

ESCOBAR - URIBE ASOCIADOS

A B O G A D O S

Carrera 11A No. 94-76 Of. 305 - P.O. Box 94940 - Bogotá, Colombia S.A.

Tel.: (571) 6162051 - 6162061 - 1

SUPERINDUSTRIA Y COMERCIO

Fax: (571) 61618

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Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

2461/P

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO DIVISIÓN DE NUEVAS CREACIONES

E. S. D.

Re: Expediente No. 01.109.551
Solicitud de Patente en nombre de
Johnson & Johnson Consumer Companies, Inc.

Yo, JIMENA ESCOBAR URIBE, identificada como aparece al pie de mi firma, domiciliada en Bogotá, en la Carrera 11 A No. 94-76 Of. 305, obrando como apoderada de la sociedad Johnson & Johnson Consumer Companies, Inc. solicitante de la patente de la referencia, anexo al presente memorial los siguientes documentos:

Copia certificada de la solicitud de Patente Número 09/742,922 presentada en los Estados Unidos de América el día 21 de diciembre de 2000, con la debida traducción de lo pertinente, incluyendo el capítulo reivindicatorio.

A este mismo respecto, debe tenerse en cuenta que en la primera página de la copia en mención la Oficina de Patentes correspondiente certificó la fecha de presentación de esa solicitud, cumpliéndose de esta forma todos y cada uno de los requisitos establecidos en el inciso segundo del artículo 10 de la Decisión 486 de la Comisión de la Comunidad Andina.

Señor Superintendente,


JIMENA ESCOBAR URIBE
C.C.39.779.452 de usaquén
T.P. 68228

**ESTADOS UNIDOS DE AMERICA
A TODOS AQUELLOS A QUIENES EL PRESENTE
LLEGUE:**

**DEPARTAMENTO DE COMERCIO DE LOS ESTADOS
UNIDOS
Oficina de Patentes y Marcas de los Estados Unidos**

Febrero 1, 2002

La presente es para certificar que el anexo es una copia fiel de los registros de la Oficina de Patentes y Marcas de los Estados Unidos, de los documentos de la solicitud de patente identificada más adelante, que cumplieron con los requerimientos para concederse una fecha de presentación de acuerdo con 35 USC 111.

Número de Solicitud: 09/742,922

Fecha de Presentación: Diciembre 21, 2000

**Por la autoridad del
Comisionado de Patentes y Marca**

**(fdo) L. EDELEN
Oficial Certificador
Sello oficial de la Oficina de Patentes y Marcas de los
Estados Unidos de América**

Lo que se reivindica:

1. Una composición limpiadora transparente en barra que comprende:
 - a) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante anfotérico;
 - b) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante aniónico;
 - c) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante no-iónico; y
 - d) desde aproximadamente 0.1% a aproximadamente 20% de un agente solidificante; y
 - e) desde aproximadamente 10% a aproximadamente 90% de por lo menos un solvente orgánico;en donde la composición no es irritante a los ojos.
2. La composición limpiadora transparente en barra de la Reivindicación 1, en donde el agente solidificante se selecciona del grupo conformado por sorbitol dibencilideno, xilitol dibencilideno, ribitol dibencilideno, y mezclas de los mismos.
3. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un solvente orgánico se selecciona del grupo conformado por alcoholes dihidroxílicos alifáticos que contienen de 3 a 6 átomos de carbono; polietilén y polipropilén glicoles; alcoholes monohídricos; alcoholes polihídricos; y mezclas de los mismos.
4. La composición limpiadora transparente en barra de la Reivindicación 3, en donde por lo menos un solvente orgánico se selecciona del grupo conformado por glicerina, propilén glicol, y mezclas de los mismos.
5. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante anfotérico se selecciona del grupo conformado por anfocarboxilatos, alquil betáinas, amidoalquil betáinas, amidoalquil sultáinas, anfofosfatos, fosfobetáinas, pirofosfobetáinas, carboxialquil alquil poliaminas, y mezclas de los mismos.

Lo que se reivindica:

1. Una composición limpiadora transparente en barra que comprende:
 - a) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante anfotérico;
 - b) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante aniónico;
 - c) desde aproximadamente 0.5% a aproximadamente 30% de por lo menos un surfactante no-iónico; y
 - d) desde aproximadamente 0.1% a aproximadamente 20% de un agente solidificante; y
 - e) desde aproximadamente 10% a aproximadamente 90% de por lo menos un solvente orgánico;en donde la composición no es irritante a los ojos.
2. La composición limpiadora transparente en barra de la Reivindicación 1, en donde el agente solidificante se selecciona del grupo conformado por sorbitol dibencilideno, xilitol dibencilideno, ribitol dibencilideno, y mezclas de los mismos.
3. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un solvente orgánico se selecciona del grupo conformado por alcoholes dihidroxílicos alifáticos que contienen de 3 a 6 átomos de carbono; polietilén y polipropilén glicoles; alcoholes monohídricos; alcoholes polihídricos; y mezclas de los mismos.
4. La composición limpiadora transparente en barra de la Reivindicación 3, en donde por lo menos un solvente orgánico se selecciona del grupo conformado por glicerina, propilén glicol, y mezclas de los mismos.
5. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante anfotérico se selecciona del grupo conformado por anfocarboxilatos, alquil betaínas, amidoalquil betaínas, amidoalquil sultainas, anfofosfatos, fosfobetaínas, pirofosfobetaínas, carboxialquil alquil poliaminas, y mezclas de los mismos.

