110

Señor
SUPERINTENDENTE DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES
E. S. D.

SUPERINDUSTRIA Y COMERCIO
Radicacion : 00049307 00010000 Folios: 21
Fecha (AMD): 2004-08-31 18:31:49
Tramite : 002 PATENTES D 332 PRESENTAC 411 PRESENTA
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

Re: P1.-**UNILEVER N.V.**-Expediente número **00-049.307.-**

1. Me refiero al asunto de la referencia.

2. Por medio del presente, atentamente me permito manifestar a ese Despacho, que hubo un **cambio** de Representante Legal para todos los asuntos de la Propiedad Industrial en Bogotá de **UNILEVER N.V.**, una sociedad organizada y existente de conformidad con las leyes de Holanda, domiciliada en Rotterdam, Holanda.

3. En consecuencia, atentamente solicito a ese Despacho reconocerme personería, en este asunto, de conformidad con el documento de Representación Legal para todos los asuntos de la Propiedad Industrial en Bogotá de la sociedad **UNILEVER N.V.**, otorgado a favor de la **SUSCRITA (ALICIA LLOREDA)** y/o al doctor GUSTAVO TAMAYO y/o al doctor IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ de acuerdo con la copia debidamente autenticada ante Notario Público que adjunto al presente expediente (Artículos 26 y 39 de la Decisión 486 de la Comunidad Andina de Naciones).

4. Anexo al presente acompaño fotocopia, debidamente autenticada por Notario Público, de:

(a) Documento que acredita a la SUSCRITA y/o al doctor GUSTAVO TAMAYO y/o al doctor IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ en los términos del parágrafo 1º. del Artículo 543 del Decreto-Ley 410 de 1971, como Representantes Legales en Bogotá para todos los asuntos relacionados con la propiedad industrial de la sociedad **UNILEVER N.V.**, una sociedad organizada y existente de

conformidad con las leyes de Holanda, domiciliada en Rotterdam, Holanda.

(b) Certificación Notarial expedida el 28 de Julio de 2004; y

(c) Traducción Oficial No. 2004-08-12-406 correspondiente a las partes pertinentes del documento anterior, también debidamente legalizada hasta por el Ministerio de Relaciones Exteriores bajo el número 055734 de 13 de Agosto de 2004.

5. Ruego a usted tomar atenta nota de lo anterior y continuar con el trámite correspondiente.

Señor Superintendente,

ALICIA LLOREDA RICAURTE
T.P. 53.215
Código 231

John Venn & Sons
Scrivener Notaries
Translators

William B Kennair LL B • Jessica M Reeve M A
Associates Agnes Corless • Jonathan P Coutts M A , MIL
Consultants Keith F C Baker LL B, FIL • Bridget M Ellison B A

95 Aldwych London WC2B 4JF
United Kingdom

Telephone: 020 7395 4300
Fax 020 7395 4310
e-mail notary@johnvenn co uk
http //www johnvenn co uk

#4
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Yo, don WILLIAM BRIGNALL KENNAIR, Notario Público debidamente admitido, con competencia para actuar en Inglaterra y Gales y con ejercicio en Londres, Inglaterra, certifico por las presentes:

1. QUE el Poder que se adjunta fue firmado en nombre y representación de **UNILEVER N.V.** con oficinas en Weena 455, 3013 AL, Rotterdam, Países Bajos, por don RICHARD DUNCAN HEATH y doña NICOLA HOPE, ambos Firmantes debidamente Autorizados de la referida Sociedad;

2. Y QUE el referido Poder, así firmado, ha sido debidamente otorgado en representación de la referida Sociedad.

EN TESTIMONIO de lo cual expido este Certificado bajo mi firma y Sello Notarial en Londres, el día catorce de julio de dos mil cuatro.

W B Kennair
Not. Pub.

NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CONCUERDA CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CONCUERDA CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

SCRIVENER NOTARIES

APOSTILLE
(Hague Convention of 5 October 1961 / Convention de La Haye du 5 octobre 1961)

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

1 Country United Kingdom of Great Britain and Northern Ireland
Pays Royaume-Uni de Grande-Bretagne et d'Irlande du Nord

This public document / Le présent acte public

2 Has been signed by William Brignall Kennair
a été signé par

3 Acting in the capacity of Notary Public
agissant en qualité de

4 Bears the seal/stamp of The Said Notary Public
est revêtu du sceau/timbre de

5 at London/à Londres

6 the/le 14 July 2004

Certified/Attesté

7 by Her Majesty's Principal Secretary of State for Foreign and Commonwealth Affairs /
par le Secrétaire d'Etat Principal de Sa Majesté aux Affaires Etrangères et du Commonwealth

8 Number/sous No **G464139**

9 Stamp
timbre

10 Signature

For the Secretary of State / Pour le Secrétaire d'Etat

If this document is to be used in a country which is not party to the Hague Convention of 5 October 1961, it should be presented to the consular section of the mission representing that country

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...LEVER N.V.; una sociedad
...ite de conformidad con las leyes

con domicilio en Rotterdam, Holanda

nombramos por el presente a ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, domiciliados en Bogotá, Colombia, con oficinas en dicha ciudad, Calle 72 No 5-83, piso 6o , nuestros representantes legales y verdaderos en Bogotá, con facultades para recibir notificaciones y nombrar apoderados judiciales o extrajudiciales, con el fin de dar cumplimiento al parágrafo 1o del artículo 543 del decreto 410 de 1971

...s doctores ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, o los apoderados que cualquiera de ellos designe, quedan especialmente facultados para representarnos ante las autoridades colombianas, administrativas, judiciales o de policía, en todos los trámites relativos a la propiedad industrial, a cuyo efecto les facultamos para dar ante dichas autoridades todos los pasos necesarios al objeto indicado, elevar solicitudes, declaraciones, reclamos, recursos y presentar desistimientos, formular descripciones, enmiendas, limitar el alcance de las solicitudes y los registros, presentar oposiciones y apelaciones, instaurar cancelaciones, renunciar total o parcialmente a los registros, abonar todos los impuestos y cuotas y efectuar todo otro pago determinado por la ley, recibir todos los documentos y valores, dando el descargo respectivo, llenar cualesquiera otros requisitos y toma... en fin, todas las medidas que creyeren conc...entes al resguardo de nuestros intereses, y adicionalmente quedan facultados para tomar intervención como demandantes o demandados ante los jueces que sean competentes, pudiendo transar, someter a árbitros, desistir, percibir, conciliar y apelar, con todas las demás facultades que resulten necesarias, y por el presente declaramos desde ahora válido y bueno cuanto dichos representantes y/o los apoderados que cualquiera de ellos nombre hicieren en nuestro beneficio

Asimismo, facultamos a los doctores ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, para solicitar en la Oficina de Propiedad Industrial la protocolización de este documento y de cualquier poder que cualquiera de ellos otorgue a nombre nuestro

Dado y firmado el 13 de Julio de 2.004

The undersigned, **UNILEVER N.V.** a corporation organized and existing under the laws of The Netherlands,

domiciled at Weena 455, 3013 AL, Postbus 760, 3000 DK, Rotterdam, The Netherlands,

hereby appoint, ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, of Bogota, Colombia, with offices in said town, Calle 72 No. 5-83, Sixth Floor, our true and legal representatives in Bogotá, with power to receive notifications and to appoint judicial or extrajudicial agents, so as to comply with paragraph 1o. of article 543 of decree 410 of 1971.

Doctors ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, or the agents by any one of them appointed, are especially empowered to represent us before the administrative, judicial or police authorities of Colombia, in all proceedings pertaining to industrial property, for which purpose we authorize them to take before the said authorities all the necessary steps for the said end; to file petitions, declarations, claims, recourses and withdrawals, to draw up specifications; to file amendments, to limit the scope of applications and registrations, file oppositions; file cancellations total or partially waive registrations, to pay all installments and effect all other payments prescribed by law, to receive proper receipts, to comply with all other requirements and, in short, to take all those measures which they may deem fit for the protection of our interests, and additionally we authorize said agents to act on our behalf, as complainants as well as defendants, before the competent judges, with full powers to make arrangements, to submit to arbitrators, to desist, to collect, to conciliate, to appeal and, in short, with all such further powers as may be required, and we hereby declare from now on as valid and good all that said representatives and/or the agents by any one of them appointed may do for our benefit

We also authorize doctors ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ to apply for protocolization of this document and of any power of attorney by any one of them conferred in our name, before the Office of Industrial Property.

Given and signed this 13th day of July 2004

Richard Duncan Heath Nicola Hope
Both Duly Authorised

NOTARY SHOULD EXECUTE OTHER SIDE

...NOTARIO SEXTO (6) DEL CIRCULO ... CONSTAR QUE LA ... COPIA QUE HE TENIDO A LA VISTA ... COINCIDE CON EL ORIGINAL

17 AGO 2004

27 AGO 2004

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KAMER VAN KOOPHANDEL
ROTTERDAM

File number: 24051830 Page 00001 Limited extract

English translation of an extract from the commercial register of the Chamber of Commerce and Industries for Rotterdam

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Legal person:

Legal form	:Naamloze Vennootschap (Public Limited Liability Company)
Name	:Unilever N.V.
Statutory seat	:Rotterdam
Incorporation deed	:09-11-1927
Deed of latest amendment of articles	:13-05-2004
Authorized capital	:EUR 697.641.704,22
Issued capital	:EUR 411.862.272,26
Paid up capital	:EUR 411.862.272,26 (Capital converted into euro acc. to art. 2:67c B.W.)
There are different classes of shares	:Consult the commercial register file

---

Undertaking:

Tradename(s)	:Unilever N.V.
Address	:Weena 455, 3013AL Rotterdam
Mailing address	:Postbus 760, 3000DK Rotterdam
Telephone number	:010-2174000
Fax number	:010-2174798
Description of business conducted	:TO OBTAIN INTERESTS IN PARTNERSHIPS AS WELL AS MANAGING AND FINANCING
Employees	:0

This extract contains a selection of registered incumbents

Director(s):

Name	:Fitzgerald, Niall William Arthur
Date and place of birth	:13-09-1945, Flijo, Ireland
Address	:Warreners Lane, Weybridge kt13 0lq, United Kingdom
Date of entry into office	:20-05-1987
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles

Date of (present) represen-

28-07-2004

Page 00002 follows.

17 AGO 2004

PABLO MENDEZ BARAJAS NOTARIO(E)

KAMER VAN KOOPHANDEL ROTTERDAM
BLAAK 40, 3011 TA ROTTERDAM
T (010) 402 77 77 F (010) 414 57 54
INZAGE HANDELSREGISTER
T 0900-1234567 (€ 0,70 PER MINUUT)
INTERNET. WWW.KVK.NL

KAMER VAN KOOPHANDEL
ROTTERDAM

115
17

File number: 24051830 Page 00002 Limited extract

tative authority	:13-05-2004
Name	:Burgmans, Antony
Date and place of birth	:13-02-1947, Rotterdam
Address	:1 Danesmead, Cobham, surrey, kt11 2en, United Kingdom
Date of entry into office	:08-05-1991
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Date of (present) representative authority	:13-05-2004
Name	:Butler, Alan Clive
Date and place of birth	:22-06-1946, Bogota, Colombia
Address	:1 Campden Hill Gardens, Londen w8 7au, United Kingdom
Date of entry into office	:06-05-1992
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Date of (present) representative authority	:13-05-2004
Name	:Markham, Rudolph Harold Peter
Date and place of birth	:13-03-1946, Alresford, United Kingdom
Address	:48 Trinity Church Road 17 CALLOWHS, Barnes, londen sw13 8rj, United Kingdom
Date of entry into office	:06-05-1998
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Date of (present) representative authority	:13-05-2004
Name	:Cescau, Patrick Jean Pierre
Date and place of birth	:27-09-1948, Parijs, France
Address	:10a Gloucester Park App. ASHBURN, Place,kensington,london, United Kingdom
Date of entry into office	:04-05-1999
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles

28-07-2004

Page 00003 follows.

