coatings that come into consideration here, form good supports for a series of additives that contribute to the external aspect and/or the taste of the eggs.

 Additives that influence the taste of the 20 eggs and that can be added in the coating are aroma's, salt, pepper and other spices.

 Further shall still be underlined that the applied coatings carriers can be issued from anti-oxidants, anti-microbe material and/or functional biological 25 composites such as vitamins, enzymes and the like.

 In resume it can be said that in the scope of the invention the following compositions are available.

1. A single coating based on proteins;
2. A composite coating based on proteins and one or more 30 of the above mentioned additives;
3. A composite coating according to points 1 and 2 with addition of flavourings;
4. A composite coating according to point 3 with addition of anti-oxidants, anti-microbial material and/or func- 35 tional biological compositions.

The application of an eatable elastic coating on peeled cooked eggs thus allows to package these eggs in a transparent plastic film and to commercialise them in this conditioning. The external look of the eggs stays unchanged and the secretion of a yellowish humidity is definitely prevented.

CLAIMS

1. A method for the prevention of the secretion of the yellowish liquid with peeled cooked eggs, characterized in that the eggs are provided with an eatable elastic coating.

2. A method according to claim 1, characterized in that use is made of a material based on proteins as eatable elastic coating.

3. A method according to one of the claims 1 and 2, characterized in that use is made of a composition based on water wherein about 15% gelatine and about 3% glycerine is used.

4. A method according to one of the claims 1 to 3, characterized in that the eggs are provided with the used eatable elastic coating by atomising.

5. A method according to one of the claims 1 to 3, characterized in that the eggs are submerged in a coating.

6. A peeled cooked egg characterized in that it is provided with an eatable elastic coating.

7. A peeled cooked egg according to claim 6, characterized in that the above mentioned eatable elastic coating is a material based on proteins.

8. A peeled cooked egg according to claim 6, characterized in that the above mentioned eatable elastic coating contains gelatin.

9. A peeled cooked egg according to claim 6, characterized in that the above mentioned eatable elastic coating contains glycerin.

10. A peeled cooked egg according to claim 6, characterized in that the above mentioned eatable elastic coating contains gelatin and glycerin.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/BE 96/00038

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 A23B5/00 A23B5/06 A23B5/005

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A23B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US,A,4 191 102 (COPE WHELOM) 4 March 1980 see column 1, line 1-9 ---	1,2,6,7 3-5,8-10
Y	US,A,2 427 857 (J. HAMILL) 23 September 1947 see column 1, line 37 - column 2, line 11; claims ---	3-5,8-10
A	US,A,2 618 562 (H. A. MULVANY) 18 November 1952 see the whole document --- -/--	4

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

27 August 1996

Date of mailing of the international search report

11.09.96

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C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 6, no. 7 (C-087), 16 January 1982 & JP,A,56 131338 (WATANABE KEGEYOSHI), 14 October 1981,	1,6
Y	see abstract ---	7
Y	DATABASE WPI Week 8637 Derwent Publications Ltd., London, GB; AN 81-10397d XP002011779 & JP,A,55 156 580 (MATSUTANI) , 6 December 1980 see abstract ---	7
X	P. MONTAGNE: "nouveau larousse gastronomique" 1967 , LIBRAIRIE LAROUSSE , PARIS XP002011778 see page 720, column 2, line 33-55 ---	1
A	FR,A,1 193 125 (LES FILS DE W. SAURIN) 30 October 1959 ---	
A	DATABASE WPI Week 9334 Derwent Publications Ltd., London, GB; AN 87-310975 XP002011780 & JP,A,62 220 171 (TOCHIGI HOKUYO SHOJ) , 28 September 1987 ---	
A	DATABASE WPI Week 9009 Derwent Publications Ltd., London, GB; AN 90-063605 XP002011781 & JP,A,02 016 951 (YG MATSUBE) , 19 January 1990 -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-4191102	04-03-80	NONE	
US-A-2427857	23-09-47	NONE	
US-A-2618562	18-11-52	NONE	
FR-A-1193125	30-10-59	NONE	