6. La composición limpiadora transparente en barra de la Reivindicación 5, en donde por lo menos un surfactante anfotérico se selecciona del grupo conformado por cocamidopropilbetaína, lauroanfoglucinato, fosfobetaínas láurico-mirísticas, y lauril betaína..
7. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante aniónico se selecciona del grupo conformado por alquil sulfatos; alquil éter sulfatos; alquil monogliceril éter sulfatos; alquil monoglicérido sulfatos; alquil monoglicérido sulfonatos; alquil sulfonatos; alquilaril sulfonatos; alquil sulfosuccinatos; alquil éter sulfosuccinatos; alquil sulfosuccinamatos; alquil amidosulfosuccinatos; alquil carboxilatos; alquil amidoétercarboxilatos; alquil succinatos; acil sarcosinatos grasos, acil aminoácidos grasos; acil tauratos grasos; alquil sulfoacetatos grasos; alquil fosfatos; y mezclas de los mismos, en donde el grupo alquilo tiene desde aproximadamente 10 a aproximadamente 16 átomos de carbono.
8. La composición limpiadora transparente en barra de la Reivindicación 7, en donde por lo menos un surfactante aniónico se selecciona del grupo conformado por laureth sulfato de sodio y laureth-13 carboxilatos de sodio.
9. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante no-iónico se selecciona del grupo conformado por derivados de polioxietileno de ésteres de poliol, en donde el derivado de polioxietileno de éster de poliol (1) se deriva de (a) un ácido graso que comprende desde aproximadamente 8 a aproximadamente 22 átomos de carbono, y (b) un poliol seleccionado de sorbitol, sorbitan, glucosa, α -metil glucósido, poliglucosa con un promedio desde aproximadamente 1 a aproximadamente 3 residuos de glucosa por molécula, glicerina, pentaeritritol y mezclas de los mismos; (2) contiene un promedio de desde aproximadamente 10 a aproximadamente 120 unidades de oxietileno; y (3) tiene un promedio de aproximadamente 1 a aproximadamente 3 residuos de ácido graso por mol de derivado de polioxietileno de éster de poliol; alquil glucósidos de cadena larga, y poliglucósidos, los cuales son los productos de la condensación de (a) un alcohol de cadena larga que contiene desde aproximadamente 6 a aproximadamente 22 átomos de carbono, con (b) glucosa o un polímero con contenido de glucosa.
10. La composición limpiadora transparente en barra de la Reivindicación 9, en donde por lo menos un surfactante no-iónico se selecciona del grupo conformado por polisorbato 20 y polioxietilen-sorbitan laurato.

6. La composición limpiadora transparente en barra de la Reivindicación 5, en donde por lo menos un surfactante anfotérico se selecciona del grupo conformado por cocamidopropilbetaína, lauroanfoglucinato, fosfobetaínas láurico-mirísticas, y lauril betaína..
7. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante aniónico se selecciona del grupo conformado por alquil sulfatos; alquil éter sulfatos; alquil monogliceril éter sulfatos; alquil monoglicérido sulfatos; alquil monoglicérido sulfonatos; alquil sulfonatos; alquilaril sulfonatos; alquil sulfosuccinatos; alquil éter sulfosuccinatos; alquil sulfosuccinamatos; alquil amidosulfosuccinatos; alquil carboxilatos; alquil amidoétercarboxilatos; alquil succinatos; acil sarcosinatos grasos, acil aminoácidos grasos; acil tauratos grasos; alquil sulfoacetatos grasos; alquil fosfatos; y mezclas de los mismos, en donde el grupo alquilo tiene desde aproximadamente 10 a aproximadamente 16 átomos de carbono.
8. La composición limpiadora transparente en barra de la Reivindicación 7, en donde por lo menos un surfactante aniónico se selecciona del grupo conformado por laureth sulfato de sodio y laureth-13 carboxilatos de sodio.
9. La composición limpiadora transparente en barra de la Reivindicación 1, en donde por lo menos un surfactante no-iónico se selecciona del grupo conformado por derivados de polioxietileno de ésteres de poliol, en donde el derivado de polioxietileno de éster de poliol (1) se deriva de (a) un ácido graso que comprende desde aproximadamente 8 a aproximadamente 22 átomos de carbono, y (b) un poliol seleccionado de sorbitol, sorbitan, glucosa, α -metil glucósido, poliglucosa con un promedio desde aproximadamente 1 a aproximadamente 3 residuos de glucosa por molécula, glicerina, pentaeritritol y mezclas de los mismos; (2) contiene un promedio de desde aproximadamente 10 a aproximadamente 120 unidades de oxietileno; y (3) tiene un promedio de aproximadamente 1 a aproximadamente 3 residuos de ácido graso por mol de derivado de polioxietileno de éster de poliol; alquil glucósidos de cadena larga, y poliglucósidos, los cuales son los productos de la condensación de (a) un alcohol de cadena larga que contiene desde aproximadamente 6 a aproximadamente 22 átomos de carbono, con (b) glucosa o un polímero con contenido de glucosa.
10. La composición limpiadora transparente en barra de la Reivindicación 9, en donde por lo menos un surfactante no-iónico se selecciona del grupo conformado por polisorbato 20 y polioxietilén-sorbitan laurato.