17 AGO 2004

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KAMER VAN KOOPHANDEL ROTTERDAM

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File number: 24051830 Page 00003 Limited extract

Date of (present) representative authority	:13-05-2004
Name	:van Heemstra, André René
Date and place of birth	:31-01-1946, Zwolle
Address	:Floris Grijpstraat 13, 2596XD 's-Gravenhage
Date of entry into office	:03-05-2000
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Date of (present) representative authority	:13-05-2004
Name	:Dadiseth, Keki Bomi
Date and place of birth	:20-12-1945, Punecms, India
Address	:Gloucester Park app. 10 A Asburn, Place Kensington London, United Kingdom
Date of entry into office	:03-05-2000
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Date of (present) representative authority	:13-05-2004
Name	:van der Graaf, Cornelis Job
Date and place of birth	:02-11-1950, Goes
Address	:Kievietslaan 34, 2243GD Wassenaar
Date of entry into office	:13-05-2004
Title	:Uitvoerend bestuurder
Powers	:Authorised jointly with other directors/others, see articles
Name	:Gonzalez Laporte, Claudio Xavier
Date and place of birth	:22-05-1934, Cananea, Son., Mexico
Address	:Santa Anita 190, Edo. de Mexico C.P. 53900, Mexico
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Baroness Chalker, Lynda
Date and place of birth	:29-04-1942, Hitchin, United Kingdom

HAGO CONSTAR QUE LA PRESENTE COPIA COINCIDE CON LA FOTOCOPIA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO

28-07-2004

Page 00004 follows.

HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
27 AGO 2004

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KAMER VAN KOOPHANDEL ROTTERDAM

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File number: 24051830 Page 00004 Limited extract

Address	:11 The Winery, Londen SW8 1JR, United Kingdom
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Lord Brittan of Spennithorne, Leon
Date and place of birth	:25-09-1939, Londen, United Kingdom
Address	:1 Carlisle Mansions, Londen SW1, United Kingdor
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Collomb, Bertrand Pierre Charles
Date and place of birth	:14-08-1942, Lyon, France
Address	:4 Rue de la Lota, Parijs 75116, France
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Dik, Wim
Date and place of birth	:11-01-1939, Rotterdam
Address	:Antwerpse Baan 10, 5268KB HELVOIRT
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Fanjul Martin, Oscar
Date and place of birth	:20-05-1949, Santiago de Chile
Address	:Juan Belmonte 11, Madrid 28014, Spain
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Kopper, Hilmar
Date and place of birth	:13-03-1935, Oslanin, Federal Republic of Germany
Address	:Himburg 9, Rothenbach D-56459, Federal Republic of Germany

28-07-2004

Page 00005 follows.

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KAMER VAN KOOPHANDEL ROTTERDAM

File number: 24051830 Page 00005 Limited extract

Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:Simon of Highbury, David Alec Gwyn Roberts
Date and place of birth	:24-07-1939, Londen, United Kingdom
Address	:6 St. Mary's Grove Mannonbury, Londen N1 2NT, United Kingdom
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)
Name	:van der Veer, Jeroen
Date and place of birth	:27-10-1947, Utrecht
Address	:Adres afgeschermd, o.g.v. art 32 Hrb.
Date of entry into office	:13-05-2004
Title	:Niet-uitvoerend bestuurder
Powers	:Authorised jointly (with other directors, see articles)

Issued by the chamber of commerce

NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

Rotterdam, 28-07-2004

For extract

Mw. C. Mijnsbergen-Tuil de Mortel

NOTARIA SEGUNDA NOTARIO SUSTITUTO CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
17 AGO 2004

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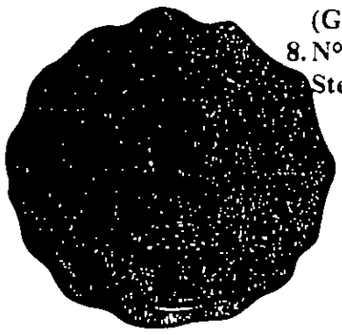
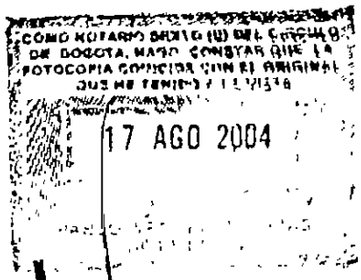
APOSTILLE

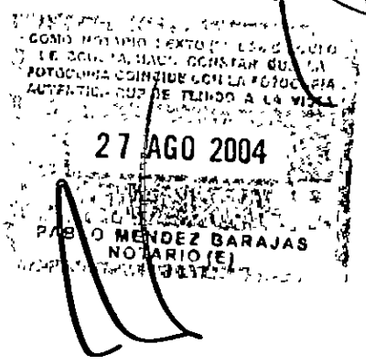
(Convention de la Haye du 5 octobre 1961)

1. Country: The NETHERLANDS
   This public document
2. has been signed by
   C. Mijnsbergen van de Mortel
3. acting in the capacity of
   servant of the chamber of commerce
4. bears the stempel of
   C. Mijnsbergen van de Mortel
   Certified
5. at ROTTERDAM 6. on 04-08-2004
7. by the clerk of the District Court

   (Griffier van de Arrondissementsrechtbank)
8. N° 147560
   Stempel: 10. Signature:







119

TRADUCCION OFICIAL No 2004-08-12-**406** de un documento escrito en Inglés/ Español, la cual para efectos del presente lleva el sello personal de **Martha Lucia Arciniegas M.,** Traductora e Intérprete Oficial en virtud de la Res 1523 /88 del Ministerio de Justicia

Legalización de un Poder de Representación Legal conferido a ALICIA LLOREDA y/o GUSTAVO TAMAYO, y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ otorgado por **UNILEVER N.V.**

Dado y firmado el 13 de julio del 2004

(fdo)

Richard Duncan Heath Nicole Hope

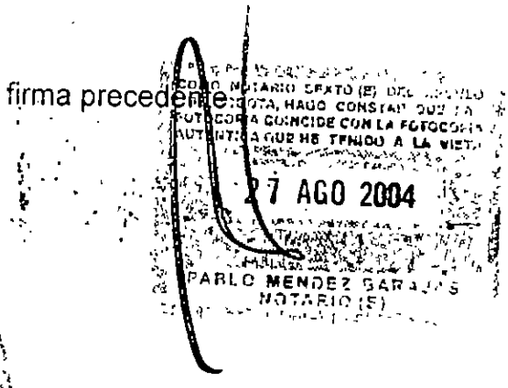
Debidamente autorizado

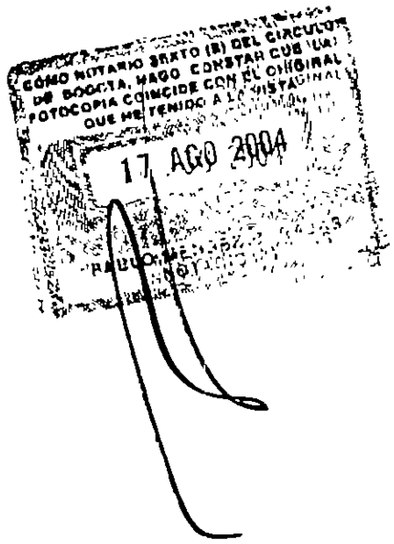
SE DEBE LEGALIZAR MEDIANTE NOTARIO AL DORSO Página

Sigue len Español legalización, mediante Notario, de la firma precedente:

(fdo)

WILLIAM BRIGNALL KENNAIR, Notario Público





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APOSTILLA

(Convención de La Haye del 5 de Octobre de 1961)

REINO UNIDO DE GRAN BRETAÑA E IRLANDA DEL NORTE

1 País Reino Unido de Gran Bretaña e Irlanda del Norte

Este documento público
2 ha sido firmado por **William Brignall Kennair**
3 actuando como **Notario Público**
4 y lleva el sello/estampilla de **Dicho Notario Público**

Certificado

5 en Londres 6. el 11 de **julio del 2004**

7 Por el Secretario Principal de Su Majestad para Asuntos Exteriores y del Commonwealth

8 No **G464139**

9. Timbre/Sello

Aparece el Sello de la Oficina de Asuntos Exteriores y del Commonwealth

10 Firma

W. Glass

27 AGO 2004

PABLO MENDEZ BARAJAS
NOTARIO (E)

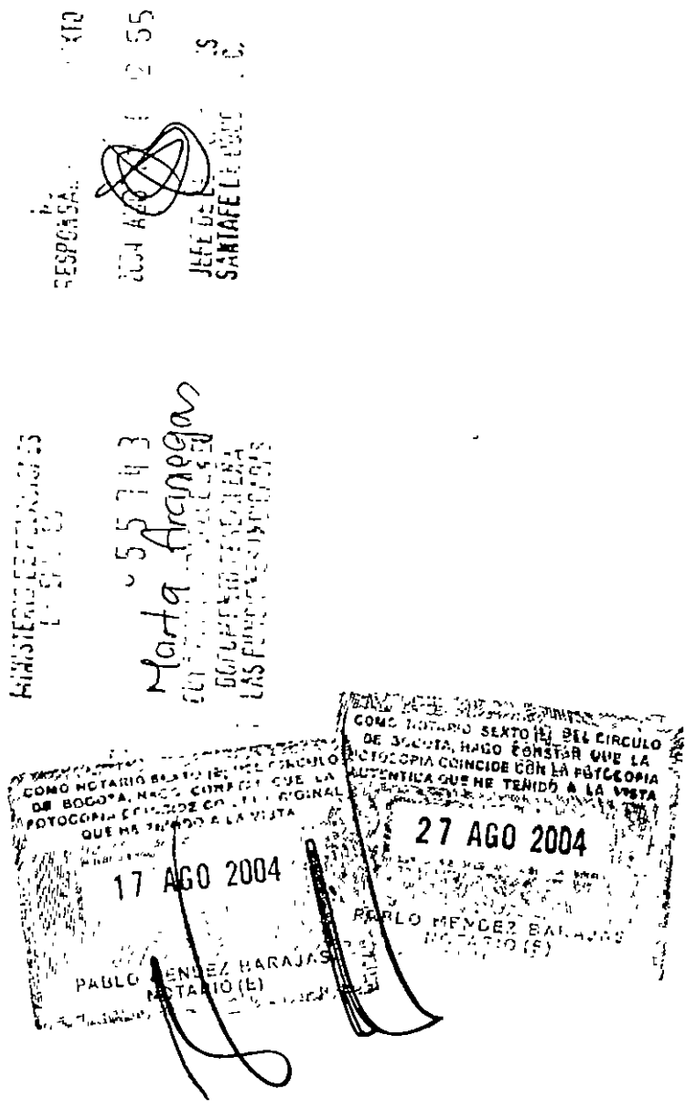
Según mi leal saber y entender, esta es una traducción fiel y completa de su original en inglés de la cual se deja copia para futuras referencias.

MARTHA LUCIA ARCINIEGAS M.
TRADUCTORA E INTERPRETE OFICIAL
RESOLUCION 1523/88 MINJUSTICIA

COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE ME FUE PRESENTADO A LA VISTA

17 AGO 2004

PABLO MENDEZ BARAJAS
NOTARIO (E)


COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
17 AGO 2004
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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

11

123 121

KAMER VAN KOOPHANDEL
ROTTERDAM

Número Archivo 24051830 Página 00001 Extracto Limitado

Traducción al inglés de un extracto del registro comercial de la Cámara de Industria y Comercio de Rotterdam

---

Persona legal

Forma jurídica	Naamloze Vennootschap) (Compañía de Responsabilidad Limitada Pública) .
Nombre	Unilever N.V.
Sede Estatutaria	Rotterdam
Primer registro en el registro comercial	09-11-1927
Escritura de la última enmienda de los artículos	13-05-2004
Capital autorizado	EUR 697 641.704,22
Capital emitido	EUR 411 862.272,26
Capital pagado	EUR 411 862 272 26
	(Capital convertido a euros según el art 2: 2 67c B.W.)
Existen diferentes clases de acciones	Consultar el archivo de registro comercial

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

Empresa

Razón social	Unilever N.V.
Dirección	Weena 455, 3013 AL Rotterdam
Dirección de correo	: Postbus 760, 3000DK Rotterdam
Número telefónico	. 010-2174000 ..
Número de fax	: 010-2174798

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

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Número Archivo 24051830

Descripción Negocio realizado	OBTENER INTERESES EN SOCIEDADES, ASI COMO MANEJO Y FINANCIAMIENTO
Empleados	0

Este extracto contiene una selección de personas en ejercicio de un cargo público

Nombre	: Fitzgerald, Niall William Arthur
Fecha y lugar de nacimiento	: 13-09-1945, Flijo, Irlanda
Dirección	: Warreners Lane, Weybridge kt13 Olq, United Kingdom
Fecha de ingreso a la oficina	20-05-1987
Cargo	Uitvoerend bestuurder
Facultades	: Autorizado conjuntamente (con otros directores/ otros, ver artículos...
Fecha de Autoridad Representativa	13-05-2004.....

