Abstract: The invention relates to a composition comprising, in a physiologically acceptable aqueous i) at least one phosphorylated oligosaccharide and ii) at least onesaccharide polymer other than the phosphorylated oligosaccharides i) chosen from galactomannan gums and scleroglucan gums, and mixtures thereof. Use for caring for and making up keratin materials.
Cosmetic composition comprising a phosphorylated oligosaccharide and a polysaccharide

The present invention relates to compositions, in particular cosmetic and/or dermatological compositions, comprising a phosphorylated oligosaccharide and a particular polysaccharide, and also to the use of these compositions in a process for treating human keratin materials. More particularly, the compositions of the invention are intended for caring for and/or making up keratin materials.

For the purposes of the invention, the term "keratin materials" is intended to denote, for example, the skin, mucous membranes, the lips, the scalp, the eyelashes, the eyebrows and the hair.

Oligosaccharides of low molecular weight which have properties as regards lightening the complexion, for exfoliating the skin (WO 2003/01 3448) or for promoting the cell proliferation of keratinocytes or fibroblasts and for inhibiting the synthesis of certain proteases of elastase type are known (Andres E. et al., Pathol. Biol. (Paris), 2006 Sep; 54(7):420-5; WO 2002/020622). Phosphooligosaccharides such as Pos-Ca would also make it possible to improve the elasticity of skin tissue and to combat the signs of aging of the skin (JP2009/227632).

However, the introduction of phosphorylated oligosaccharides into an aqueous cosmetic formulation may be reflected by an appreciable decrease in the viscosity and/or destabilization of the composition. In particular, phosphorylated oligosaccharides must be fully dissolved and/or dispersed in the composition.

A composition which is too fluid is difficult to apply to keratin materials. Such a composition runs on keratin materials, in particular on the skin, to which it is applied. Its application to the keratin materials that it is desired to treat lacks precision and therefore makes it relatively unattractive to use.

Thus, there is a need for cosmetic compositions comprising a phosphorylated oligosaccharide and having good stability over time, especially after storage for 2 months at room temperature (25°C) or at higher temperature, without substantial fluidization and/or destabilization.
The object of the present invention is, precisely, to satisfy these needs.

More specifically, the present invention relates to a composition comprising, in a physiologically acceptable medium containing an aqueous medium, i) at least one phosphorylated oligosaccharide and ii) at least one saccharide polymer as described below other than the phosphorylated oligosaccharide(s) i).

The composition according to the invention is in particular a cosmetic and/or pharmaceutical composition, in particular a dermatological composition.

Surprisingly, the inventors have observed that the addition of a phosphorylated oligosaccharide to a composition comprising a particular saccharide polymer does not significantly affect the viscosity of said composition and thus enables it to be formulated in a form that is suited to its handling during its application. Moreover, this makes it possible to add the phosphorylated oligosaccharide during the various preparation phases without modifying the viscosity.

Furthermore, compositions comprising a polysaccharide according to the invention and a phosphorylated oligosaccharide are stable and homogeneous.

What is more, this specific combination of phosphorylated oligosaccharide-saccharide polymer also makes it possible to confer, on a composition of the invention, a pleasant appearance and, during the application thereof, comfortable feel properties.

According to yet another of its subjects, the present invention relates to a nontherapeutic treatment process for caring for or making up keratin materials, comprising the application to said keratin materials of a composition in accordance with the invention.

The term "phosphorylated oligosaccharide" means a linear or branched polysaccharide compound consisting of or containing:

a) from 2 to 10 monosaccharide units; and
b) one, two or more than two phosphate groups.

The 2 to 10 monosaccharide units may in particular be pentoses or hexoses. Preferentially, the monosaccharide units are hexoses, and may be selected, independently of each other, from the group consisting of:

- aldohexoses, namely fructose, psicose, sorbose and tagatose;
ketohexoses, namely glucose, galactose, mannose, allose, altrose, gulose, idose and talose; and
deoxymonosaccharides, namely rhamnose, fucose fubulose, pneumose and quinovose.

In particular, the monosaccharide units may all be glucoses.

In the context of the present patent application, the term "phosphorylated oligosaccharides" denotes, without preference, several molecules of the same phosphorylated oligosaccharide or a mixture of several phosphorylated oligosaccharides.