11. La composición limpiadora transparente en barra de la Reivindicación 1, que comprende:
- a) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante anfotérico seleccionado del grupo conformado por cocamidopropilbetaína, lauroanfoglicinato, fosfobetaínas láurico-mirísticas, y lauril betaína;
 - b) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante aniónico seleccionado del grupo conformado por laureth sulfato de sodio y laureth-13 carboxilato de sodio;
 - c) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante no-iónico seleccionado del grupo conformado por polisorbato 20 y polioxietilen-sorbitan laurato;
 - d) desde aproximadamente 0.5% a aproximadamente 5% de un agente solidificante seleccionado del grupo conformado por sorbitol dibencilideno, xilitol dibencilideno, ribitol dibencilideno, y mezclas de los mismos; y
 - e) desde aproximadamente 20% a aproximadamente 80% de por lo menos un solvente orgánico seleccionado del grupo conformado por glicerina, propilen glicol, y mezclas de los mismos.
12. La composición limpiadora transparente en barra de la Reivindicación 11, que comprende además:
- f) desde aproximadamente 0.05% a aproximadamente 10% de un sinergizante solidificante.
13. La composición limpiadora transparente en barra de la Reivindicación 12, en donde el sinergizante solidificante se selecciona del grupo conformado por celulosa y derivados de guar, polímeros de ácido acrílico, poliacrilamidas, polímeros de óxido de alquilen/alquilen, esmectita hidrofílica y organoarcillas, sílices hidratados y ahumados, gelatina, queratina, gomas de xantana y guar, carragenina, agar y alginatos.

11. La composición limpiadora transparente en barra de la Reivindicación 1, que comprende:

Repetid 4.

- a) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante anfotérico seleccionado del grupo conformado por cocamidopropilbetaína, lauroanfoglucinato, fosfobetainas láurico-mirísticas, y lauril betaína;
- b) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante aniónico seleccionado del grupo conformado por laureth sulfato de sodio y laureth-13 carboxilatos de sodio;
- c) desde aproximadamente 1% a aproximadamente 20% de por lo menos un surfactante no-iónico seleccionado del grupo conformado por polisorbato 20 y polioxietilen-sorbitan laurato;
- d) desde aproximadamente 0.5% a aproximadamente 5% de un agente solidificante seleccionado del grupo conformado por sorbitol dibencilideno, xilitol dibencilideno, ribitol dibencilideno, y mezclas de los mismos; y
- e) desde aproximadamente 20% a aproximadamente 80% de por lo menos un solvente orgánico seleccionado del grupo conformado por glicerina, propilen glicol, y mezclas de los mismos.

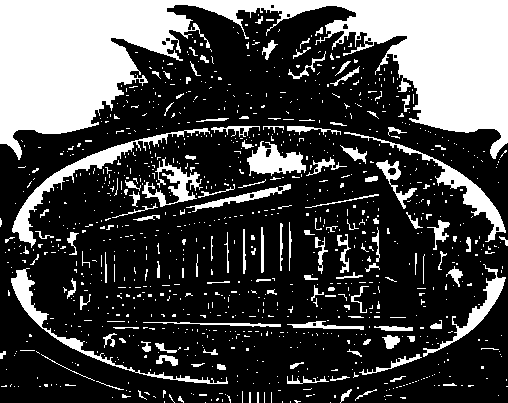
12. La composición limpiadora transparente en barra de la Reivindicación 11, que comprende además:

- f) desde aproximadamente 0.05% a aproximadamente 10% de un sinergizante solidificante.

13. La composición limpiadora transparente en barra de la Reivindicación 12, en donde el sinergizante solidificante se selecciona del grupo conformado por celulosa y derivados de guar, polímeros de ácido acrílico, poliácridamidas, polímeros de óxido de alquileo/alquileo, esmectita hidrofílica y organoarcillas, sílices hidratados y ahumados, gelatina, queratina, gomas de xantana y guar, carragenina, agar y alginatos.

R.

PA 518282



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

February 01, 2002

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE UNDER 35 USC 111.

APPLICATION NUMBER: 09/742,922 ✓

FILING DATE: December 21, 2000



By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

L. Edelen

L. EDELEN
Certifying Officer

UTILITY
PATENT APPLICATION
TRANSMITTAL

Attorney Docket No. JBP636

First Inventor

LAMBINO ET AL.

Title

Clear Cleansing Bar Compositions That Are Efficient And Are Not Irritating To The Eyes

Express Mail Label No.

EL190924106US

APPLICATION ELEMENTS

See MPEP Chapter 800 concerning utility patent application contents.

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
3. ☒ Specification [Total Pages 17 - including 13 claims and 1 page of Abstract]

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)

8. Nucleotide and/or Amino Acid Sequence Submission (If applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

4. ☐ Drawing(s) (35 USC 113) [Total Sheets]
5. Oath or Declaration [Total Pages 3]
- a. ☒ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
- i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement
(IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Request and Certifications under 35 U.S.C. 122
(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other

6. ☐ Application Data Sheet. See 37 CFR 1.76

18. ☐ If a CONTINUING APPLICATION, check appropriate box and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No.: , filed

Prior application information: Examiner Group Art Unit:

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☒ Correspondence Address below

Name: Phillip S. Johnson, Esq.