Nombre	Burgmans, Antony .....
Fecha y lugar de nacimiento	: 13-02-1947, Rotterdam
Dirección	: 1 Danesmead, Cobham, Surrey, kt11 2en, United Kingdom
Fecha de ingreso a la oficina	: 08-05-1991
Cargo	Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos.... .....

DESPACHO NOTARIO SESENTA Y UNO (61) DEL CIRCULO DE BOGOTA, D.C. CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS NOTARIO (E)

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DESPACHO NOTARIO SESENTA Y UNO (61) DEL CIRCULO DE BOGOTA, D.C. CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ NOTARIO

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Fecha de Autoridad Representativa	13-05-2004. .. ..
Nombre	. Butler, Alan Clive
Fecha lugar de nacimiento	. 22-06-1946, Bogota, Colombia
Dirección	1 Campden Hill Gardens, London w8 7au United Kingdom... . ...
Fecha de ingreso a la oficina	· 06-05-1992 ....
Cargo	. Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos. .. .
Fecha de Autoridad Representación	13-05-2004
Nombre	· Markham, Rudolph Harold Peter
Fecha y lugar de nacimiento	13-03-1946, Alresford, United Kingdom
Dirección	48 Trinity Church Road 17 CALDWHS Barnes London sw13 8rj United Kingdom
Fecha de ingreso a la oficina	· 06-05-1998
Cargo	. Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos . . .
Fecha de Autoridad Representativa	· 13-05-2004

COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
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NOTARIO (E)

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Número Archivo 24051830 Página 00004 Extracto Limitado

Nombre	Cescau, Patrick Jean Pierre
Fecha y Lugar de Nacimiento	27-09-1948, Paris, Francia
Dirección	10ª Gloucester Park App ASHBURN, Place, Kensington, London, United Kingdom
Fecha de ingreso a la oficina	04-05-1999
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos . ...
Fecha de Autoridad Representación	13-05-2004

Nombre	van Heemstra, André René
Fecha y Lugar de Nacimiento	31-01-1946, Zwolle
Dirección	Floris Grijpstraat 13, 2596XD's Gravenhage
Fecha de ingreso a la oficina	03-05-2000
Cargo	Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos
Fecha de Autoridad Representación	13-05-2004

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PABLO MENDEZ BARAJAS
NOTARIO (E)

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17 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

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Número Archivo 24051830 Página 00005 Extracto Limitado

Nombre	Dadiseth, Keki Bomi
Fecha y Lugar de Nacimiento	20-12-1945, Punecms, India
Dirección	Gloucester Park app. 10 A Asburn, Place Kensington London, United Kingdom
Fecha de ingreso a la oficina	03-05-2000
Cargo	Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos.... ....
Fecha de Autoridad Representativa	13-05-2004
Nombre	van der Graaf, Cornelis Job
Fecha y Lugar de Nacimiento	02-11-1950, Goes
Dirección	Kievietslaan 34, 2243GD Wassenaar
Fecha de ingreso a la oficina	13-05-2004
Cargo	Uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/otros, ver artículos
Nombre	Gonzalez Laporte, Claudio Xavier
Fecha y Lugar de Nacimiento	22-05-1934, Cananea, Son , Mexico
Dirección	Santa Anita 190, Edo de Mexico C P. 53900 México

COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS NOTARIO (E)

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ BARAJAS NOTARIO (E)

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Fecha de ingreso a la oficina	. 13-05-2004
Cargo	Niet-uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/otros, ver artículos .

Nombre	. Baroness Chalker, Lynda
Fecha y Lugar de Nacimiento	. 29-04-1942, Hitchin, United Kingdom
Dirección	11 The Winery, London SW8 1JR, United Kingdom
Fecha de ingreso a la oficina	13-05-2004
Cargo	: Niet-uitvoerend bestuurder
Facultades	.- Autorizado conjuntamente (con otros directores/otros, ver artículos..... ....

Nombre	Lord Brittan of Spennithorne, Leon
Fecha y Lugar de Nacimiento	. 25-09-1939, London, United Kingdom
Dirección	· 1 Carlisle Mansions, London SW1, United Kingdom
Fecha de ingreso a la oficina	· 13-05-2004
Cargo	· Niet-uitvoerend bestuurder
Facultades	· Autorizado conjuntamente (con otro directores/otros, ver artículos ... .

EL NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA QUE HE TENIDO A LA VISTA
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NOTARIO (E)

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004
PABLO MENDEZ
NOTARIO

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Nombre	Collomb, Bertrand Pierre Charles
Fecha y Lugar de Nacimiento	14-08-1942, Lyon, Francia
Dirección	: 4 Rue de la Lota, Paris 75116, Francia
Fecha de ingreso a la oficina	13-05-2004
Cargo	Niet-uitvoerend bestuurder
Facultades	: Autorizado conjuntamente (con otros directores/otros, ver artículos.

Nombre	Dik, Wim
Fecha y Lugar de Nacimiento	11-01-1939, Rotterdam
Dirección	Antwerpse Baan 10 5269KB HELVOIRT
Fecha de ingreso a la oficina	13-05-2004
Cargo	. Niet-uitvoerend bestuurder
Facultades	· Autorizado conjuntamente (con otros directores, ver artículos

COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

Nombre	. Fanjul Martin, Oscar
Fecha y Lugar de Nacimiento	. 20-05-1949, Santiago de Chile, Chile
Direccion	. Juan Belmonte 11, Madrid 28043, España
Fecha de ingreso a la oficina	. 13-05-2004
Cargo	· Niet-uitvoerend bestuurder

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
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NOTARIO (E)

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Facultades	Autorizado conjuntamente (con otros directores/otros, ver artículos. ....
Nombre	Kopper, Hilmar
Fecha y Lugar de Nacimiento	13-03-1935, Oslanin, República Federal Alemana
Dirección	Himburg 9, Rothenbach D-56459, República Federal Alemana
Fecha de ingreso a la oficina	13-05-2004
Cargo	: Niet-uilvoerend bestuurder
Facultades	: Autorizado conjuntamente (con otros directores/otros, ver artículos ....
Nombre	Simon of Highbury, David Alec Gwyn Roberts
Fecha y Lugar de Nacimiento	24-07-1939, London, United Kingdom
Dirección	6 St. Mary´s Grove Canonbury, London N1 2NT United Kingdom
Fecha de ingreso a la oficina	13-05-2004
Cargo	Niet-uilvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/otros, ver artículos

COMO NOTARIO SEXTO (E) DEL ... DE BOGOTA HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA QUE HE TENIDO A LA VISTA
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PABLO MENDEZ BARAJAS
NOTARIO (E)

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004

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Número Archivo 24051830 Página 00009 Extracto Limitado

Nombre	van der Veer, Jeroen
Fecha y Lugar de Nacimiento	27-10-1947, Utrecht
Dirección	Adres afgeschermd, o.g.v. art 32 Hrb
Fecha de ingreso a la oficina	13-05-2004
Cargo	Niet-uitvoerend bestuurder
Facultades	Autorizado conjuntamente (con otros directores/ otros, ver artículos... ... .

Emitido por la Cámara de Comercio

Rotterdam, 28-07-2004

(fdo) Mw C Mijnsbergen- Van de Morter

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17 AGO 2004

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COMO NOTARIO SEXTO (E) DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA

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APOSTILLA

(Convención de La Haye del 5 de Octobre de 1961)

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2	Este documento público ha sido firmado por	**Mijnsbergen van de Mortel**
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4	y lleva el sello/estampilla de	**Dicho Notario Público**

Certificado

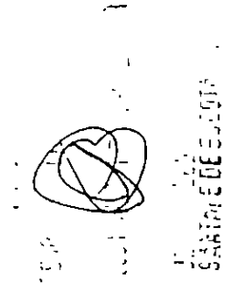
5	en Rotterdam	6.	el **4 de agosto del 2004**
7	Por el Secretario de la Corte del Distrito		
8.	No **147560**		
9	Timbre/Sello	10.	Firma (firma ilegible)

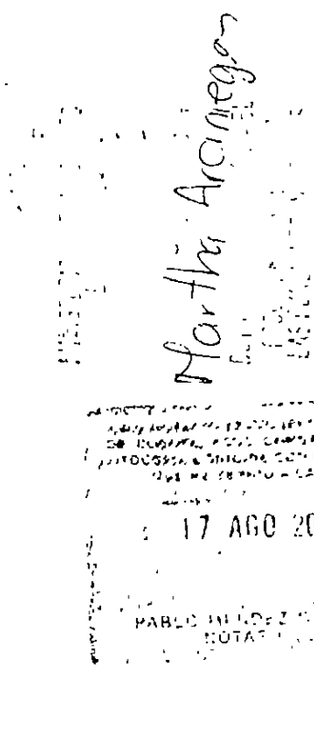
DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON LA FOTOCOPIA AUTENTICA QUE HE TENIDO A LA VISTA
27 AGO 2004
PABLO MENDEZ BARAJAS
NOTARIO (E)

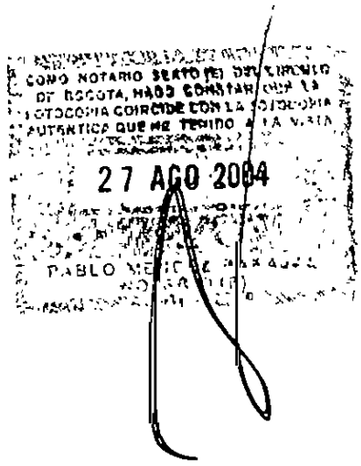
Según mi leal saber y entender, esta es una traducción fiel y completa de su original en inglés de la cual se deja copia para futuras referencias

NOTARIO SESENTA DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
17 AGO 2004

CATALINA LUCIA ARCINIEGAS M.
TRADUCTORA E INTERPRETE OFICIAL
RESOLUCION 1523/88 MINJUSTICIA




Martha Arciniegas
17 AGO 2004


27 AGO 2004

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PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
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(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, 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), ARIPO patent (KE, LS, MW, SD, SZ, UG).

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(54) Title: CLEAR, CONCENTRATED LIQUID FABRIC SOFTENER COMPOSITIONS

(57) Abstract

Clear fabric softener microemulsion compositions have been developed for use in the rinse cycle comprising a combination of diester quaternary ammonium surfactants, diamido ammonium surfactants and selected organic solvants. Fatty co-softeners and oil perfumes may be included as optional ingredients. These microemulsions are converted to macroemulsions upon dilution with water in the rinse cycle to provide a fabric softening treatment.

Clear, Concentrated Liquid Fabric Softener Compositions

A. BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to rinse cycle fabric softener compositions. More particularly it relates to aqueous liquid microemulsion fabric softener compositions that are clear, i.e., transparent even when highly concentrated.

2. Description of Related Art

U.S. 3,892,669 issued to A.A. Rapisarda et al. relates to a clear aqueous fabric softening composition containing a solubilized tetra alkyl quaternary ammonium salt having two short-chain alkyl and two long-chain alkyl groups, about 5% to about 25% of the latter having methyl and ethyl branching on the 2-carbon atom. Solubilization is effected by the presence of solubilizers comprising aryl sulfonates, diols, ethers, low molecular weight quaternaries, sulfobetaines, taurines, sulfoxides and non-ionic surfactants.

U.S. 4,149,978 issued to P.C.E Goffinet describes textile treatment compositions comprising a water-soluble fabric softener and a C12 - C40 hydrocarbon optionally together with a water-soluble cationic surfactant. The preferred fabric softeners are quaternary ammonium salts having two C10 - C22 alkyl chains.

U.S. 4,351,737 issued to S. Billenstein describes and claims softening concentrates containing 30 - 70% of a cationic softener, 5 - 50% of a non-ionic softener, 5 - 20% of a non-ionic dispersing agent, 5 - 30% of a C1 to C3 alkanol, 5 - 30% of liquid glycol, polyglycol or alkyl ether and water and optionally perfume and dyestuffs.

The fabric softener prepared according to this patent is alleged to be easily dispersible in water.

