Description

This invention relates to compositions for reducing adverse reactions of the skin to chemicals and compositions that contact the skin, e.g., topical cosmetic and pharmaceutical compositions, and for reducing such adverse reactions caused by certain kinds of physical contact.

Exposure of human skin to chemicals contained in topical cosmetic and pharmaceutical compositions can result in adverse reactions to the skin, including irritation response and contact sensitization of the skin. As used herein, the term cosmetic and pharmaceutical compositions is used in the widest sense of the term, and encompasses any composition that is applied to the skin for a beneficial effect. As used herein, contact sensitization of the skin refers to adverse systemic immunological reactions of the skin, e.g., itching, burning, swelling or redness. Irritation response of the skin involves similar symptoms in which the systemic immune system plays no role.

A small, but significant segment of the population is particularly prone to such irritation response and contact sensitization. As a consequence, the use of a wide variety of topical preparations for the skin by this segment of the population is, at best, an unpleasant task. For example, compositions containing paramino benzoic acid (e.g., sunscreens) or Balsam of Peru are known to cause contact sensitization, and certain chemicals, e.g., vasodilators and surfactants are known to cause irritation response when used by certain persons.

In addition, certain types of physical contact with human skin can cause irritation response of the skin. For example, the removal of hair from human skin by waxing methods is known to cause irritation to most, if not all, persons who have waxing treatments. Hereinafter, the types of physical contact that cause irritation response of human skin are referred to as "contact physical irritants."

EP-A-0 342 100 describes certain cosmetic or dermatological compositions containing Cola extracts in free or liposomal form which may be used to obtain a slimming or anticellulitic effect. The extracts of Cola grains are characterized in that they are noticeably free from methylxanthines or are lamellar lipidic hydrated phases or liposomes containing total or partial extracts of Cola grains.

GB-A-2 092 445 describes a composition having a slimming and anti-cellulitic action when applied to the skin which comprises at least one extract of a plant containing saponins, an extract *Arnica montana L.* and a Cola nut extract.

FR-A-2 609 395 describes the utilization of xanthic bases as an active ingredient of a dermatological or cosmetic composition which has a local slimming activity. The xanthic base may be obtained by extraction from plants which contain a xanthic base, such as, among others, Cola nitida.

An object of this invention is to provide a composition and method for reducing the irritation response and contact sensitization of human skin to chemicals and compositions that contact the skin, e.g., topical cosmetic and pharmaceutical preparations.

Another object of this invention is to provide a composition and method for reducing the irritation response of human skin to contact physical irritants.

We have discovered that compositions containing a hydroalcoholic extract of Cola nitida in a carrier are useful for reducing adverse reactions of the skin to chemical irritants and to contact physical irritants. Preferably, the composition of the invention comprises at least 5% by weight of the hydroalcoholic extract of Cola nitida.

As used herein, the term "carrier" shall include materials that are suitable for use in contact with the skin and which, when combined with the Cola nitida extract in the composition of the invention, take a form that is suitable for application to the skin, e.g., the form of a liquid, gel, ointment, cream, lotion or the like.

The compositions of the invention may be applied in effective amounts to the skin in any suitable manner at about the time the skin is exposed to a chemical irritant or a contact physical irritant. Preferably, they are applied to the skin in an effective amount shortly before (e.g., less than about half an hour before, preferably less than about 15 minutes before) the skin is exposed to a chemical or contact physical irritant. It is within the scope of the invention, however, to apply the composition of the invention simultaneously with (e.g., as part of a composition containing a chemical irritant) or shortly after (e.g., less than about half an hour after, preferably less than about 15 minutes after) the skin is exposed to a chemical or contact physical irritant.

In use, the composition of the invention prevents the induction of any noticeable adverse systemic immunological reaction of the skin (i.e., it prevents the induction of contact sensitization) in some cases and reduces the extent of contact sensitization in other cases. Similarly, in use the composition of the invention prevents the onset of an irritation response to the skin in some cases and reduces the extent of irritation response to the skin in other cases.