Address: Johnson & Johnson

One Johnson & Johnson Plaza

New Brunswick, NJ 08933-7003 USA

19. TELEPHONE CONTACT

Please direct all telephone calls or telefaxes to Erin M. Harriman at:

Telephone: (732) 524-3619

Fax: (732) 524-2808

19. SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

NAME

Erin M. Harriman

Reg. No. 40,410

SIGNATURE

Erin M. Harriman

DATE

December 21, 2000

FEE TRANSMITTAL	Complete if Known	
	Application Number	
	Filing Date	
	First Named Inventor	
	Group Art Unit	
	Examiner Name	
	Attorney Docket Number	JBP538

FEE CALCULATION

CLAIMS AS FILED

(1)	(2)	(3)	(4)	(5)
FOR:	NUMBER FILED	NUMBER EXTRA	RATE	BASIC FEE \$710.00
TOTAL CLAIMS	13 - 20 =	0	x 18.00	\$ 0.00
INDEPENDENT CLAIMS	1 - 3 =	0	x 80.00	\$ 0.00
MULTIPLE DEPENDENT CLAIMS	☐	N/A	\$270.00	
			TOTAL FEES	\$ 710.00

METHOD OF PAYMENT

- ☒ Please charge Deposit Account No. 10-0750/JBP538/EMH in the amount of \$710.00. Three copies of this sheet are enclosed.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required in connection with the filing of this communication, or credit any overpayment, to Account No. 10-0750/JBP538/EMH. Three copies of this sheet are enclosed.

SUBMITTED BY:		Complete (if applicable)
Typed or Printed Name	Erin M. Harriman	Reg. No. 40,410
Signature		Deposit Account No. 10-0750
	Date: 12/21/00	

JOB 12 U.S. PTO
09/742922
11/21/00

09742922-122100

3A

DOCKET NO. JBP536

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Applicant: Lambino et al.

For : Clear Cleansing Bar Compositions That Are Efficient
And are Not Irritating To The Eyes

Express Mail Certificate

"Express Mail" mailing number: EL190924106US

Date of Deposit: 12/21/2000

I hereby certify that this non provisional application, including 17 pages of specification (including 13 claims and 1 page of Abstract 1), and unexecuted Declaration (3 pages), is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

A Combined Declaration and Power of Attorney will be submitted to the United States Patent and Trademark Office upon receipt of the U.S. Serial Number for this patent application.

Alwin Haywood

(Typed or printed name of person mailing paper or fee)


(Signature of person mailing paper or fee)

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CLEAR CLEANSING BAR COMPOSITIONS THAT ARE EFFICIENT AND
ARE NOT IRRITATING TO THE EYES

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BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

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This invention relates to cleansing bar compositions, which are clear and exhibit exceptionally low ocular and skin irritation. The cleansing bar compositions have good foaming properties.

2. Description Of The Prior Art

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Conventional soap bars are opaque and have several problems associated with them. One problem associated with soap bars is that they tend to absorb water on the surface of the bar and form a gel or mush on the wet surfaces. The gel or mush tends to rinse off the bar upon use and go down the bath or sink drain, resulting in a less efficient soap bar.

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Another problem associated with soap bars is that cracks form in the soap bars upon drying after use. The cracks lead to part of the soap bar falling off, usually going down the bath or sink drain, and ultimately a less efficient soap bar.

Many people also find conventional soap bar compositions to be irritating to their eyes. Therefore, there is a need for a cleansing bar that does not form gel or mush, does not crack upon drying, and is not irritating to the eyes.

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US Patent 5,286,755 discloses a non-alcoholic cosmetic gel comprising a polyol, a dibenzylidene-ose, a sulfosuccinate hardening agent, and water. The compositions may contain surfactants conventionally employed in cosmetics. The reference does not address the issue of eye irritation and is silent as to suitable genus and species of surfactants for cleansing bar applications.

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Despite the disclosure of the prior art, there is a continuing need for a cleansing bar that does not form gel or mush, does not crack upon drying, and is not irritating to the eyes.

It is therefore, the object of the present invention to provide a cleansing bar that does not form gel or mush, does not crack upon drying, and is not irritating to the eyes.

SUMMARY OF THE INVENTION

The present invention provides a clear cleansing bar composition including:
a) from about 0.5% to about 30% of at least one amphoteric surfactant; b) from about 0.5% to about 30% of at least one anionic surfactant; c) from about 0.5% to about 30% of at least one non-ionic surfactant; d) from about 0.1% to about 20% of a solidifying agent; and e) from about 10% to about 90% of at least one organic solvent; wherein the composition is not irritating to the eyes.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The compositions of the present invention contain at least one amphoteric surfactant. As used herein, the term "amphoteric" means: 1) molecules that contain both acidic and basic sites such as, for example, an amino acid containing both amino (basic) and acid (e.g., carboxylic acid, acidic) functional groups; or 2) zwitterionic molecules which possess both positive and negative charges within the same molecule. The charges of the latter may be either dependent on or independent of the pH of the composition. Examples of zwitterionic materials include, but are not limited to, alkyl betaines and amidoalkyl betaines. The amphoteric surfactants are disclosed herein without a counter ion. One skilled in the art would readily recognize that under the pH conditions of the compositions of the present invention, the amphoteric surfactants are either electrically neutral by virtue of having balancing positive and negative charges, or they have counter ions such as alkali metal, alkaline earth, or ammonium counter ions.

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Commercially available amphoteric surfactants suitable for use in the present invention include, but are not limited to amphocarboxylates, alkyl betaines, amidoalkyl betaines, amidoalkyl sultaines, amphophosphates, phosphobetaines, pyrophosphobetaines, carboxyalkyl alkyl polyamines, and mixtures thereof.