The phosphorylated oligosaccharides may be in the form of a complex with cations, in particular calcium.

The phosphorylated oligosaccharides may more specifically be phosphorylated maltooligosaccharides, i.e. phosphorylated oligosaccharides consisting of 2 (maltose), 3 (maltotriose), 4 (maltotetraose), 5 (maltpentaose), 6 (maltohexaose), 7 (maltoheptaose), 8 (maltooctaose), 9 (maltononaose) or 10 (maltodecaose) glucose units linked together via a-1-4 glycoside bonds. In particular, the phosphorylated oligosaccharides may comprise or consist of a mixture of maltotriose phosphate, maltotetraose phosphate and maltpentaose phosphate.

The phosphorylated maltooligosaccharides preferably bear 1 or 2 phosphate groups and are optionally combined with calcium.

The phosphorylated oligosaccharides may in particular be those sold by the company Ezaki Glico, such as calcium phosphooligosaccharides POs-Ca (INCI name: Calcium Phosphoryl Oligosaccharides) which are a mixture of maltooligosaccharides to which are attached at least 1 or 2 phosphorus groups and calcium ions.

These phosphooligosaccharides (POs) may be obtained by enzymatic hydrolysis of potato starch using a mixture of bacterial liquefying a-amylase (EC 3.2.1.1), glucoamylase (EC 3.2.1.3) and pullulanase (EC 3.2.1.41), the POs being present in the fraction that is not hydrolysable by the enzymes.
These POs comprise or consist of two fractions that may be separated by anion-exchange chromatography:

- a major fraction known as PO-1, which is a mixture consisting of monophosphorylated maltotriose, maltotetraose and maltopentaose (Kamasaka et al., Biosci. Biotech. Biochem., 1997, 61(2), 238-244); and
- a minor fraction known as PO-2, which is a mixture consisting in major amount of phosphorylated maltopentaose and maltohexaose, and in minor amount of phosphorylated maltotriose, maltotetraose, maltoheptaose and maltooctaose, the phosphorylated maltooligosaccharides each having at least two phosphate groups (Kamasaka et al., Biosci. Biotech. Biochem., 1995, 59(8), 1412-1416).

In particular, the fraction PO-1 consists of six monophosphorylated compounds (Kamasaka et al., Biosci. Biotech. Biochem., 1997, 61(2), 238-244):

- 3-phosphoryl oligosaccharides [3\textsuperscript{3}-phosphoryl maltotetraose (maltotetraose bearing a phosphate group on the carbon at C3 of the third glucosyl residue) and 3\textsuperscript{4}-phosphoryl maltopentaose (maltopentaose bearing a phosphate group on the carbon at C3 of the fourth glucosyl residue)]; and
- 6-phosphoryl oligosaccharides [6\textsuperscript{3}-phosphoryl maltotriose (maltotriose bearing a phosphate group on the carbon at C6 of the third glucosyl residue), 6\textsuperscript{2}-phosphoryl maltotriose (maltotriose bearing a phosphate group on the carbon at C2 of the second glucosyl residue), 6\textsuperscript{3}-phosphoryl maltotetraose (maltotetraose bearing a phosphate group on the carbon at C6 of the third glucosyl residue) and 6\textsuperscript{4}-phosphoryl maltopentaose (maltopentaose bearing a phosphate group on the carbon at C6 of the fourth glucosyl residue)].

The mean degree of polymerization of the two dephosphorylated fractions PO-1 and PO-2 is 4.02 and 5.82, respectively.

The two fractions PO-1 and PO-2 may form a complex with calcium ions (calcium phosphooligosaccharides or POs-Ca). This complex contains about 5% calcium, by weight of calcium relative to the total weight of the POs-Ca.
In particular, the POs may be obtained by hydrolysis of potato starch, according to the process described by Kamasaka et al., Biosci. Biotech. Biochem., 1995, 59(8), 1412-1416. According to this process, 1 g of potato starch is suspended in 100 ml of a solution containing 6 mM NaCl, 2 mM CaCl₂ and 3.0 U/ml of BLA (bacterial liquefying α-t-amylase). After having gradually heated the suspension to 100°C to liquefy it, the solution is cooled and incubated at 50°C for 1 hour. 1 ml of glucoamylase at 600 U/ml, 1 ml of pullulanase at 200 U/ml and 1 ml of BLA at 300 U/ml are then added, and the reaction mixture is incubated at 40°C for 2 hours.