U.S.4,569,800 issued to K.D. Stanley et al. teaches the use of hydrogenated tallowalkyl 2-ethylhexyl dimethylammonium salts dissolved in water and/or ethanol or in isopropanol in fabric softener compositions. These compositions are clear because they form true solutions.

While consumer preference favors clarity in fabric softener compositions, fabric softeners are preferably brought into contact with the fabric as macroemulsions.

It is an object of this invention to provide a clear liquid fabric softener composition that is environmentally acceptable.

It is another object to provide such a fabric softener composition as an aqueous microemulsion concentrate.

It is also an object that this microemulsion composition be physically stable for at least about six weeks.

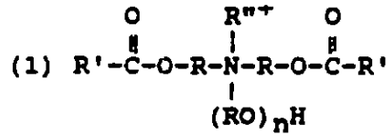
Another object is to provide a microemulsion which upon dilution, as in a washing machine dispenser, forms a macroemulsion without gelification.

Other objects will become apparent to those skilled in the art upon a further reading of the specification.

SUMMARY OF THE INVENTION

The objects cited above have been satisfied by a clear fabric softener composition comprising an aqueous microemulsion concentrate of:

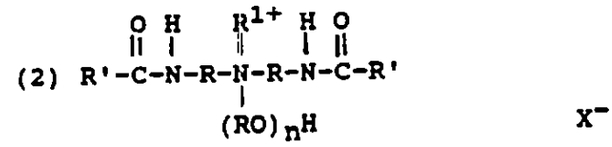
(A) a diester quaternary ammonium surfactant fabric softener having the formula:



(1)

wherein R is an alkylene radical having 2 to about 4 carbon atoms, R' is an alkyl or alkenyl group having 8 to about 22 carbon atoms, n is an integer having values of 1 to about 4, and R" is a lower alkyl radical having 1 to about 4 carbon atoms,

and/or a diamido ammonium surfactant fabric softener having the formula:



(2)

wherein n, R and R'are as defined above, R1+ is a lower alkyl radical having 1 to about 4 carbon atoms or hydrogen and X is R"SO4-, Br- or Cl- wherein R" is a lower alkyl radical having 1 to about 4 carbon atoms,

(B) an organic solvent,

(C) an optional water-immiscible oil perfume, and

(D) an optional fabric co-softener selected from the group consisting of fatty alcohols, fatty acids, fatty esters, fatty amines or amine/amides, whereby said microemulsion is convertible to a milky macroemulsion upon dilution with water.

All of the ingredients of the composition delineated above, both required and optional, must be normally liquid, i.e., liquid at ambient room temperatures.

The preferred concentration of softeners in these microemulsions lies between about 40% and about 60% although as little as 10% can be used.

The microemulsion compositions of this invention can contain about 10% to about 60% of the primary softeners, diester quaternary ammonium surfactants and diamido ammonium surfactants, about 5% to about 40% of organic solvent, from 0 to about 15% of co-softener and 0 to about 10% of oil perfume, and the remainder water all on a 100% weight basis.

Most of the prior art quaternary ammonium compounds, commonly designated as Quats, are not environmentally friendly because of their toxicity to aquatic life and/or their poor biodegradability. However the softeners of this invention, both the dioleyl diester Quats and the diamido ammonium compounds are environmentally friendly.

Diester quaternary ammonium surfactant fabric softeners, represented by equation (1) are commercially available from Stepan Co. as Stepantex and from KAO Corp. as Tetranyl but can also be synthesized by the reaction of two moles of a fatty acid with a trialkanolamine followed by alkoxylation and methylation with dimethyl sulfate or an alkyl halide such as, methyl iodide. In a preferred mode the fatty acid is oleic acid and ethylene oxide is used as the alkoxylation agent. For economical reasons it has been found that Soya fatty acids are a practical source for this purpose consisting of about 3% myristic acid, about 5% palmitic acid, about 5% palmitoleic acid, 1.5% stearic acid, 72.5% oleic acid and about 13% linoleic acid. Other sources of useful fatty acids are those obtained from the saponification of beef tallow, butter, corn oil, cottonseed oil, lard, olive oil, palm oil, peanut oil, cod liver oil, coconut oil and the like.

A preferred diester quaternary ammonium surfactant fabric softener is methyl bis[ethyl(oleyl)]-2-hydroxyethyl ammonium methyl sulfate. Other diesters useful in the practice of this invention include:

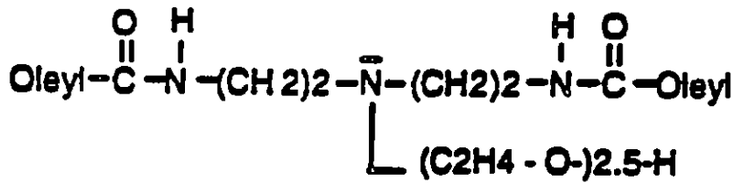
methyl bis-[ethyl(coconut)]-2-hydroxyethyl ammonium methyl sulfate
methyl bis-[ethyl(decyl)]-2-hydroxyethyl ammonium methyl sulfate
methyl bis-[ethyl(dodeceyl)]-2-hydroxyethyl ammonium methyl sulfate
methyl bis-[ethyl(lauryl)]-2-hydroxyethyl ammonium methyl sulfate
methyl bis-[ethyl(palmityl)]-2-hydroxyethyl ammonium methyl sulfate
methyl bis-[ethyl(soft-tallow)]-2-hydroxyethyl ammonium methyl sulfate, and the like.

The designation of the terms coconut and soft-tallow indicate mixtures of esters corresponding to the fatty acid source.

In the preparation of the diester quaternary ammonium surfactants, a certain amount of the triester homolog may be produced as an impurity. Unlike the diester, it is not soluble in water and has to be considered as an oil to be emulsified.

A preferred diamido ammonium surfactant fabric softener is the methyl bis-(oleyl amido ethyl)-2-hydroxyethyl ammonium methyl sulfate, a quaternary. This can be synthesized by the interaction of one mole of triethylamine with two moles of oleic acid followed by ethoxylation with ethylene oxide and methylation with dimethyl sulfate. As in the case of the preparation of the diester compounds above, either pure fatty acids or mixtures obtained from the saponification of natural fats and oils can be utilized in their synthesis. These diamido quaternary ammonium surfactant fabric softeners are also commercially from Rewo as Rewopo P.

Another preferred diamido ammonium surfactant fabric softener is the diOleyl diamido amine having the structure:



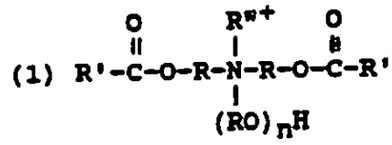
The term "perfume" is used in its ordinary sense to refer to and include any non water-soluble fragrant substance or mixture of substances including natural (i.e., obtained by extraction of flower, herb, blossom or plant), artificial (i.e., a mixture of natural oils or oil constituents) and synthetic (i.e., a single or mixture of synthetically produced substance) odoriferous substances. Typically perfumes are complex mixtures of blends of various organic compounds, such as, esters, ketones, hydrocarbons, lactones, alcohols, aldehydes, ethers, aromatic compounds and varying amounts of essential oils (e.g., terpenes) such as from about 0% to about 80%, usually from about 10% to 70% by weight, the essential oils themselves being volatile odoriferous compounds and also serving to dissolve the other components of the perfume. The precise composition of the perfume has no particular effect on fabric softening so long as it meets the criteria of water immiscibility and pleasant odor.

Organic solvents suitable for use in this invention include: aliphatic alcohols having 1 to about 6 carbon atoms, such as, ethanol, propanol, isopropanol, n-butanol, isobutanol, t-butanol, n-pentanol, isopentanol, sec-pentanol, n-hexanol, isohexanol, other isomers and the like; aliphatic polyalcohols, such as, ethylene glycol, propylene glycol, butylene glycol, diethylene glycol, dipropylene glycol, 1,4-

What is claimed is:

1. A clear fabric softener aqueous microemulsion concentrate composition capable of conversion to a macroemulsion upon dilution with water comprising:

(A) a diester quaternary ammonium surfactant fabric softener having the formula:

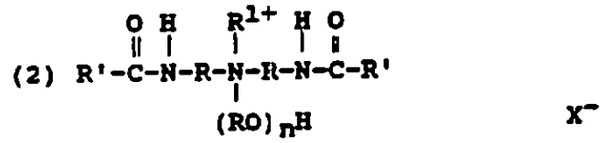


(1)

$$R'-C(=O)-O-R-N^{+}(R^{"})(-(RO)_nH)-R-O-C(=O)-R'$$

$$R"SO_4^-$$

wherein R is an alkylene radical having 2 to about 4 carbon atoms, R' is an alkyl or alkenyl group having 8 to about 22 carbon atoms, n is an integer having values of 1 to about 4, and R" is a lower alkyl radical having 1 to about 4 carbon atoms, and/or a diamido ammonium surfactant fabric softener having the formula:



(2)

$$R'-C(=O)-NH-R-N^{1+}(-(RO)_nH)-R-NH-C(=O)-R' \quad X^-$$

wherein n, R and R'are as defined above, R1+ is a lower alkyl radical having 1 to about 4 carbon atoms or hydrogen and X is R"SO4-, Br- or Cl- wherein R" is a lower alkyl radical having 1 to about 4 carbon atoms,

(B) an organic solvent,

(C) an optional water-immiscible oil perfume, and

(D) an optional fabric co-softener selected from the group consisting of fatty alcohols, fatty acids, fatty esters, fatty amines or amine/amides, whereby said microemulsion is converted to a milky macroemulsion upon dilution with water.

2. Composition claimed in claim 1 wherein the fabric softener is a diester quaternary ammonium surfactant.

3. Composition claimed in claim 2 wherein the diester is methyl bis[ethyl(oleyl)]-2-hydroxyethyl ammonium methyl sulfate.

4. Composition claimed in claim 1 wherein the fabric softener is a combination of a diester quaternary ammonium surfactant and a diamido ammonium surfactant.

5. Composition claimed in claim 4 wherein the diamido ammonium surfactant is methyl bis-(oleyl amido ethyl)-2-hydroxyethyl ammonium methyl sulfate.

6. Composition claimed in claim 4 wherein the diamido ammonium surfactant is a salt of a diOleyl diamido amine.

7. Composition claimed in claim 1 wherein the fabric softener is a diamido ammonium surfactant.

8. Composition claimed in claim 7 wherein the diamido ammonium surfactant is methyl bis-(oleyl amido ethyl)-2-hydroxyethyl ammonium methyl sulfate.

9. Composition claimed in claim 7 wherein the diamido ammonium surfactant is a salt of a dioleyl diamino amine.

10. Composition claimed in claim 9 wherein the salt is a salt of maleic acid.

11. Composition claimed in claim 1 wherein said composition contains a water-immiscible oil-perfume.

12. Composition claimed in claim 1 wherein the organic solvent is a lower alkanol.

13. Composition claimed in claim 12 wherein the alkanol is isopropyl alcohol.

14. Composition claimed in claim 12 wherein the alkanol is a butanol.

15. Composition claimed in claim 1 wherein the organic solvent is a glycol.

16. Composition claimed in claim 15 wherein the glycol is hexylene glycol.

17. Composition claimed in claim 1 wherein the organic solvent is an aliphatic ether.

18. Composition claimed in claim 17 wherein the aliphatic ether is ethylene or diethylene glycol monobutyl ether.

19. Composition claimed in claim 17 wherein the aliphatic ether is dipropylene glycol methyl ether.

20. Composition claimed in claim 17 wherein the aliphatic ether is dipropylene glycol butyl ether.

21. Composition claimed in claim 1 wherein the fabric co-softener is a fatty alcohol.

22. Composition claimed in claim 21 wherein the fatty alcohol is oleyl alcohol.

23. Composition claimed in claim 1 wherein the fabric softener is a fatty ester.

24. Composition claimed in claim 23 wherein the fatty ester is glycerol monooleate.

25. Composition claimed in claim 23 wherein the fatty ester is a polyethylene glycol monooleate.

26. Composition claimed in claim 23 wherein the fatty ester is sucrose cocoate.

27. Composition claimed in claim 1 comprising about 10% to about 60% by weight of softener (A), and about 5% to about 40% of organic solvent, with the remainder being water.

28. Composition claimed in claim 27 comprising in addition up to about 15% of a co-softener and up to about 10% of an oil perfume.