5 Cocamidopropylbetaine, lauroamphoglycinate, lauric-myristic phosphobetaines, and lauryl betaine are preferred. The amount of amphoteric surfactant may range from about 0.5% to about 30%, preferably from about 1% to about 20% by weight of the total composition.

10 The compositions of the present invention also contain at least one anionic surfactant. Suitable anionic surfactants include, but are not limited to alkyl sulfates; alkyl ether sulfates; alkyl monoglyceryl ether sulfates; alkyl monoglyceride sulfates; alkyl monoglyceride sulfonates; alkyl sulfonates; alkylaryl sulfonates; alkyl sulfosuccinates; alkyl ether sulfosuccinates; alkyl sulfosuccinamates; alkyl amidosulfosuccinates; alkyl carboxylates; alkyl amidoethercarboxylates; alkyl succinates; fatty acyl sarcosinates; fatty acyl amino acids; fatty acyl taurates; fatty alkyl sulfoacetates; alkyl phosphates; and mixtures thereof, wherein the alkyl group has from about 10 to about 16 carbon atoms. Preferred anionic surfactants include sodium laureth sulfate and sodium laureth-13 carboxylates. The amount of anionic surfactant may range from about 0.5% to about 30%, preferably from about 1% to about 20% by weight of the total composition.

20 Nonionic surfactants are also utilized in the compositions of the present invention. One class of nonionic surfactants useful in the present invention are polyoxyethylene derivatives of polyol esters, wherein the polyoxyethylene derivative of polyol ester (1) is derived from (a) a fatty acid containing from about 8 to about 22, and preferably from about 10 to about 14 carbon atoms, and (b) a polyol selected from sorbitol, sorbitan, glucose, α -methyl glucoside, polyglucose having an average of about 1 to about 3 glucose residues per molecule, glycerine, pentaerythritol and mixtures

thereof, (2) contains an average of from about 10 to about 120, and preferably about 20 to about 80 oxyethylene units; and (3) has an average of about 1 to about 3 fatty acid residues per mole of polyoxyethylene derivative of polyol ester.

5 Examples of preferred polyoxyethylene derivatives of polyol esters include, but are not limited to PEG-80 sorbitan laurate and Polysorbate 20. PEG-80 sorbitan laurate, which is a sorbitan monoester of lauric acid ethoxylated with an average of about 80 moles of ethylene oxide, is available commercially from ICI Surfactants of Wilmington, Delaware under the tradename, "Atlas G-4280." Polysorbate 20, which is the laurate monoester of a mixture of sorbitol and sorbitol anhydrides condensed with approximately 20 moles of ethylene oxide, is available commercially from ICI Surfactants of Wilmington, Delaware under the tradename "Tween 20."

10 Another class of suitable nonionic surfactants includes long chain alkyl glucosides or polyglucosides, which are the condensation products of (a) a long chain alcohol containing from about 6 to about 22, and preferably from about 8 to about 14 carbon atoms, with (b) glucose or a glucose-containing polymer. The alkyl glucosides have about 1 to about 6 glucose residues per molecule of alkyl glucoside. The preferred nonionic surfactants include Polysorbate 20 and Polyoxyethylene-Sorbitan Laurate. The amount of nonionic surfactant may range from about 0.5% to about 30%, preferably from about 1% to about 20% by weight of the total composition.

15 The compositions of the invention may include a cationic surfactant. Useful cationic surfactants include N-alkyl betaines, quaternary ammonium compounds, amido-amines, N-alkylamines, N-alkylamine oxides, amido-amine betaines, amido-amine salts, amido-amine oxides, sultaines and ethoxylated amines. The amount of cationic surfactant may range from about 0.1% to about 10% by weight of the total composition.

The present invention requires a solidifying agent in order to make soap bars. The solidifying agent may be selected from the group consisting of dibenzylidene alditols (such as sorbitol, xylitol, ribitol), and mixtures thereof. The solidifying agent is present in the cleansing bar at a concentration of from about 0.1% to about 20%, preferably from about 0.5% to about 5% by weight of the total composition.

At least one organic solvent is utilized in the compositions of the present invention. Suitable organic solvents include, but are not limited to dihydroxy aliphatic alcohols containing from 3 to 6 carbon atoms, such as 1,3 propylene glycol, 1,3-butylene glycol, 1,4 butylene glycol and hexylene glycol; polyethylene and polypropylene glycols, such as dipropylene glycol, tripropylene glycol, tetrapropylene glycol and 1,3-propanediol; monohydric alcohols, such as ethanol and propanol; polyhydric alcohols, such as glycerol, diglycerol, and polyglycerol; and mixtures thereof. Preferably, the organic solvent is a mixture of dihydroxy and polyhydric alcohols. The amount of organic solvent may range from about 10% to about 90%, preferably from about 20% to about 80% by weight of the total composition.

The compositions of the present invention optionally contain a solidifying synergist. The solidifying synergist aids the solidifying agent in forming a solid soap bar. Suitable solidifying synergists include, but are not limited to cellulose and guar derivatives, including but not limited to hydroxypropylcellulose, acrylic acid polymers, polyacrylamides, alkylene/alkylene oxide polymers, smectite hydrophilic and organoclays, hydrated and fumed silicas, gelatin, keratin, xanthan and guar gums, carrageenan, agar and alginates. When utilized, the amount of solidifying synergist utilized may range from about 0.05% to about 10%, preferably from about 0.1% to about 5% by weight of the total composition.