The amylolytic reaction progress may be monitored by the starch-iodine complex method and/or by the glucose oxidase method (see Barham and Trinder, Analyst, 1972, 97, 142-146). Since the action of the amylolytic enzymes is blocked by the phosphate groups linked to the glucose residues, the phosphorylated oligosaccharides are present in the indigestible fraction of this enzymatic treatment.

Once the enzymatic reaction is complete (which may be determined by a negative starch-iodine staining reaction), the solution is heated in a boiling water bath for 10 minutes and then applied onto a column of anion-exchange resin (for example Chitopearl BCW-2501; 10 x 2 cm or an equivalent column) which has been equilibrated with 20 mM acetate buffer (pH 4.5). The neutral saccharides are washed from the column with the buffer and the phosphorylated oligosaccharides are then eluted with the same 20 mM acetate buffer (pH 4.5) also containing 0.5 M NaCl.

The eluted phosphorylated oligosaccharides may be desalted, for example by precipitation with ethanol (at a concentration of 70% v/v) followed by washing with 70% ethanol before dissolution in deionized water, or by passing through a cation-exchange column (for example Dowex 50WX4, 20-50 mesh or an equivalent column).

The phosphorylated oligosaccharides complexed with calcium (POs-Ca) may be prepared by neutralizing the desalted solution of phosphooligosaccharides with Ca(OH)₂ to pH 6.5. The calcium content is then 5 g of calcium per 100 g of total weight.
The phosphorylated oligosaccharide(s) may be present in the composition according to the invention in a content ranging from 0.01% to 10% by weight and preferably from 0.1% to 5% by weight relative to the total weight of the composition.

The composition according to the invention comprises at least one saccharide polymer other than the phosphorylated oligosaccharides (i) chosen from galactomannan gums and scleroglucan gums, and mixtures thereof.

The galactomannan gums that may be used according to the invention are more particularly modified galactomannan gums.

The galactomannan gums are especially guar gums and more particularly modified guar gums.

For the purposes of the present patent application, the term "modified galactomannan gum" means galactomannan gums alkylated with at least one C1-8 alkyl group, galactomannan gums hydroxyalkylated with at least one C1-s hydroxyalkyl group or galactomannan gums acylated with at least one C1-s acyl group.

Preferably, it will be a hydroxyalkyl guar gum, in particular of C1-C6 and more particularly hydroxypropylated, especially such as the product sold under the name Jaguar HP 105 by the company Rhodia.

The scleroglucans used in accordance with the invention are nonionic polysaccharides preferably corresponding to formula (I):
in which the degree of polymerization n ranges from 500 to 1600.

According to the invention, sderoglucans of microbial origin are advantageously used, obtained, for example, by aerobic fermentation of a glucose medium with a fungus of the Sclerotium type and having the structure of a D-glucopyranose homopolymer.

Examples of scleroglucan gums that may be used in the present invention are, in a nonlimiting manner, the products sold under the name Actigum CS, in particular Actigum CS 11, by the company Sanofi Bio Industries and under the names Amigum and Amigel by the company Alban Muller International.

The saccharide polymer described previously may be present in the composition according to the invention in a content ranging from 0.05% to 10% by weight, preferably ranging from 0.1% to 5% by weight and preferentially ranging from 0.5% to 3% by weight, relative to the total weight of the composition.

Advantageously, the phosphorylated oligosaccharide(s) and the saccharide polymer described previously may be present in the composition according to the invention in a compound (i)/saccharide polymer according to the invention weight ratio ranging from 0.1 to 10 and preferably ranging from 0.5 to 5.

PROTOCOL FOR MEASURING THE VISCOSITY
The viscosity of a composition of the invention may be measured via any method known to those skilled in the art, and especially according to the following conventional method. Thus, the measurement may be carried out at 25°C using a Contraves TV or Rheomat 180 viscometer equipped with a spindle rotating at 200 rpm. Those skilled in the art may select the spindle for measuring the viscosity from the spindles M1, M2, M3 and M4 on the basis of their general knowledge, so as to be able to perform the measurement.

The composition according to the invention comprises a physiologically acceptable aqueous medium.