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(54) Fabric conditioning composition

(57) A fabric conditioner that easily disperses in water and softens without effecting the water absorbency of the fabrics treated therewith The fabric conditioner comprises a cationic fabric softening compound and an oil in which the cationic fabric softening compound is suspended in the oil

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Description

Technical Field

The present invention relates to fabric conditioning compositions In particular the present invention relates to fabric conditioning concentrates with less than 10% by weight of water that easily disperse and self-emulsify in cold water (10-25°C) and when emulsified give excellent perfume delivery and softening to laundry

Background and Prior Art

Conventional rise conditioners are obtained by dispersing a cationic softening material and perfume into hot water The problem with such conventional rinse conditioners is that although the rinse conditioners soften laundry they do not deliver perfume onto the fabric well because as much as one third of the perfume in the formulation remains in the rinse water

Rinse conditioners based on emulsions are known We have found that such emulsion-based softeners perfume fabrics more effectively than these conventional rinse conditioners but subsequently have a loss in their softening performance

WO 92/18593 (Procter and Gamble) discloses a granular rinse conditioner, which can be added to water to form an aqueous dispersion, comprising a fatty alkyl ester of a polyhydric alcohol as the softening compound and a mono-long chain alkyl cationic surfactant

EP 404 474 (Unilever) discloses a clear, isotropic fabric softening compound comprising a cationic fabric softening material and a carboxylic acid having a total number of 8 carbon atoms

GB 2 007 734 (Cargo Fleet) discloses a liquid fabric softener concentrate which consists of a quaternary ammonium salt having at least one C_8-C_{30} long chain alkyl group and an oil The concentrate can be dispersed or emulsified with water No mention of improved perfume delivery is made

The present invention overcomes the problems associated with the prior art in that it provides a rinse conditioner with excellent perfume delivery and fabric softening properties

Additionally the present invention also provides rinse conditioners which are not detrimental to the absorbency of fabric and which also reduce the creasing of fabric

Definition of the Invention

The present invention relates to a conditioning concentrate comprising a cationic fabric softening compound and oil in which the cationic fabric softening compound is suspended in the oil

The invention also relates to the use of a composition described above during the rinse cycle to reduce creasing or to improve the water absorbency of fabric

A process for perfuming and softening laundry is also described in which the composition described above is added directly to the rinse liquor

Detailed description of the invention

The present invention relates to a conditioning concentrate The term concentrate in the context of the present invention means that little or no water is present in the formulation The maximum level of water that can be present in the formulation is 10 % or less by weight of the total formulation, more preferably 5 % or less by weight, most preferably 2 % or less by weight In some situations less than 0.5% by weight of water may be present

It is especially advanageous if the softening compound and the oil are heated together to form a melt Perfume may also form part of the melt

Without being bound by theory the compositions of the invention can be described as having a physical state wherein a network of solid crystallites of controlled strength is formed to contain the liquid phase The strength of the solid network is controlled such that composition does not undergo gravitational sedimentation under quiescent conditions but flows under agitation and stirring In direct contrast a conventional emulsion comprises an oil emulsified by cationic active in the form of lamellar layers, said emulsion can yield to gravitational phase separation

Further discussion on the properties of inorganic solids suspended in an oil are given in "Electrostatic Stabilization of Suspensions in Non-aqueous Media" Ph C van der Hoevan, University of Wageningen Thesis (1991), Chapter 2

It is preferred that when added to water the emulsified product has an oil droplet size (D_{43} volume average droplet size) of under 5μm and more preferably under under 3μm Droplet size (D_{10}) is typically in the range 0 2μm-50μm

The Oil

The compositions of the present invention comprise at least one oil The oil may be a mineral oil, an ester oil or a sugar ester oil Some natural oils, such as vegetable oils may be included if appropriate

It is preferred if the oil is an ester oil, sugar ester oil or a mineral oil Suitable oils include those in the Sirius range of mineral oils (ex Silkolene)

Suitable ester oils include the saturated ester oils (ex Unichema) and the unsaturated sugar ester oils (ex Mitsubishi Kagaku)

It is preferred if the ester oils of the invention are hydrophobic in nature It is further preferred if the ester oil is saturated (hardened) in nature, unless it is a sugar ester oils ,or which unsaturation is preferred

Suitable ester oils are the fatty ester of a mono or polyhydric alcohol having from 1 to about 24 carbon atoms in the hydrocarbon chain, and mono or polycarboxylic acids having from 1 to about 24 carbon atoms in the hydrocarbon chain with the proviso that the total number of carbon atoms in the ester oil is equal to or greater than 16 and that at least one of the hydrocarbon radicals in the ester oil has 12 or more carbon atoms

Ester oils most suitable for use in the present invention are the PRIOLUBES from Unichema In particular PRIOLUBE 1407, PRIOLUBE 1447, PRIOLUBE 1415, PRIOLUBE 1448, PRIOLUBE 1427, PRIOLUBE 1445, PRIOLUBE 2045, PRIOLUBE 3988, PRIOLUBE 3987, PRIOLUBE 2091, ESTOL 1545 and ESTOL 1527 are advantageously employed Of these PRIOLUBE 2045, which is a neopentyl glycol monomerate, PRIOLUBE 1446, which is a neopentyl glycol dioleate, and Estol 1445, which is a 2-ethyl hexyl stearate are particularly useful The fatty acid mixture for this ester is called in the oleochemical industry "monomer fatty acid" and derives from the dimerisation of rape oil (eruca low) fatty acid or oleine from tallow In the dimerisation process, dimer, trimer acids and so called monomeric acids are formed After the dimerisation the "monomeric" part is separated via distillation

Suitable mineral oils include Esso Marcol technical garde range of oils and particularly preferred is the Silkolene medicinal Sirius range

The molecular weight of the mineral oil is typically within the range 150 to 400

It is preferred if the viscosity of the ester oil or mineral oil is from 2 cP (mPa s) to 400 cP (mPa s) at a temperature of 25°C, more preferably a viscosity from 2 to 150 cP (mPa s), most preferably a viscosity from 10 to 100 cP (mPa s)

It is preferred if the viscosity of the sugar ester oil is above 50,000 cP, preferably 5,000 to 20,000 cP, most preferably 6,000 to 20,000 cP All viscosities are measured at 25°C.

It is preferred if the density of the mineral oil is from 0 80 to 0 90 g/cm^3, more preferably from 0 83 to 0 88g/cm^3

It is further preferred if the refractive index of the oil is from 1 445 to 1 490, more preferably from 1 460 to 1 485

The level of oil in the rinse conditioner is preferably from 20 to 80 wt% of the composition, most preferably from 50 to 70 wt%

The Crystal Growth Inhibitor

It is also preferred if a crystal growth inhibitor is present It is beneficial if the crystal growth inhibitor forms part of the melt

The crystal growth inhibitors are compounds that have highly polarisable hydrophilic groups

Examples of suitable crystal growth inhibitors include (poly) carboxylates, fatty acids, (poly) ethylene oxides , hydroxylic organic acids, (poly) phosphates, organic phosphonates, amino phosphonates, poly acrylic acids, poly aspartic acid, poly propopylene glycols, polyethelene glycols and soil release polymers such as PET-POET (PERMALOSE TM ex ICI), SOKOLAN HP 22 (ex BASF), cationic decoupling polymers (ex National Starch) as disclosed in (EP 0 415 69842).

Particularly preferred crystal growth modifiers are organic acids of alkyl chain length C_{18} or less, and nonionic surfactants having an average alkyl chain length between C_{10} and C_{22} and from 10 to 30 ethoxylate groups Particularly preferred crystal growth inhibitors are tallow and coco nonionic surfactants having from 15 to 20 ethoxylate groups, organic acids such as lactic acid (which contains about 20% linear polymeric self-esterified esters), stearic acid, and hardened or unhardened tallow acid Mixtures of crystal growth inhibitors may also be used

When the compositions of the present invention are being produced by the melt process as herein described it is particularly preferred that the compositions comprise a fatty acid crystal growth modifier, especially hardened or non-hardened tallow fatty acid or lactic acid or a tallow ethoxylated alcohol

If the crystal growth inhibitor is a fatty acid or nonionic surfactant it is advantageous if the alkyl chain is not branched

The average alkyl chain length of the nonionic surfactant may, for example be between C_{10} to C_{14} If a nonionic surfactant is used as the crystal growth inhibitor it is preferred if the HLB is from 14 to 17 especially from 15 to 17

Preferred crystal growth inhibitors have further advantages in that they control crystal agglomeration (and hence the viscosity) and aid emulsification of the oil Furthermore, the preferred crystal growth inhibitors aid the dispersion of the melt in water

The crystal growth inhibitor can be cationic and nonionic in nature but not anionic In this context fatty acids if used (in presence of some water) as a crystal growth inhibitor should be used at a pH where they are not dissociated and are thus not anionic in nature

The crystal growth inhibitor or mixtures thereof should preferably be present at a level of from 1 wt% to 20 wt% of the composition, more preferably the crystal growth inhibitor should be present at a level from 2 wt% to 10 wt% As described above a mixture of crystal growth inhibitors may be used, however the level of each individual crystal growth inhibitor is preferably between 1 wt% and 10 wt% , more preferably between 1 wt% and 6 wt% of the total composition

It is preferred that the compositions comprise a co-emulsifier for rapid dispersion of the composition when it is added to water

If a nonionic ethoxylated surfactant is used as the crystal growth inhibitor then this will function as both the inhibitor and as a co-emulsifier to provide good dispersion

It is a preferred feature of the present invention that the compositions comprise a co-emulsifier which is a surfactant having a low HLB, preferably less than 14 It has been found that such surfactants provide excellent dispersion results

The preferred co-emulsifers are C_8-C_{22} alcohol alkoxylates with an average of 3 to 10 alkoxylate groups, preferably 5 to 7 alkoxylate groups Ethoxylates are the preferred alkoxylates although mixed ethoxylates/propoxylates or propoxylates may also be used

Alternatively, the compositions may comprise, as the co-emulsifer, a mixture of surfactants to provide good dispersibility A mixture of a nonionic ethoxylate surfactants having an HLB of less than 14 with surfactants having an HLB of greater than 15 5 also provides excellent dispersibility in water

Suitable surfactants with an HLB of less than 14 are disclosed hereinabove Suitable surfactants with an HLB of greater than 15 5 include C_8-C_{22} alcohol alkoxylates with an average of 15 to 25 aloxylate groups, preferably 17 to 23

Again ethoxylates are preferred, although mixed ethoxylates/propoxylates and propoxylates may be used

The co-emulsifer mixture preferably comprises no more than 90% by weight of the higher HLB surfactant, preferably no more than 75%, especially no more than 65%

The Fabric softening Compound

The compositions of the present invention comprise at least one fabric softening compound

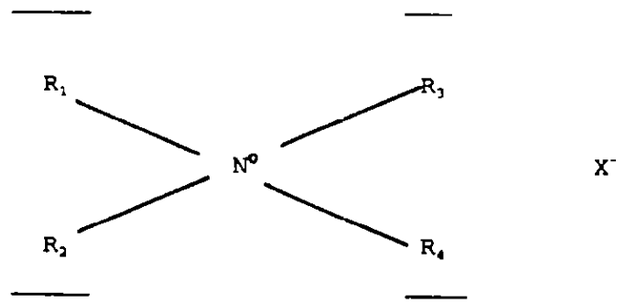
The fabric softening compound is preferably a quaternary ammonium material comprising a polar head group and two alkyl or alkenyl chains

Preferably the fabric softening compound of the invention has two long chain alkyl or alkenyl chains with an average chain length greater than C_{14}, more preferably each chain has an average chain length greater than C_{16}, more preferably at least 50% of each long chain alkyl or alkenyl group has a chain length of C_{18}

It is preferred if the long chain alkyl or alkenyl groups of the fabric softening compound are predominantly linear

It is highly preferred if the fabric softening compounds of the invention are substantially water insoluble Substantially insoluble fabric softening compounds in the context of this invention are defined as fabric softening compounds having a solubility less than 1×10^{-3} Wt% in demineralised water at 20°C, preferably the fabric softening compounds have a solubility less than 1×10^{-4}, most preferably the fabric softening compounds have a solubility at 20°C in demineralised water from 1×10^{-8} to 1×10^{-6}

Well known species of substatially water-insoluble quaternary ammonium compounds having the formula