Optional ingredients may be incorporated into the composition of this invention. These ingredients include perfumes, colorants and dyes, beads, antimicrobial agents, and insect repellent agents.

5 The clear soap bar compositions according to the invention may be prepared by means known in the art. In a preferred embodiment, the soap bars are prepared by mixing and heating at least one organic solvent as described above to about 70°C to about 130°C, when utilized, the solidifying synergist described above is added and mixing is continued until a clear mucilage is formed. The solidifying agent described above is then added and mixed until fully dissolved. To this mixture is added surfactant(s) and mixed. Optional ingredients like perfume and colorants are added when temperature reaches below about 90°C. The molten stock is then poured into suitable molds of different forms made of plastic or rubber and allowed to cool and harden at ambient conditions. The soap bar compositions may be aerated such that the soap bar will float in water. The clear soap bar may be formed around a small toy.

EXAMPLES

20 The following examples will more fully illustrate the embodiments of this invention. All parts, percentages and proportions referred to herein are by weight unless otherwise indicated. The examples are provided for illustrative purposes and should not be construed as limiting the scope of the invention.

25 The sources for the materials utilized in the following examples were as follows: dibenzylidene sorbitol (Disorbene LC) was obtained from Roquette; hydroxypropyl cellulose (Klucel LFF) from Aqualon Chemicals; glycerin from Henkel; propylene glycol from Dow Chemicals; sodium laureth-13 carboxylate (Miranate LEC) from Rhodia; cocamidopropyl betaine (Tegobetaine L7) from Goldschmidt; lauric imidazoline betaine (Empigen CDL 30/J) from Albright &

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Wilson; POE-80 sorbitan monolaurate (Atlas G4280) from Uniqema; and sodium laureth sulfate (EMPICOL ESC 70-AU) from Albright & Wilson.

Example 1 – Preparation Of A Clear Cleansing Bar

A clear cleansing bar composition was prepared by charging 202.5g glycerin and 500g propylene glycol into a 1 kg vessel. The solvents were mixed and heated to 70° C to 80° C. Hydroxypropylcellulose (2.1g) was sprinkled into the batch until a clear mucilage was formed. The temperature was then ramped-up to 100-110° C. Then 20.1g dibenzylidene sorbitol was added. As soon as the dibenzylidene sorbitol was fully dissolved, the following surfactants were added until a homogeneously clear liquid was formed:

sodium laureth sulfate	38.6 g
sodium laureth-13 carboxylate	4.5 g
POE-sorbitan laurate	63.0 g
cocamidopropylbetaine	125.0 g
lauroamphoglycinate	20.8 g

Other minor ingredients such as perfume and colorants were added. The batch was cooled to about 80° C and then poured in a plastic mould which was resistant to 80C hot pour temperature. The cleansing bar stock was allowed to cool and harden at ambient air.

Eye Irritation Test

The clear cleansing bar prepared in Example 1 was tested by a Transepithelial Permeability Assay (TEP) to measure eye irritation potential. TEP is a mechanistic assay, which measures the damage to a layer of epithelial cells. Exposure of a layer of Madin-Darby Canine Kidney Epithelial (MDCK) cells, grown on a microporous membrane, to a test sample is a model of the first event that occurs when an irritant comes in contact with the eyes. *In vivo*, the outermost layers of the corneal epithelium form a selectively permeable barrier due to the tight

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junctions between the cells. On exposure to an irritant, the tight junctions separate removing the permeability barrier. Fluid is imbibed to the underlying layers of epithelium and to the stroma, causing the collagen lamellae to separate, and resulting in opacity. Damage is measured spectrophotometrically, by measuring the amount of marker dye that leaks through the cell layer and microporous membrane to the lower well. A TEP score of 2.2% or higher is considered a pass, a score of 1.78% to 2.19% is considered borderline, and a score of 1.79% or below is considered a fail. The procedure was in accordance with the TEP test, as set forth in Invitox Protocol Number 86 (May 1994). The results of the test are reported in Table 1.

Table 1

Sample	Mean EC ₅₀ + $\delta n-1$	Rating
Example 1	32.97 +/- 11.83	Pass

The clear cleansing bar of this invention was found to be non-irritating to the eyes.

Cleansing Bar Clarity

The clarity of the cleansing bar was assessed visually by a trained expert evaluator using a scale ranking from 1- totally clear to 10 - totally opaque. Example 1 had a mean ranking of 3.5.

Cleansing Bar Mush

A test was performed on the sample from Example 1 to determine how much mush forms. Water (40mL at 25°C and 4gpg hardness) was poured at the bottom of a 16mm x 90mm petri dish. After taking its initial weight, the bar was placed on top of the water-filled dish. A triangular rod was used to support the bar and keep it in contact with the water. The bar was left to stand for 16 hours after which the mush or gel that formed on the side of the bar in contact with water was scrapped using a spatula. The bar was then allowed to dry at ambient temperature for 4 hours. The final weight was taken after drying. The percent bar mush was then calculated as:

Initial Weight of Bar – Final Weight of Bar
----- x 100%
Initial Weight of Bar

The results of the test are shown in Table 2.

Table 2

Sample	% Bar Mush
Example 1	4.5 +/- 0.5

The cleansing bar from Example 1 was shown to form very little mush.