The term "physiologically acceptable medium" is intended to denote a medium that is compatible with human keratin materials and/or fibers, for instance, in a nonlimiting manner, the skin, mucous membranes, the nails, the scalp and/or the hair.

This physiologically acceptable aqueous medium comprises an aqueous phase, optionally as a mixture, or not, with one or more organic solvents, such as a \textbf{Ci-Cs} alcohol, in particular ethanol, isopropanol, tert-butanol, \textit{n}-butanol, polyols such as glycerol, propylene glycol, butylene glycol, and polyol ethers.

A composition according to the invention may also comprise a fatty phase, which may comprise oils, gums and waxes normally used in the field of application under consideration.

Thus, according to one embodiment, a composition according to the invention may also comprise at least one fatty phase chosen from a fatty phase which is solid at room temperature (20-25°C) and atmospheric pressure and/or a fatty phase which is liquid at room temperature (20-25°C) and atmospheric pressure.

A liquid fatty phase suitable for implementing the invention may comprise a volatile oil, a nonvolatile oil, and a mixture thereof. A volatile or nonvolatile oil may be a hydrocarbon-based oil, in particular of animal or plant origin, a synthetic oil, a silicone oil, a fluoro oil or a mixture thereof.

A solid fatty phase suitable for implementing the invention may be chosen, for example, from pasty fatty substances and gums, and mixtures thereof.
As oils or waxes that may be used in the invention, mention may be made of
mineral oils (liquid petroleum jelly), plant oils (liquid fraction of shea butter,
sunflower oil), animal oils (perhydrosqualene), synthetic oils (purcellin oil),
silicone oils or waxes (cyclomethicone) and fluoro oils (perfluoropolyethers),
beeswax, carnauba wax or paraffin wax. Fatty alcohols and fatty acids (stearic
acid) may be added to these oils.

When a composition is an emulsion, the proportion of the fatty phase may range
from 5% to 80% by weight and preferably from 5% to 50% by weight relative to
the total weight of the composition. The oils, waxes, emulsifiers and co-
emulsifiers used in the composition in emulsion form are chosen from those
conventionally used in the cosmetics field.

An emulsifier and a coemulsifier may be present in a composition of the
invention in a proportion ranging from 0.3% to 30% by weight and in particular
from 0.5% to 20% by weight relative to the total weight of the composition.

An emulsion according to the invention may also contain lipid vesicles.

When a composition according to the invention is an oily solution or gel, the
fatty phase may represent more than 90% of the total weight of the composition.

A composition according to the invention may also contain adjuvants that are
common in the field under consideration, such as surfactants, emulsifiers,
hydrophilic or lipophilic gelling agents, hydrophilic or lipophilic additives,
preserving agents, antioxidants, solvents, fragrances, fillers, UVA and/or UVB
screening agents (organic or mineral, soluble or insoluble), pigments, fibers,
chelating agents, odor absorbers, dyestuffs and other cosmetic or
pharmaceutical active agents.

The amounts of these various adjuvants are those conventionally used in the
cosmetics field, and may range, for example, from 0.01% to 30% of the total
weight of the composition. In general, the amounts are adjusted as a function of
the formulation prepared. Depending on their nature, these adjuvants may be
introduced into the fatty phase, into the aqueous phase and/or into lipid
spherules.
As hydrophilic gelling agents that may be used in the invention, mention may be made of carboxyvinyl polymers (carbomer), acrylic copolymers such as acrylate/alkylacrylate copolymers, polyacrylamides, natural gums and clays, and, as lipophilic gelling agents, mention may be made of modified clays such as bentones, metal salts of fatty acids, for instance aluminum stearates, and hydrophobic silica.

A composition of the invention may be provided in any galenical form that may be envisioned.

In particular, a composition according to the invention may have the form of an aqueous or aqueous/alcoholic solution; a dispersion; a water-in-oil, oil-in-water or multiple emulsion; a suspension; microcapsules or microparticles; vesicular dispersions of ionic and/or nonionic type; or an aerosol composition also comprising a pressurized propellant. Preferentially, the composition according to the invention may be an oil-in-water emulsion.

A composition according to the invention may be provided in the form of a haircare composition, in particular a shampoo, a hair-setting lotion, a treating lotion, a styling cream or gel, a dye composition, in particular an oxidation dye composition, hair-restructuring lotions, a perming composition (in particular a composition for the first step of a perming), a lotion or a gel for combating hair loss, or an antiparasitic shampoo.