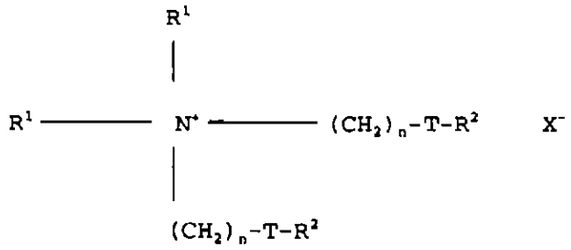


wherein R_1 and R_2 represent hydrocarbyl groups having from 12 to 24 carbon atoms, R_3 and R_4 represent hydrocarbyl groups containing 1 to 4 carbon atoms, and X is an anion, preferably selected from halide, methyl sulphate and ethyl sulphate radicals are preferred

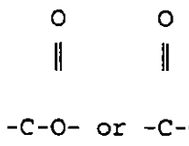
Representative examples of these quaternary softeners include di(tallow alkyl)dimethyl ammonium chloride, di (tallow alkyl) dimethyl ammonium methyl sulphate, dihexadecyl dimethyl ammonium chloride, di(hydrogenated tallow alkyl) dimethyl ammonium chloride, dioctadecyl dimethyl ammonium chloride, di(hydrogenated tallow alkyl) dimethyl ammonium methyl sulphate, dihexadecyl diethyl ammonium chloride, di(coconut alkyl) dimethyl ammonium chloride Ditallow alkyl dimethyl ammonium chloride, di(hydrogenated tallow alkyl) dimethyl ammonium chloride, and quats of this

Other preferred softeners contain esters or amide links, for example those available under the tradenames Accosoft 580, Varisoft 222, and Stepantex

Particularly preferred fabric softening compounds are a water insoluble quaternary ammonium materials which comprises a compound having two C_{12-18} alkyl or alkenyl groups connected to the molecule via at least one an ester link It is more preferred if the quaternary ammonium material has two ester links present The preferred ester-linked quaternary ammonium material for use in the invention can be represented by the formula

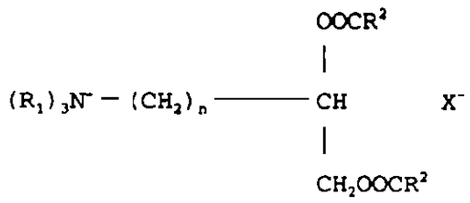


wherein each R^1 group is independently selected from C_{1-4} alkyl, hydroxyalkyl or C_{2-4} alkenyl groups, and wherein each R^2 group is independently selected from C_{8-28} alkyl or alkenyl groups;
T is



X^- is any suitable anion and
n is an integer from 0-5

A second preferred type of quaternary ammonium material can be represented by the formula



wherein R_1, n X^- and R_2 are as defined above

It is advantageous for environmental reasons if the quaternary ammonium material is biologically degradable

Preferred materials of this class such as 1,2 bis[hardened tallowoyloxy]-3- trimethylammonium propane chloride and their method of preparation are, for example, described in US 4 137 180 (Lever Brothers) Preferably these materials comprise small amounts of the corresponding monoester as described in US 4 137 180 for example 1-hardened tallowoyloxy -2-hydroxy trimethylammonium propane chloride

The fabric softening agent may also be a polyol ester quat (PEQ) as described in EP 0 638 639 (Akzo)

The level of cationic softening compound is preferably from 3 wt% to 60 wt% of the total composition, more pref-

erably from 10 wt% to 40 wt%

It is prefered if the ratio of cationic softening compound to oil is from 1 10 to 5 1 preferably from 1 5 to 1 1, and most preferably 1 3 to 1 1

It is preferred that the composition contains less than 25 wt% of the total composition of organic solvent, more preferably less than 20 wt%, most preferabley less than 10 wt%

It is especially preferred that the solvents are non-aqueous In any case level of water must be kept below 10% of the total composition

For compositions produced by the melt process, as herein below described it is preferred that organic solvents are included in the compositions It is preferred that less than half of the amount of any solvent present is flammable solvent (i e has a flash point of less than 25°C The major proportion of the solvent should most preferably be a non-flammable solvent (i e have a flash point of higher than 25°C) Suitable examples include IPA, propylene glycol, and especially hexylene glycol and butyl digol for reasons of viscosity and appearance of the melt A mixture of solvents may provide advantageous results, especially with respect to viscosity In some compositions solvent may be present as a result of being a component of an ingredient of the composition

It is believed that the choice of the type of any solvent present in the compositions of the present invention help to control the size of the crystals of the fabric softening compound

An excess of solvent in the compositions, e g greater than 30% by weight of solvent typically produces an increase in the particle size of the fabric softening compound However, this typically results in compositions which are more difficult to disperse

Composition pH

The compositions of the invention when dispersed in water at use concentration preferably have a pH of more than 1 5, more preferably less than 5

Product Form

The composition is in the form of a concentrate, typically in the form of a paste or high viscosity liquid The concentrate may be added either immediately or after standing, following addition to water by the consumer to form an emulsion which is then added to the rinse liquor

However, it is preferable if the concentrate is added directly to the rinse liquor

Other Ingredients

The composition can also contain one or more optional ingredients, selected from pH buffering agents, perfumes, perfume carriers, fluorescers, colorants, hydrotropes, antifoaming agents, antiredeposition agents, polymeric or other thickening agents, enzymes, optical brightening agents, opacifiers, anti-shrinking agents, anti-wrinkle agents, anti-spotting agents, germicides, fungicides, anti-corrosion agents, drape imparting agents, antistatic agents and ironing aids

The concentrated compositions according to the present invention may be produced according to any suitable method Two methods are particularly preferred namely the melt process and the cold grinding (milling) process

A melt as referred to herein is a homogeneous liquid mixture of two or more substances that would individually solidify on cooling to ambient temperature In our melts typically one or two of the components solidify on cooling (usually cationic and nonionic)

In the melt process the fabric softening compound is heated until it is mobile, preferably liquid, followed by addition to an oil phase (which may contain a perfume) to produce a melt The additional components of the composition may be incorporated into the composition via a mobile fabric conditioning compound, via the oil, or they may be added after the fabric conditioning compound and the oil have been mixed together Typically the melt is formed at a temperature of at least 35°C, preferably of at least 40°C, e g at a temperature of 45°C to 70°C Preferably the fabric softening compound and nonionic(s) are mixed with the oil and then heated to form a liquid to which upon cooling to a lower temperature perfume may be added

Alternatively, the compositions of the present invention may be produced by a cold grinding (milling) method wherein the fabric softening compound and the oil are mixed together, at ambient temperature typically at high shear rates, without the fabric softening composition being heated prior to mixing

The cold grinding process typically produces compositions of lower viscosities than the corresponding compositions produced by the melt route

The invention will now be illustrated by reference to the following non-limiting Examples Further modifications within the scope of the present invention will be obvious to the skilled man

Comparative Examples are illustrated by a letter and Examples of the invention by a number

EXAMPLES

Examples 1 to 5 and A to H

Examples 1 to 5 were prepared by heating the cationic softener until liquid and adding it to a blend of oil and perfume or adding the cationic to the oil and heating the mixture Additional components were added to the oil and warmed or added to the cationic softener and warmed or added to the blend of cationic and oil while cooling This method is referred to herein as the melt process

Examples A to H were prepared by stepwise addition of components to hot water

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Table 1

Component % w/w	1	A	2	B	3	C	4	D	5	E	F	G	H
n-Hexadecane	66 4	13.3	-	-	-	-	-	-	-	-	-	-	-
Estol 1545			68.0	13.6	66 9	13 4	-	-	-	-	-	-	--
Marcol 52			-	-	-	-	64.9	13. 0	-	-	-	-	-
Sirius M70			-	-	-	-	-	-	66.9	13.4	-	-	3.38
Arquad 2HT	27.4	5.5	29.2	5.8	27.9	5.8	27.9	5.6	27.9	5.8	2.13	2.13	2.13
Perfume	6.3	1.3	-	-	4.5	0.9	4.5	0.9	4.5	0.9	0.24	0.24	0.24
Lactic Acid	2.8	0.6	2.8	0.6	-	-	2.7	0.5	-	-	-	-	-
Sirus M180	-	-	-	-	-	-	-	-	-	-	3.38	-	-
Ryoto Sugar Ester	-	-	-	-	-	-	-	-	-	-	-	3.38	-
Coco 20E0	-	-	-	-	0.7	0.14	-	-	0.70	0.14	-	-	-
Water		to 100		to 100		to 100		to 100		to 100	to 100		
Softness Score	4.2	5.2	4.0	4.7	4.3	6.0	4.3	4.8	3.8	5.2	4.7	-	4.67
Perfume Score		2.6			3.60	2.60					3.53	3.69	3.33

Arquad 2 HT is di methyl di hardened tallow quaternary ammonium chloride containing about 20% isopropyl alcohol and was used as supplied ie. the % refers to the product as supplied.

Examples F,G and H are 5% emulsions prepared from the melts by diluting in 50°C water.
The perfume score is noted as perfume on "wet" fabric.

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Table 2

Oil	Type	Viscosity 25°C/mPa s	RI 20°C	Density 20°C
n-hexadecane	hydrocarbon (ex Baker	5 98	1 43453	0 778
Estol 1545 2 - ethylhexyl stearate	ester oil (ex Unichema)	13 37	1 44811	0 860
Marcol 52	mineral (ex Esso)	14 49	1 45246	0 829
Marcol 172	mineral (ex Esso)	60 23	1 47056	0 859
Sirius M70	pure mineral (ex Silkolene)	24 38	1 46076	0 836
Sirius M180	mineral (ex Silkolene)	68 5	1 47171	0 860
Ryoto ER 290	Sugar ester (ex Mitsubishi Kagaku)	$20x10^3$	1 48354	0 968
Sirius M125	mineral (ex Silkolene)	42 524 38	1 46915	0 855
Sirius M350	mineral (ex Silkolene)	106 0	1 47451	0 866

(i) Softening evaluation method

Softening performance was evaluated by adding O lg of fabric softening compound to 1 litre of demineralised water at ambient temperature containing in a tergotometer It should be noted that the level of actives was equal in the rinse liquor for the examples of the invention and the comparative examples Three pieces of terry towelling (19cm x 19 5cm) were added to the tergotometer pot (The terry towelling was previously rinsed with 0 001% (w/w) sodium alkyl benzene sulphonate (ABS))to simulate carryover of anionic detergent from the main wash)

The cloths were treated for 5 minutes at 65 rpm, spin dried to remove excess liquor and line dried overnight Softness was evaluated by a trained panel of four people ranked the cloths against set standards A low number indicates a greater degree of softening

(ii) Perfume delivery evaluation method

Perfume delivery was evaluated by rinsing three pieces of terry towelling (7 75 by 7 5"), per product in a similar manner to that previously described for softening evaluation above Instead of being line-dried the cloths were immediately assessed for perfume intensity by a trained group of eighteen panellists who ranked each cloth on a scale of zero to five corresponding to descriptors ranging from no perfume to very strong perfume Further assessments were made after five hours when the cloths were dry and again after twenty-four hours The level of product was 0 1g/l active matter with a perfume level in the rinse liquor of 4 76mg/l

Absorbency of fabrics was evaluated by treating fabric as described for the softening assessment Strips of fabric were cut to 11 cm by 3 cm The strips of treated fabric were held vertically and lowered into a dish containing a 0 02% solution of direct red 81 dye, so that ca 0 5cm of the fabric was below the surface of the water The height to which the liquid rose up the strip was measured at intervals of time for a total of one hour The average height for each treatment was calculated Higher values are indicative of better absorbency

Examples 6,7 and I

Example 6 was prepared as for Examples 1 to 5

Example 7 was prepared by adding Example 6 to hot water (60 °C to give an emulsion comprising 20% active Example I a conventional softener dispersion, was prepared by stepwise addition of the components to hot water

	Example 6	Example I
Sirius M70	53 23	-
Arquad 2HT	36 92	7 3
Coco20EO	5 91	-
Hardened Tallow fatty acid	-	0 4

(continued)

	Example 6	Example I
Perfume	3 9	0 3
Water	0 0	91 6

Softening and absorbency were evaluated as described above

	Softening score	Absorbency Height (mm) in one hour
Example 6	3 38	126
Example 7	3 5	109
Example I	3 0	18

These results show that Examples 6 and 7 of the invention unlike comparative Example I have dissociated softening from absorbency