Bar Wear and Foaming

The sample from Example 1 was also tested for bar wear and foam volume using a tumbling tube apparatus. The tumbling tube apparatus was equipped with six 1000mL cylinders and mounted on a rotating casing with variable speed and number of rotations. In this test, each cylinder was filled with 500mL of water. Bars were cut into approximately 2x2x1 mm³, each weighing approximately 5g. Test bars were added into each of the cylinders. The cylinders were rotated at 100 rpm for 50 revolutions. The foam volume was then read using the graduations of the cylinder. Bars were removed from the cylinders and allowed to dry at ambient temperature for 4 hours. The final weight of each bar was recorded. The percent bar wear was calculated as:

Initial Weight of Bar – Final Weight of Bar
----- x 100%
Initial Weight of Bar

The results of the tests are shown in Table 3.

Table 3

Sample	% Bar Wear	Foam
Example 1	13.2 +/- 0.5	292mL +/- 1.0
Comparative	57.6 +/- 0.6	6.7 +/- 0.7

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The comparative sample was Johnson's Baby Clear Soap. The cleansing bar of Example 1 was shown to have good foaming and bar wear properties.

Example 2

A second sample was prepared following the method of Example 1, but a different surfactant combination was utilized. The surfactant combination was as follows:

sodium laureth sulfate	100.0 g
POE sorbitan laurate	50.0 g
cocamidopropylbetaine	80.0 g
lauric-myristic phosphobetaine	20.0 g

Example 3

A third sample was prepared following the method of Example 1, but a different surfactant combination was utilized. The surfactant combination was as follows:

sodium laureth sulfate	127.3 g
lauroamphoglycinate	46.3 g
lauryl betaine	33.3 g

The foam volume and percent bar wear of examples 2 and 3 are shown in Table 4.

Table 4

Sample	% Bar Wear	Foam
Example 2	17.0	290mL
Example 3	18.6	540mL

Both Examples 2 and 3 had good foaming and bar wear properties.

Example 4

A fourth sample was prepared following the method of Example 1, but solidifying synergists were added to the composition. The solidifying synergists were hydroxypropyl cellulose (10 g) and hydroxypropyl guar (10 g).

Example 5

An opaque bar composition was prepared following the method of Example 1, but using sodium cocoyl isethionate as a surfactant. The cleansing bar composition was as follows:

<u>Ingredient</u>	<u>Weight (grams)</u>
propylene glycol	518.0
hydroxypropyl cellulose	12.0
dibenzylidene sorbitol	2.7
sodium cocoylisethionate	12.5
glycerin	27.2

Example 6

A sixth sample was prepared following the method of Example 1, but without hydroxypropyl cellulose in the formulation. TEP results are summarized in Table 5.

Example 7

A seventh sample was prepared following the method of Example 1, with addition of the following ingredients: PPG-Hydroxyethyl Caprylamide at 2%, Fragrance at 0.20%, and FD&C Red # 40 colorant. TEP, foam volume and bar wear rate results are summarized in Table 5.

Table 5

<u>Sample</u>	<u>% Bar Wear</u>	<u>Foam</u>	<u>Mean EC₃₀ + 8n-1</u>
Example 6	Not tested	Not tested	38.29
Example 7	23.9	292.5 mL	32.85

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Examples 6 and 7 were shown to be non-irritating to the eyes. Example 7 had good bar wear and foaming properties.

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What is claimed:

1. A clear cleansing bar composition comprising:

- a) from about 0.5% to about 30% of at least one amphoteric surfactant;
- b) from about 0.5% to about 30% of at least one anionic surfactant;
- c) from about 0.5% to about 30% of at least one non-ionic surfactant; and
- d) from about 0.1% to about 20% of a solidifying agent; and
- e) from about 10% to about 90% of at least one organic solvent;

wherein the composition is not irritating to the eyes.

2. The clear cleansing bar composition of claim 1, wherein

the solidifying agent is selected from the group consisting of dibenzylidene sorbitol, dibenzylidene xylitol, dibenzylidene ribitol, and mixtures thereof.

3. The clear cleansing bar composition of claim 1, wherein

the at least one organic solvent is selected from the group consisting of dihydroxy aliphatic alcohols containing from 3 to 6 carbon atoms; polyethylene and polypropylene glycols; monohydric alcohols; polyhydric alcohols; and mixtures thereof.

4. The clear cleansing bar composition of claim 3, wherein

the at least one organic solvent is selected from the group consisting of glycerin, propylene glycol, and mixtures thereof.

5. The clear cleansing bar composition of claim 1, wherein

the at least one amphoteric surfactant is selected from the group consisting of amphocarboxylates, alkyl betaines, amidoalkyl betaines, amidoalkyl sultaines,

amphosphates, phosphobetaines, pyrophosphobetaines, carboxyalkyl alkyl polyamines, and mixtures thereof.

6. The clear cleansing bar composition of claim 5, wherein

the at least one amphoteric surfactant is selected from the group consisting of cocamidopropylbetaine, lauroamphoglycinate, lauric-myristic phosphobetaines, and lauryl betaine.

7. The clear cleansing bar composition of claim 1, wherein

the at least one anionic surfactant is selected from the group consisting of alkyl sulfates; alkyl ether sulfates; alkyl monoglyceryl ether sulfates; alkyl monoglyceride sulfates; alkyl monoglyceride sulfonates; alkyl sulfonates; alkylaryl sulfonates; alkyl sulfosuccinates; alkyl ether sulfosuccinates; alkyl sulfosuccinamates; alkyl amidosulfosuccinates; alkyl carboxylates; alkyl amidoethercarboxylates; alkyl succinates; fatty acyl sarcosinates; fatty acyl amino acids; fatty acyl taurates; fatty alkyl sulfoacetates; alkyl phosphates; and mixtures thereof, wherein the alkyl group has from about 10 to about 16 carbon atoms.