Cola nitida (also known as Cola nitida semen) is a plant that includes Cola nuts. Extracts useful in the composition of the invention may be obtained by crushing the Cola nuts and then extracting the crushed nuts with a hydroalcoholic solution (e.g., a 50% aqueous solution of ethyl alcohol at 25°C). After filtering, the extract is preferably concentrated by drying (e.g., spray drying) to obtain either a solid or liquid extract (depending on the extent of drying). Suitable Cola nitida extracts may be obtained from Indena S.P.A., Gruppo Inverni Della Beffa, Milan, Italy.

Suitable hydroalcoholic extracts of Cola nitida for use in this invention include hydroalcoholic extracts of Cola nitida that have been treated (either before or after they are concentrated by drying) to alter the color of the extract (e.g., to lighten its color) and/or to diminish its odor. Such treatment can be accomplished, for example, by chromatographic techniques.

In one embodiment of this invention, the composition of the invention comprises at least 5% by weight of Cola nitida extract in a suitable carrier. In other embodiments, the composition comprises 10-15% by weight of the Cola nitida extract.

Upon application to the skin, the composition of the invention is effective in reducing adverse reactions of the skin to a number of chemical irritants. For example, when a composition containing 10% by weight of Cola nitida extract was applied by a panel of persons (who were chosen to be on the panel because of their sensitivity to a variety of irritant compounds) just before the persons applied to their skin a known irritant (Balsam of Peru), the overall irritation response of the panel to the irritant was significantly reduced. In addition, panelists who were known to exhibit an irritation response to paramino benzoic acid containing sunscreens applied a composition containing 10% by weight of Cola nitida extract composition prior to applying such a sunscreen with the following results: 86% of the panelists demonstrated a noticeable improvement in resistance to sunscreen irritation (slightly more than half of which demonstrated a highly significant improvement), 10% of the panelists had no change in response to sunscreen irritation and 3% (one person) had a decrease in resistance to sunscreen irritation.

Preferably, the compositions of the invention are applied to the skin shortly before (about 30 minutes or less, preferably about 15 minutes or less) a cosmetic or pharmaceutical composition containing a chemical irritant is applied to the skin.

The composition of the invention may also be applied shortly after (less than about 30 minutes after, preferably less than about 15 minutes after) a cosmetic or pharmaceutical composition containing a chemical irritant is applied to the skin. In addition, the Cola nitida extract may be included in effective amounts in compositions containing chemical irritants, thereby permitting the simultaneous application of the Cola nitida extract and the irritant to the skin.

The composition of the invention may also be applied to the skin shortly before (about 30 minutes or less, preferably about 15 minutes or less) the skin is waxed for the purpose of removing hair therefrom. We have found that the use of our composition in such a manner reduces the irritation resulting from removing hair by such waxing techniques. The composition of the invention may also be applied shortly after (less than about 30 minutes after, preferably less than about 15 minutes after) the skin is waxed for the purpose of removing hair therefrom. We believe also that the composition of the invention would be useful to reduce the irritation response of the skin to other contact physical irritants such as, for example, harsh environmental conditions and abrasive clothing.

A wide variety of materials may be used as carriers in the composition of the invention. Examples of such carriers include hydroalcoholic solutions and water and oil emulsions. In addition, the compositions of the invention may include other active ingredients for the skin as well as one or more fragrances, preservatives, emulsifiers, and other materials of the type that are conventionally included in cosmetic and pharmaceutical compositions. Among the wide range of active ingredients that may be included in the composition of the invention, but which do not comprise part of the invention, are vitamins, sunscreens, antioxidants, free radical scavengers, lipids, glycolipids, and other materials that have desirable cosmetic or pharmaceutical effects on the skin.

The following non-limiting Example illustrates a composition of the present invention.