It can also be provided in the form of a cleansing, protecting, treating or caring composition for the face, for the hands, for the feet, for the major anatomical folds or for the body (for example, day cream, night cream, makeup-removing cream, antisun composition, protective or care body milk, after-sun milk, lotion, gel or foam for caring for the skin, such as cleansing lotions, or artificial tanning compositions); a composition for making up the body or face, such as a foundation; a bath composition; a deodorizing composition comprising, for example, a bactericidal agent; an after-shave composition; a depilatory composition; a composition for countering insect stings or bites; a pain-relieving composition; or a dermatological or pharmaceutical composition for treating certain skin diseases, such as eczema, rosacea, psoriasis, lichen or severe pruritus.
When a composition according to the invention is intended for a use of peeling type, it can also be provided in all the formulation forms mentioned above, provided that it is easily removed by rinsing, in particular in the form of an aqueous gel or an aqueous or aqueous/alcoholic solution.

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A composition according to the invention can be applied by any means which makes possible uniform distribution and in particular using a cotton wool swab, a rod, a brush, a gauze, a spatula or a pad, or else by spraying, and can be removed by rinsing with water or using a mild detergent.

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A composition according to the invention can be provided in a fluid form of vaporizable or nonvaporizable liquid type, in the form of a paste, of a direct or inverse emulsion, or of an impregnated support or gel.

15 In particular, a composition according to the invention may be in a solid form, in particular a compact, pulverulent or cast solid form, or in a stick form.

A composition according to the invention may also be in the form of a care product, an antisun or after-sun product, a daily photoprotective care product, a body product, a foundation to be applied to the face or the neck, a corrector, a complexion corrector, a tinted cream or a makeup base for making up the face, or a body makeup composition.

A composition according to the invention may be used for the purposes of improving the general condition of the epidermis, in particular of the skin, and especially for maintaining or restoring its physiological functions and/or its esthetic appearance.

Thus, a composition according to the invention can advantageously be employed in order to combat aging of the epidermis, to maintain and/or stimulate the moisturizing and/or to combat the drying out of the skin, to improve the tonicity of the skin, to maintain or restore the suppleness and elasticity of the skin, to improve the mineralization of the epidermis, to improve the vitality of the epidermis, to facilitate intercellular exchanges, and to combat chapping and the cracked appearance of the skin.
A composition according to the invention may be intended for a cosmetic and/or dermatological application.

Other characteristics and advantages of the invention will emerge more clearly from the examples that follow, which are given as nonlimiting illustrations. In the text hereinbelow or hereinabove, the proportions are given as weight percentages, unless otherwise indicated.

**Comparative Examples 1 to 3:**

An aqueous gel was prepared with three different thickening polymers (two polysaccharide polymers according to the invention and one polymer outside the invention), and, for each of the polymers, the gel was prepared with or without the phosphorylated oligosaccharide.

The viscosity of the aqueous gels obtained was then measured after 24 hours of storage at room temperature (viscosity measured at 25°C using a Contraves TV viscometer with an M3 spindle after 10 minutes of rotation at 200 revolutions/minute).

<table>
<thead>
<tr>
<th></th>
<th>Example 1A (outside the invention)</th>
<th>Example 1B (invention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium phosphorylated</td>
<td>0</td>
<td>2% AM</td>
</tr>
<tr>
<td>oligosaccharides (POs-Ca from Ezaki Glico)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scleroglucan gum (Amigel)</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Water</td>
<td>qs 100%</td>
<td>qs 100%</td>
</tr>
<tr>
<td>Viscosity (DU)</td>
<td>10</td>
<td>10.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Example 2A (outside the invention)</th>
<th>Example 2B (invention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium phosphorylated</td>
<td>0</td>
<td>2% AM</td>
</tr>
<tr>
<td>oligosaccharides (POs-Ca from Ezaki Glico)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydroxypropyl guar (Jaguar HP 105 from Rhodia)</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Water</td>
<td>qs 100%</td>
<td>qs 100%</td>
</tr>
<tr>
<td>Viscosity (DU)</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

| Calcium phosphorylated oligosaccharides (POs-Ca from Ezaki Glico) | Example 3A (outside the invention) | Example 3B (outside the invention) |
| Acrylates/C10-30 alkyl acrylate crosspolymer (Carbopol Ultrez 20 from Noveon) | 1% | 1% |
| Water | qs 100% | qs 100% |
| Viscosity (DU) | 60 | <9 |

These tests show that only the gels comprising the polysaccharides according to the invention in the presence of calcium phosphorylated oligosaccharides do not show any loss of viscosity, which makes it possible more easily to prepare the compositions comprising phosphorylated oligosaccharides.