8. The clear cleansing bar composition of claim 7, wherein

the at least one anionic surfactant is selected from the group consisting of sodium laureth sulfate and sodium laureth-13 carboxylates.

9. The clear cleansing bar composition of claim 1, wherein

the at least one nonionic surfactant is selected from the group consisting of polyoxyethylene derivatives of polyol esters, wherein the polyoxyethylene derivative of polyol ester (1) is derived from (a) a fatty acid containing from about 8 to about 22 carbon atoms, and (b) a polyol selected from sorbitol, sorbitan, glucose, α -methyl

glucoside, polyglucose having an average of about 1 to about 3 glucose residues per molecule, glycerine, pentaerythritol and mixtures thereof, (2) contains an average of from about 10 to about 120, oxyethylene units; and (3) has an average of about 1 to about 3 fatty acid residues per mole of polyoxyethylene derivative of polyol ester, long chain alkyl glucosides, and polyglucosides, which are the condensation products of (a) a long chain alcohol containing from about 6 to about 22 carbon atoms, with (b) glucose or a glucose-containing polymer.

10. The clear cleansing bar composition of claim 9, wherein

the at least one nonionic surfactant is selected from the group consisting of polysorbate 20 and polyoxyethylene-sorbitan laurate.

11. The clear cleansing bar composition of claim 1, comprising:

a) from about 1% to about 20% of at least one amphoteric surfactant selected from the group consisting of cocamidopropylbetaine, lauroamphoglycinatc, lauric-myristic phosphobetaines, and lauryl betaine;

b) from about 1% to about 20% of at least one anionic surfactant selected from the group consisting of sodium laureth sulfate and sodium laureth-13 carboxylates;

c) from about 1% to about 20% of at least one non-ionic surfactant selected from the group consisting of polysorbate 20 and polyoxyethylene-sorbitan laurate;

d) from about 0.5% to about 5% of a solidifying agent selected from the group consisting of dibenzylidene sorbitol, dibenzylidene xylitol, dibenzylidene ribitol, and mixtures thereof; and

e) from about 20% to about 80% of at least one organic solvent selected from the group consisting of glycerin, propylene glycol, and mixtures thereof.

12. The clear cleansing bar composition of claim 11, further comprising:

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f) from about 0.05% to about 10% of a solidifying synergist.

13. The clear cleansing bar composition of claim 12, wherein

the solidifying synergist is selected from the group consisting of cellulose and
guar derivatives, acrylic acid polymers, polyacrylamides, alkylene/alkylene oxide
polymers, smectite hydrophilic and organoclays, hydrated and fumed silicas, gelatin,
keratin, xanthan and guar gums, carrageenan, agar and alginates

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ABSTRACT OF THE DISCLOSURE

Cleansing bar compositions that are efficient and have excellent foam properties and low ocular and skin irritation are disclosed. The compositions include dibenzylidene sorbitol as a gelling agent, a glycol solvent, and a combination of anionic, amphoteric, and nonionic surfactants to provide detergency. The compositions may contain hydroxypropyl cellulose as a solidifying synergist.

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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled Clear Cleansing Bar Compositions That Are Efficient and Are Not Irritating To The Eyes, the specification of which

(check one) ☐ is attached hereto.

☒ was filed on December 21, 2000 as

Application Serial No. _____

and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

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Prior Foreign Application(s):

Country	Application Number	Date of Filing	Priority Claimed Under 35 U.S.C. 119	
			☐ YES	☐ NO
			☐ YES	☐ NO
			☐ YES	☐ NO

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No. Filing Date Status

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I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith as well as to file equivalent patent applications in countries foreign to the United States including the filing of international patent applications in accordance with the Patent Cooperation Treaty: Steven P. Berman (Reg. #24,772), Andrea L. Colby (Reg. #30,194), Paul A. Coletti (Reg. #32,019), Matthew S. Goodwin (Reg. #32,839), Ralph R. Palo (Reg. #29,486), Bernard F. Plantz (Reg. #32,091), Joseph F. Shirtz (Reg. #31,880), Michael Stark (Reg. #32,495), Mark R. Warfield (Reg. #33,463), and Erin M. Harriman

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5A

(Reg. #40,410) One Johnson & Johnson Plaza, New Brunswick, NJ 08933.

Address all telephone calls to Erin M. Harriman at telephone no. (732) 524-3619.

Address all correspondence to Philip S. Johnson, One Johnson & Johnson Plaza, New Brunswick, NJ 08933-7003.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Inventor's Signature: _____
Full Name of Sole Danilo L. Lambino
or First Inventor
Date: _____
Citizenship: The Philippines
Residence: 9/2 Cairo Street, Rockdale
NSW 2216, Australia
Mailing Address: Same as above

Inventor's Signature: _____
Full Name of Second Joint Annabelle J. Personeni
Inventor, If Any
Date: _____
Citizenship: France
Residence: 1/10 Cables Place, Waverly
NSW 2024, Australia
Mailing Address: Same as above

Inventor's Signature: _____
Full Name of Third Joint Matthew J. Noble
Inventor, If Any
Date: _____
Citizenship: Great Britain
Residence: 35 Miramont Ave., Riverview
NSW 2066, Australia
Mailing Address: Same as above