EXAMPLE

A formulation comprising an oil in water emulsion was prepared by combining the following ingredients in the sequence and manner described below:

Example 1

Sequence 1	
Ingredient	Parts By Weight
Hetester PCA (an oil)	10.00
Hetester PHA (an oil)	5.00
Parabens (a preservative)	0.15
Glyceryl mono stearate (a wax)	1.30
MYRJ 52 (an emulsifier)	1.20
Emerest 2486 (an oil)	1.00

Sequence 2	
Ingredient	Parts By Weight
Cola nitida Powder	10.00
Deionized Water	38.15
Butylene Glycol (a solubilizer)	6.00
Emeressence 1160 (a preservative)	.05
Parabens (a preservative)	.35
Sequestrene (a chelating agent)	.10

Sequence 3	
Ingredient	Parts By Weight
Carbopol 934 (2% aqueous solution) (a thickener)	20.00

Sequence 4	
Ingredient	Parts By Weight
Deionized Water	3.00
TEA 99% (a neutralizer)	0.40

Sequence 5	
Ingredient	Parts By Weight
Deionized Water	3.00
Germall 115 (a preservative)	0.3

The above ingredients were combined by the following procedure:

(1) the Sequence 1 ingredients were combined and heated to 78°C, with mixing;

(2) the Sequence 2 ingredients were combined and heated to 78°C, with mixing, until the Parabens dissolve;

(3) the Sequence 3 ingredient was added to the Sequence 2 ingredients, with mixing;

(4) the Sequence 1 ingredients were added to the Sequence 2/3 ingredients, with mixing;

(5) the mixture of the Sequence 1-3 ingredients was cooled to 45°C;

(6) the Sequence 4 ingredients were added to the cooled mixture of Sequence 1-3 ingredients, with mixing;

(7) the resulting mixture of Sequence 1-4 ingredients was cooled to 38 °C;
(8) the Sequence 5 ingredients were added to the cooled mixture of Sequence 1-4 ingredients, with mixing; and
(9) the mixture of Sequence 1-5 ingredients was cooled to 25 °C.

Claims

Claims for the following Contracting States : AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

1. A composition for reducing the adverse reaction of skin to chemicals and to contact physical irritants comprising at least about 5% by weight of a hydroalcoholic extract of Cola nitida and a carrier.

2. The composition of claim 1 wherein the extract of Cola nitida comprises about 10-15% by weight of the composition.

3. Use of a hydroalcoholic extract of Cola nitida in a carrier for the preparation of a composition for reducing the adverse reaction of skin to chemicals contained in topical cosmetic and pharmaceutical preparations and to contact physical irritants.

4. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before a composition containing paramino benzoic acid or Balsam of Peru is applied to the skin.

5. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before that skin is waxed for the purpose of removing hair therefrom.

6. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin as described in claim 1.

7. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin, wherein the extract of Cola nitida comprises about 10-15% by weight of the total composition.

Claims for the following Contracting States : ES, GR

1. A composition comprising at least about 5% by weight of a hydroalcoholic extract of Cola nitida and a carrier.

2. The composition of claim 1 wherein the extract of Cola nitida comprises about 10-15% by weight of the composition.

3. A method for the preparation of a composition for reducing the adverse reaction of skin to chemicals contained in topical cosmetic and pharmaceutical preparations and to contact physical irritants comprising combining a hydroalcoholic extract of Cola nitida with a carrier.

4. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before a composition containing paramino benzoic acid or Balsam of Peru is applied to the skin.

5. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before that skin is waxed for the purpose of removing hair therefrom.

6. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin as described in claim 1.

7. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin, wherein the extract of Cola nitida comprises about 10-15% by weight of the total

(7) the resulting mixture of Sequence 1-4 ingredients was cooled to 38 • C;
(8) the Sequence 5 ingredients were added to the cooled mixture of Sequence 1-4 ingredients, with mixing; and
(9) the mixture of Sequence 1-5 ingredients was cooled to 25 • C.