The perfume performance, crease recovery, average recovery angle and ease of ironing for examples 6, F,G and H (as according to the present invention) and comparative Example I were tested as detailed below

(i) Perfume Performance

Perfume Performance was evaluated as described above

Table 3

	Wet Cloth	After 5 hours	After 24 hours
Example 6	2 58	2 39	1 74
Example I (comparative)	2 22	1 36	0 95
Example F	3 53	2 36	1 42
Example G	3 69	1 97	1 36
Example H	3 33	2 40	1 81

(ii) Crease Recovery (warp test)

Cotton poplin cloth was soaked in a solution of fabric softening compound (0 1g/l in demineralised water) at room temperature and then wrung using an Atlas Laboratory wringer After line drying, the cloth was left at 20°C and 65% humidity for 24 hours The cloth was then cut to 25mm to 50mm The cloth was folded in half (short ends together) and placed on a plate A 2kg load was placed on the crease of the cloth a using a "Shirley Crease Recovery Tester (SDL 003A)" One half of the cloth was secured to the tester, the other half being left suspended in the air The angle of the free end was measured relative to secured end after 2 minutes 30 seconds

(iii) Average recovery angle (warp)

Example 6	73 0
Example 7	63 28
Example I	57 2

The greater the angle the better the crease recovery of the cloth

(iv) Ease of ironing

From direct observation of the cloths it could be seen that the wrinkles fell out more easily from cloths treated with Example 6 than cloths treated with Example I This made ironing of the cloth treated with Example 6 rinse conditioner

easier as the wrinkles needed little pressure from the iron to be removed In this respect wrinkles fell out more easily from cloths treated with Example 6 than cloths treated with Example 7

Examples 8 to 16

Table 4

COMPOSITION	Example 8 %	Example 9 %	Example 10 %	Example 11 %
Sirius M70	47.32	59.14	53.23	-
Arquad 2HT	36.92	36.92	36.92	36.92
Coco20EO	5.91	-	-	5.91
Hardened Tallow Fatty Acid	5.91	-	5.91	-
Perfume	3.94	3.94	3.94	3.92
Sirus M180	-	-	-	47.32

Table 5

COMPOSITION	EXAMPLES %				
	12	13	14	15	16
Priolube 1446	65.03	56.11	-	-	-
Sirius M70	-	-	52.92	52.42	53.63
2HT	-	-	36.71	-	-
HEQ	30.64	39 69	-	37 27	-
Deedmac	-	-	-	-	35.91
Coco20EO	-	-	5.82	5.77	5.90
Tallow 15 EO	4.33	4.20	-	-	-
Perfume	-	-	4.55	4.54	4.54

HEQ is a mixture of 66 2% 1,2 bis[hardened tallowoyloxy]-3-trimethylammonium propane chloride, 11 03% tallow fatty acid and isopropyl alcohol

DEEDMAC is a mixture of di(hardened tallowoyloxyethyl)dimethyl ammonium chloride 83% quat, 2% tallow fatty acid and isopropyl alcohol

All examples exhibited good softening of the fabrics and perfume delivery

Examples 17 and 18, Cold grinding route of preparation

A further method of producing the compositions of the present invention is demonstrated by this example

Example 17 had same composition as Example 15 (above) and Example 18 had the same composition as Example 16 except the oil was Estol 1545 In both cases the fabric softening compound (HEQ or Deedmac) was added to the oil (Sirius M70) and other ingredients followed by high-shear mixing at ambient temperature The compositions produced were dispersions with relatively low viscosities This method is referred to herin as the cold-grinding route

The cold-grinding route produces products with typically lower viscosities than those produced by the melt route of the present invention The cold-grinding route provides a particularly advantageous route for the preparation of products comprising high melting point fabric softening compounds

Examples 15 and 16 as prepared by the melt route were substantially solid and difficult to disperse at ambient temperature Examples 17 and 18 as prepared by the cold grinding route were soft solids/pastes

The softening and perfume performance of the same compositions but produced by two routes of the invention were comparable

Example 16 (melt) route and Example 18 (cold-grinding route) both exhibited excellent softening and perfume delivery/ longevity (see Table 6)

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(54) Title: CONCENTRATED PREMIX WITH REDUCED FLAMMABILITY FOR FORMING FABRIC SOFTENING COMPOSITION

(57) Abstract

Biodegradable fabric softener premix compositions are described containing (1) biodegradable softener actives; optional low molecular weight solvent; (2) high boiling, water soluble solvent to lower the viscosity, while avoiding flammability; and (3) optional perfume. The premixes can be added at ambient temperatures to water containing acid, to provide a pH of from about 1.5 to about 5, to form finished compositions. The water can also contain calcium and/or magnesium salt to modify the viscosity. Compositions containing highly unsaturated softener actives have improved freeze/thaw properties.

CONCENTRATED PREMIX WITH REDUCED FLAMMABILITY FOR FORMING FABRIC SOFTENING COMPOSITION

TECHNICAL FIELD

The present invention relates to concentrated liquid fabric softener active premixes for use in preparing softening compositions useful for softening cloth. It especially relates to the preparation of textile softening compositions for use in the rinse cycle of a home textile laundering operation to provide excellent fabric-softening/static-control benefits.

BACKGROUND OF THE INVENTION

Historically, fabric softening actives typically contain low solvent levels. However, normally, such fabric softener actives are difficult to process unless raised to high temperatures and processed with high energy levels. Raising the level of low molecular weight solvent to permit low temperature processing increases flammability. Moreover, there is a need for highly concentrated "compositions" that are suitable either for sale to consumers as "finished compositions" or for creating such compositions. Said highly concentrated compositions that are used to further create finished compositions should have a viscosity that allows them to be stored, pumped, and processed at ambient temperatures into finished aqueous compositions without the need for high shear mixing. It is very desirable to have these concentrated compositions also with low flammability or non-flammable characteristics. Concentrated active premixes and/or compositions that can be processed without difficulty, are of particular importance when one wants to provide the fabric softening benefit to consumers in remote areas of the world, where the cost of transporting finished low concentration products to the area from some other location is prohibitively expensive and the local manufacturing facilities are limited and rudimentary. Safety and freeze/thaw stability are both important attributes for a consumer product and/or the products used to prepare such consumer products.

The present invention provides highly concentrated active compositions containing biodegradable actives with either no, or relatively low, levels of low molecular weight organic solvent (e.g., below about 10%, by weight of the composition) so that they have reduced flammablity, that can be processed at normal, i.e., room temperatures (about 25°C) and, preferably, even sub-normal

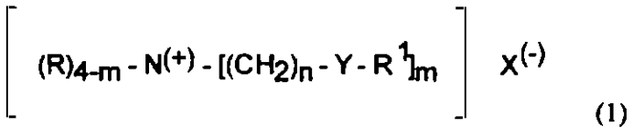
temperatures after prolonged storage conditions, preferably without high shear mixing, to form stable compositions.

SUMMARY OF THE INVENTION

The high active fabric softener "premix" compositions, useful for preparing finished compositions, herein comprise:

A. from about 50% to about 85%, preferably from about 60% to about 80%, more preferably from about 65% to about 75%, by weight of the composition, of biodegradable fabric softener active selected from the group consisting of:

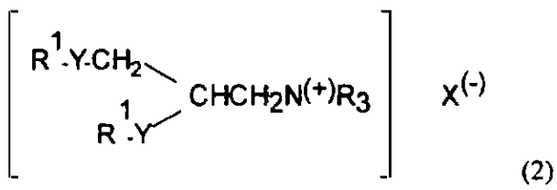
1. softener having the formula:



(1)

wherein each R substituent is a short chain C_1-C_6, preferably C_1-C_3 alkyl or hydroxyalkyl group, e.g., methyl (most preferred), ethyl, propyl, hydroxyethyl, and the like, benzyl, or mixtures thereof; each m is 2 or 3; each n is from 1 to about 4; each Y is -O-(O)C-, or -C(O)-O-; the sum of carbons in each R^1, plus one when Y is -O-(O)C-, is C_6-C_{22}, preferably C_{14}-C_{20}, and when one YR^1 sum is from about 6 to about 10, the other YR^1 sum is from about 16 to about 22, with each R^1 being hydrocarbyl, or substituted hydrocarbyl, substituent, preferably alkyl or alkylene; and where the total average Iodine Value (hereinafter referred to as IV) of the parent fatty acid of this R^1 group is preferably from about 40 to about 140, more preferably from about 60 to about 130; and most preferably from about 70 to about 105 (As used herein, the Iodine Value of the "parent" fatty acid, or "corresponding" fatty acid, is used to define an average level of unsaturation for all of the R^1 groups that are present, that is the same as the level of unsaturation that would be present in fatty acids containing the same R^1 groups.); and wherein the counterion, X^-, can be any softener-compatible anion, preferably, chloride, methyl sulfate, bromide, or nitrate, more preferably chloride or methyl sulfate;

2. softener having the formula:



(2)

wherein each Y, R, R^1, and $X^{(-)}$ have the same meanings as before (Such compounds include those having the formula:

$$[CH_3]_3 N^{(+)}[CH_2CH(CH_2OC[O]R^1)OC(O)R^1] Cl^{(-)}$$

where $C(O)R^1$ is derived from, e.g., natural source fatty acid including those that are high in oleic fatty acid, and, preferably, each R is a methyl or ethyl group and preferably each R^1 is in the range of C_{15} to C_{19} with degrees of branching and substitution optionally being present in the alkyl chains); and

3. mixtures thereof;

B. at least an effective amount to lower the viscosity, but less than about 40%, preferably from about 5% to about 30%, more preferably from about 7% to about 25%, and even more preferably from about 10% to about 20%, by weight, of high boiling point solvent, preferably to lower the viscosity to less than about 1000 cps, preferably less than about 500 cps, more preferably less than about 300 cps, while not making the composition more flammable; and

C optionally, from 0% to about 10%, preferably from about 3% to about 6%, by weight of the premix composition, of low molecular weight alcohol to lower the viscosity of the premix composition.

DETAILED DESCRIPTION OF THE INVENTION

A. FABRIC SOFTENING ACTIVE

The premixes herein contain, as an essential component, from about 50% to about 85%, preferably from about 60% to about 80%, more preferably from about 65% to about 75%, by weight of the composition, of a fabric softener active selected from the compounds identified hereinafter, and mixtures thereof.

Diester Quaternary Ammonium Fabric Softening Active Compound (DEQA)

(1) The first type of DEQA preferably comprises, as the principal active, compounds of the formula

$$\left[(R)_{4-m} - N^{(+)} - [(CH_2)_n - Y - R^1]_m \right] X^{(-)} \qquad (I)$$

wherein each R substituent is a short chain C_1-C_6, preferably C_1-C_3 alkyl or hydroxyalkyl group, e.g., methyl (most preferred), ethyl, propyl, hydroxyethyl, and the like, benzyl or mixtures thereof; each m is 2 or 3; each n is from 1 to about 4; each Y is -O-(O)C-, or -C(O)-O-; the sum of carbons in each R^1, plus one when Y is -O-(O)C-, is C_{12}-C_{22}, preferably C_{14}-C_{20}, with each R^1 being a hydrocarbyl, or

substituted hydrocarbyl, group, preferably alkyl or alkylene (mono- and/or poly-unsaturated), either straight and/or branched, and especially mixtures of groups derived from natural sources. Preferred compounds contain different R^1 groups. The average Iodine Value (hereinafter referred to as IV) of the parent fatty acid of this R^1 group is preferably from about 40 to about 140, more preferably from about 60 to about 130; and most preferably from about 70 to about 105.

The counterion, $X^{(-)}$ above, can be any softener-compatible anion, preferably the anion of a strong acid, for example, chloride, bromide, methylsulfate, sulfate, nitrate and the like, and more preferably chloride or methylsulfate.