**Example 4:**

A facial care cream having the following composition was prepared:

| Calcium phosphorylated oligosaccharides (POs-Ca from Ezaki Glico) | 2 |
| Scleroglucan gum | 0.3 |
Composition 4 obtained is stable and has the appearance of a thick cream, which is fondant when applied to the skin.

The composition applied to the face makes it possible to revive the radiance of the complexion.

**Example 5:**

An aqueous gel was prepared with two different thickening polymers (a polysaccharide polymer according to the invention and a polymer outside the invention).

The viscosity of the aqueous gels obtained was then measured after 24 hours of storage at room temperature (viscosity measured at 25°C using a Contraves TV viscometer with an M3 spindle after 10 minutes of rotation at 200 revolutions/minute).

<table>
<thead>
<tr>
<th></th>
<th>Example 5A</th>
<th>Example 5B (invention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium phosphorylated oligosaccharides (POs-Ca from Ezaki Glico)</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Scleroglucan gum</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Crosslinked acrylic acid homopolymer (Carbopol 981 from Noveon)</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>qs 100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>qs 100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonhomogeneous presence of lumps</td>
<td>Homogeneous</td>
</tr>
<tr>
<td>Viscosity (in deviation units)</td>
<td>9</td>
<td>10.5</td>
</tr>
</tbody>
</table>
CLAIMS

1. A composition comprising, in a physiologically acceptable aqueous medium, i) at least one phosphorylated oligosaccharide and ii) at least one saccharide polymer other than the phosphorylated oligosaccharides i) chosen from galactomannan gums and scleroglucan gums, and mixtures thereof.

2. The composition as claimed in claim 1, in which the phosphorylated oligosaccharides consist of 2 to 10 monosaccharide units and of one, two or more than two phosphate groups.

3. The composition as claimed in either of claims 1 and 2, in which the phosphorylated oligosaccharides, independently of each other, comprise monosaccharide units selected from fructose, psicose, sorbose, tagatose, glucose, galactose, mannose, allose, altrose, gulose, idose, talose, rhamnose, fucose, fubulose, pneumose and quinovose.

4. The composition as claimed in any one of claims 1 to 3, in which the phosphorylated oligosaccharides are phosphorylated maltooligosaccharides bearing 1 or 2 phosphate groups.

5. The composition as claimed in any one of claims 1 to 4, in which the phosphorylated oligosaccharides may be obtained by enzymatic hydrolysis of potato starch using a mixture of bacterial liquefying a-amylase, glucoamylase and pullulanase.

6. The composition as claimed in any one of claims 1 to 5, in which the phosphorylated oligosaccharides comprise monophosphorylated maltotrioses, maltotetraoses and maltopentaoses, and maltotrioses, maltotetraoses, maltopentaoses, maltohexaoses, maltoheptaoses and maltooctaoses each containing at least two phosphate groups.

7. The composition as claimed in any one of claims 1 to 6, in which the phosphorylated oligosaccharides are in the form of complexes with calcium ions.
8. The composition as claimed in any one of the preceding claims, characterized in that the phosphorylated oligosaccharide(s) are present in a content ranging from 0.01 % to 10% by weight and preferably from 0.1 % to 5% by weight relative to the total weight of the composition.

9. The composition as claimed in any one of the preceding claims, characterized in that the galactomannan gum(s) are chosen from guar gums and in particular hydroxyalkyl guar gums.

10. The composition as claimed in any one of the preceding claims, characterized in that the polysaccharide polymer is present in a content ranging from 0.05% to 10% by weight and preferably ranging from 0.1 % to 5% by weight relative to the total weight of the composition.

11. The composition as claimed in any one of the preceding claims, characterized in that it is in the form of an oil-in-water emulsion.

12. A nontherapeutic process for treating keratin materials, comprising the application to said keratin materials of a cosmetic composition as defined according to any one of the preceding claims.