Claims

Claims for the following Contracting States : AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

1. A composition for reducing the adverse reaction of skin to chemicals and to contact physical irritants comprising at least about 5% by weight of a hydroalcoholic extract of Cola nitida and a carrier.

2. The composition of claim 1 wherein the extract of Cola nitida comprises about 10-15% by weight of the composition.

3. Use of a hydroalcoholic extract of Cola nitida in a carrier for the preparation of a composition for reducing the adverse reaction of skin to chemicals contained in topical cosmetic and pharmaceutical preparations and to contact physical irritants.

4. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before a composition containing paramino benzoic acid or Balsam of Peru is applied to the skin.

5. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before that skin is waxed for the purpose of removing hair therefrom.

6. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin as described in claim 1.

7. Use of the extract as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin, wherein the extract of Cola nitida comprises about 10-15% by weight of the total composition.

Claims for the following Contracting States : ES, GR

1. A composition comprising at least about 5% by weight of a hydroalcoholic extract of Cola nitida and a carrier.

2. The composition of claim 1 wherein the extract of Cola nitida comprises about 10-15% by weight of the composition.

3. A method for the preparation of a composition for reducing the adverse reaction of skin to chemicals contained in topical cosmetic and pharmaceutical preparations and to contact physical irritants comprising combining a hydroalcoholic extract of Cola nitida with a carrier.

4. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before a composition containing paramino benzoic acid or Balsam of Peru is applied to the skin.

5. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin to be applied to the skin shortly before that skin is waxed for the purpose of removing hair therefrom.

6. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin as described in claim 1.

7. The method as described in claim 3 for the preparation of a composition for reducing the adverse reaction of skin, wherein the extract of Cola nitida comprises about 10-15% by weight of the total

composition.

Patentansprüche

Patentansprüche für folgende Vertragsstaaten : AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

1. Mittel zur Reduzierung der nachteiligen Reaktion der Haut auf Chemikalien und auf durch physikalischen Kontakt hervorgerufene Reizungen, umfassend mindestens etwa 5 Gew.-% eines hydroalkoholischen Cola nitida-Extraktes und einen Träger.

2. Mittel nach Anspruch 1, wobei der Cola nitida-Extrakt etwa 10 bis 15 Gew.-% des Mittels umfaßt.

3. Verwendung eines hydroalkoholischen Cola nitida-Extraktes in einem Träger für die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut auf Chemikalien, die in topischen kosmetischen und pharmazeutischen Präparaten enthalten sind, und auf durch physikalischen Kontakt hervorgerufene Reizungen.

4. Verwendung des Extraktes nach Anspruch 3 für die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, das auf die Haut aufgetragen werden soll, kurz bevor ein Paraminobenzoesäure oder Perubalsam enthaltendes Mittel auf die Haut aufgebracht wird.

5. Verwendung des Extraktes nach Anspruch 3 für die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, das auf die Haut aufgetragen werden soll, kurz bevor auf die Haut zum Zwecke der Haarentfernung Wachs aufgebracht wird.

6. Verwendung des Extraktes nach Anspruch 3 für die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut gemäß der Beschreibung in Anspruch 1.

7. Verwendung des Extraktes nach Anspruch 3 für die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, wobei der Cola nitida-Extrakt etwa 10 bis 15 Gew.-% des gesamten Mittels umfaßt.

Patentansprüche für folgende Vertragsstaaten : GR, ES

1. Mittel, umfassend mindestens etwa 5 Gew.-% eines hydroalkoholischen Cola nitida-Extraktes und einen Träger.

2. Mittel nach Anspruch 1, wobei der Cola nitida-Extrakt etwa 10 bis 15 Gew.-% des Mittels umfaßt.

3. Verfahren zur die Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut auf Chemikalien, die in topischen kosmetischen und pharmazeutischen Präparaten enthalten sind, und auf durch physikalischen Kontakt hervorgerufene Reizungen, umfassend die Kombination eines hydroalkoholischen Cola nitida-Extraktes in einem Träger.