These biodegradable quaternary ammonium fabric softening compounds can contain the group $C(O)R^1$ which is derived, primarily from unsaturated fatty acids, e.g., oleic acid, and/or fatty acids, and/or hydrogenated, and/or partially hydrogenated fatty acids, which are derived from vegetable oils, and/or partially hydrogenated vegetable oils, such as, canola oil, safflower oil, peanut oil, sunflower oil, corn oil, soybean oil, tall oil, rice bran oil, etc. Non-limiting examples of DEQAs prepared from fatty acids have the following approximate distributions:

Fatty Acyl Group	DEQA[1]	DEQA[2]	DEQA[3]	DEQA[4]	DEQA[5]
C12	trace	trace	0	0	0
C14	3	3	0	0	0
C16	4	4	5	5	5
C18	0	0	5	6	6
C14:1	3	3	0	0	0
C16:1	11	7	0	0	3
C18:1	74	73	71	68	67
C18:2	4	8	8	11	11
C18:3	0	1	1	2	2
C20:1	0	0	2	2	2
C20 and up	0	0	2	0	0
Unknowns	0	0	6	6	7
Total	99	99	100	100	102
IV	86-90	88-95	99	100	95
cis/trans (C18:1)	20-30	20-30	4	5	5
TPU	4	9	11	13	13

Other nonlimiting examples of DEQA's of this invention are as follows:

Fatty Acyl Group	DEQA[6]	DEQA[7]
C14	0	1
C16	11	25

C18	4	20
C14:1	0	0
C16:1	1	0
C18.1	27	45
C18:2	50	6
C18:3	7	0
Unknowns	0	3
Total	100	100
IV	125-138	56
cis/trans (C18:1)	Not Available	7
TPU	57	6

DEQA[6] is prepared from a soy bean fatty acid, and DEQA[7] is prepared from a slightly hydrogenated tallow fatty acid.

Fatty Acyl Group	DEQA[8]	DEQA[9]	DEQA[10]
Isomyristic acid	--	1-2	--
Myristic acid	7-11	0.5-1	--
Isopalmitic acid	6-7	6-7	1-3
Palmitic acid	4-5	6-7	--
Isostearic acid	70-76	80-82	60-66
Stearic acid	--	2-3	8-10
Isoleic acid	--	--	13-17
Oleic acid	--	--	6-12
IV	3	2	7-12

DEQA[8] - DEQA[10] are prepared from different commercially available isostearic acids.

Suitable DEQA's can be prepared as a single DEQA from blends of all the different fatty acids that are represented (total fatty acid blend), as well as from blends of mixtures of separate finished DEQA's that are prepared from different portions of the total fatty acid blend. Lower IV softener actives can be used if the branched chain fatty acids like isostearic acid are added.

The unsaturated, including the polyunsaturated, fatty acyl groups surprisingly provide effective softening, but also provide better rewetting characteristics, good antistatic characteristics, and especially, due to polyunsaturated fatty acids, superior recovery after freezing and thawing.

The highly unsaturated materials are also easier to formulate into concentrated premixes that maintain their low viscosity and are therefore easier to process, e.g., pump, mixing, etc. without large amounts of solvents. These highly unsaturated

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Doctor (señor):
Alicia Lloreda Ricaurte

Oficio N° 4255

REFERENCIA:	Radicación No.	00-49307.
	Trámite	002.
	Evento	001.
	Actuación	430.
	Folios	004.

Realizado el examen de patentabilidad de la presente solicitud según el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, "**art. 45**.- *Si la oficina nacional competente encontrara que la invención no es patentable o que no cumple con alguno de los requisitos establecidos en esta Decisión para la concesión de la patente, lo notificará al solicitante. Este deberá responder a la notificación dentro del plazo de sesenta días contados a partir de la fecha de la notificación. Este plazo podrá ser prorrogado por una sola vez por un período de treinta días adicionales.*
Cuando la oficina nacional competente estimara que ello es necesario para los fines del examen de patentabilidad, podrá notificar al solicitante dos o más veces conforme al párrafo precedente.
Si el solicitante no respondiera a la notificación dentro del plazo señalado, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, la oficina nacional competente denegará la patente." se notifica el siguiente Concepto Técnico:

1 DOCUMENTOS ESTUDIADOS
Para el presente estudio se tuvo en cuenta el capítulo descriptivo, folios 6 a 38 presentado originalmente, folios 59 y 60 de la descripción y reivindicaciones 1 a 11, folios 61 a 63 anexados como respuesta al requerimiento formal; lo cual fue aceptado dado que éste no implica una ampliación de la solicitud originalmente presentada conforme lo establece el artículo 34 de la decisión 486 de la Comisión de la Comunidad Andina "**art. 34**.- *El solicitante de una patente podrá pedir que se modifique la solicitud en cualquier momento del trámite. La modificación no podrá implicar una ampliación de la protección que correspondería a la divulgación contenida en la solicitud inicial.*
Del mismo modo, se podrá pedir la corrección de cualquier error material.".

- Se acepta reivindicación de prioridad GB 9915964.2 del 7 de julio de 1999.

2. OBJETO DE LA INVENCIÓN

- Título: Composiciones suavizantes que contienen tensioactivos catiónicos para el acondicionamiento de las telas.
- La invención consiste en:

Reivindicaciones 1 a 6: Una composición acuosa en la forma de una micro-emulsión para el acondicionamiento de telas que comprende:

i) uno o más tensioactivos catiónicos seleccionados entre: a) compuestos de amonio cuaternario que tienen por lo menos un grupo éster y se forman a partir de un ácido graso padre que tiene un grado de instauración representado por un valor de yodo situado entre 20 y 140 y, b) compuestos de amonio cuaternario que tienen dos cadenas alquílicas o alquenílicas C8-C28 unidas directamente al nitrógeno y se forman a partir de un ácido graso padre que tiene un grado de instauración representado por un valor de yodo situado entre 0 y 20,
ii) uno o más aceites
iii) uno o más solventes

Reivindicaciones 7 a 9: Un proceso para el acondicionamiento de telas que comprende el paso de adición – a una operación de lavado de ropa – de la composición acondicionadora de telas.

Reivindicacón 10: Un método para la preparación de una composición acuosa para el acondicionamiento de las telas que comprende mezclar un tensioactivo catiónico, un aceite, un solvente y agua, agitar o calentar la mezcla a fin de formar la microemulsión.

Reivindicación 11: Una composición para el acondicionamiento de las telas en la forma de una macro-emulsión producida mediante la composición acondicionadora con agua.

- La clasificación según la IPC correspondiente al objeto de la solicitud es C11D1/62.

4. DETERMINACIÓN DEL ESTADO DE LATÉCNICA

- La fecha a partir de la cual se realizó la búsqueda de anterioridades corresponde al 6 de julio de 1999.
- Con base a lo anterior y la definición dada en el **art. 16.-** "Una invención se considerará nueva cuando no está comprendida en el estado de la técnica.
  El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida.
  Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40.", se realizó la búsqueda de anterioridades en los archivos con que cuenta esta Oficina y se encontraron los siguientes documentos relacionados con la materia de la presente solicitud:

N°	DOCUMENTO	TÍTULO	FECHA DE PUBLICACIÓN
D1	WO 96/19552	Clear, concentrated liquid fabric softener compositions	1996-06-27
D2	EP 0829531	Fabric conditioning composition	1998-03-18
D3	WO 98/08924	Concentrated premix with reduced flammability for forming fabric softening composition	1998-03-05

5. EVALUACIÓN DE LOS REQUISITOS DE PATENTABILIDAD

El artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece que: "Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento, en todos los campos de la tecnología , siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial."

En cumplimiento del artículo 14 de la Decisión 486, se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicación industrial con el fin de establecer la patentabilidad de la invención reivindicada en la solicitud en estudio.

5.1 Evaluación del NIVEL INVENTIVO

De acuerdo al **art. 18.-** "*Se considerará que una invención tiene nivel inventivo, si para una persona del oficio normalmente versada en la materia técnica correspondiente, esa invención no hubiese resultado obvia ni se hubiese derivado de manera evidente del estado de la técnica.*", se conceptúa:

D1 revela una composición en microemulsión suavizadora de tejidos que comprende una combinación de tensioactivo diéster amonio cuaternario, tensioactivos de amonio

diamido y solventes orgánicos. Opcionalmente se pueden incluir en la formulación co-suavizadores y perfumes. Estas microemulsiones son convertidas en macroemulsiones por dilución con agua en el ciclo de enjuague para suministrar un tratamiento suavizante.

D2 divulga una composición acondicionadora fácilmente dispersable en agua y que auto- emulsifica en agua fría (10-25°C) y emulsificada da un excelente perfume y suavidad a la ropa. Dicha composición que puede o no contener hasta un 10% de agua comprende un suavizante catiónico suspendido en un aceite; adicionalmente para este tipo de composiciones se prefiere utilizar un solvente orgánico, ejemplos de ellos son IPA, propilenglicol, entre otros. Dice esta anterioridad que es especialmente ventajoso si el compuesto suavizante y el aceite se calientan juntos para formar una disolución; el perfume también puede formar parte de la disolución.

D3 revela que históricamente los suavizadores contienen un bajo contenido de solventes. En esta anterioridad se publican composiciones que comprenden relativamente bajos niveles de solvente orgánico de bajo peso molecular, de 50 a 85% de suavizante de amonio cuaternario seleccionado de las fórmulas (1) y (2) descritas en las páginas 2 a 3 de este documento, de 10 a 40% de un solvente y un alcohol de bajo peso molecular. Los componentes adicionales en esta composición pueden ser un perfume, abrinllantadores, entre otros.

Como se puede observar, D1 pone en evidencia que en el arte que ya se han combinado estos tres componentes: un suavizante catiónico, uno o más aceites y uno o más solventes, y más aún específicamente, dicha formulación se ha presentado en la forma de una microemulsión. De esta manera, D1 contiene materia que afectaría el nivel inventivo de la presente solicitud ya que una persona medianamente versada en el arte técnico correspondiente está en capacidad de derivar del estado de la técnica la composición acuosa que se reclama.

La reivindicación 1 reclama la mera combinación de estos tres elementos sin que sus proporciones sean específicas ni especiales, en consecuencia D1 anticipa dicha composición suavizante. Ahora bien, en cuanto a las proporciones definidas en las cláusulas dependientes 2 a 6, también están afectadas por el nivel inventivo ya que en algunos casos, las posibilidades pueden llegar a ser las mismas y en otros están muy próximos y resultaría más que obvio para la persona del oficio llegar a ellas por la realización de ensayos sistemáticos hasta encontrar la cantidad efectiva.

En cuanto a la macroemulsión solicitada en la reivindicación 11, se considera que también estaría afectada por la anterioridad D1 ya que claramente se publicó que esta se formaba por la simple dilución en agua de la composición en microemulsión.

D2 nuevamente divulga la combinación simple de los tres componentes constituyentes de la composición que se reclama y además las proporciones también resultan estar solapadas en algunas posibilidades y en las otras son tan próximas que se consideran derivables del estado de la técnica y del conocimiento de conjunto de la persona del oficio.

D2 además, anticipa el método de preparación de la cláusula 10 donde el suavizante catiónico se mezcla con el aceite y el solvente y por agitación o calentamiento se forma la micro-emulsión. De otro lado, conviene advertir que tal como se reivindica corresponde a un proceso normalmente conocido por la persona de nivel medio para la preparación de microemulsiones ya que no contiene características especiales que lo distinga de los convencionalmente divulgados por los textos básicos de formulación.

A la luz de las anterioridades D1, D2 y D3 se considera que la microemulsión y la macroemulsión reivindicadas en las cláusulas 1 a 6 y 10 a 11 resultan derivables para la persona del oficio con el fin de obtener productos acondicionadores de telas en donde las proporciones se pueden encontrar a través de ensayos sistemáticos

convencionales que no suponen un salto cualitativo en la formulación de la regla técnica y por tanto no tendrían nivel inventivo.

Respecto al proceso de las reivindicaciones 7 a 9, este método tal como está reivindicado no define ninguna condición o etapa característica diferente a la forma comúnmente utilizada para acondicional telas para que el producto ejerza su acción, ya que, es obvio que si se quieren suavizar, lo más lógico es que se aplique un producto que tenga propiedades acondicionadoras. ; se considera que tal como se reivindica no se indican condiciones especiales de aplicación de la composición que lo diferencien de los demás métodos convencionales de aplicación. Por lo anterior, carecería de nivel inventivo.

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta días contados a partir de la fecha de la notificación de la presente comunicación. **En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente**.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2,literal e), del capítulo quinto del título primero de la circular única No. 10 de 2001.

ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones.

El anterior requerimiento fue notificado por fijación en lista, de fecha 20 ABR 2006

CONCEPTO TÉCNICO N° 536 (2006-03-30)	EXAMINADOR TÉCNICO CÓDIGO 202001	EXAMINADOR JURÍDICO CÓDIGO