4. Verfahren nach Anspruch 3 zur Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, das auf die Haut aufgetragen werden soll, kurz bevor ein Paraminobenzoesäure oder Perubalsam enthaltendes Mittel auf die Haut aufgebracht wird.

5. Verfahren nach Anspruch 3 zur Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, das auf die Haut aufgetragen werden soll, kurz bevor auf die Haut zum Zwecke der Haarentfernung Wachs aufgebracht wird.

6. Verfahren nach Anspruch 3 zur Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut gemäß der Beschreibung in Anspruch 1.

7. Verfahren nach Anspruch 3 zur Herstellung eines Mittels zur Reduzierung der nachteiligen Reaktion der Haut, wobei der Cola nitida-Extrakt etwa 10 bis 15 Gew.-% des gesamten Mittels umfaßt.

* C L M S *

Revendications

Revendications pour les Etats contractants suivants : AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

1. Composition destinée à réduire les réactions indésirables de la peau à des produits chimiques et des irritants physiques de contact, comprenant au moins environ 5 % en poids d'un extrait hydro-alcoolique de Cola nitida et un véhicule.

2. Composition selon la revendication 1, dans laquelle l'extrait de Cola nitida représente environ 10 à 15 % en poids de la composition.

3. Utilisation d'un extrait hydro-alcoolique de Cola nitida dans un véhicule pour la préparation d'une composition destinée à réduire les réactions indésirables de la peau à des produits chimiques contenus dans des préparations cosmétiques et pharmaceutiques topiques et à des irritants physiques de contact.

4. Utilisation de l'extrait selon la revendication 3 pour la préparation d'une composition destinée à réduire les réactions indésirables de la peau, a appliquer sur la peau peu de temps avant l'application sur la peau d'une composition contenant de l'acide para-aminobenzoïque ou du baume du Pérou.

5. Utilisation de l'extrait selon la revendication 3 pour la préparation d'une composition destinée à réduire les réactions indésirables de la peau, à appliquer sur la peau peu de temps avant l'application sur la peau d'une cire en vue de son épilation.

6. Utilisation de l'extrait selon la revendication 3 pour la préparation d'une composition destinée à réduire les réactions indésirables de la peau selon la revendication 1.

7. Utilisation de l'extrait selon la revendication 3 pour la préparation d'une composition destinée à réduire les réactions indésirables de la peau, dans laquelle l'extrait de Cola nitida représente environ 10 à 15 % en poids de la composition totale.

Revendications pour les Etats contractants suivants : ES, GR

1. Composition comprenant au moins 5 % en poids d'un extrait hydro-alcoolique de Cola nitida et un véhicule.

2. Composition selon la revendication 1, dans laquelle l'extrait de Cola nitida représente environ 10 à 15 % en poids de la composition.

3. Procédé de préparation d'une composition destinée à réduire les réactions indésirables de la peau à des produits chimiques contenus dans des préparations cosmétiques et pharmaceutiques topiques et à des irritants physiques de contact, comprenant l'association d'un extrait hydro-alcoolique de Cola nitida à un véhicule.

4. Procédé selon la revendication 3 de préparation d'une composition destinée à réduire les réactions indésirables de la peau, à appliquer sur la peau peu de temps avant l'application sur la peau d'une composition contenant de l'acide para-aminobenzoïque ou du baume du Pérou.

5. Procédé selon la revendication 3 de préparation d'une composition destinée à réduire les réactions indésirables de la peau, à appliquer sur la peau peu de temps avant l'application sur la peau d'une cire en vue de son épilation.

6. Procédé selon la revendication 3 de préparation d'une composition destinée à réduire les réactions indésirables de la peau selon la revendication 1.

7. Procédé selon la revendication 3 de préparation d'une composition destinée à réduire les réactions indésirables de la peau, dans laquelle l'extrait de Cola nitida représente environ 10 à 15 % en poids de la composition totale.