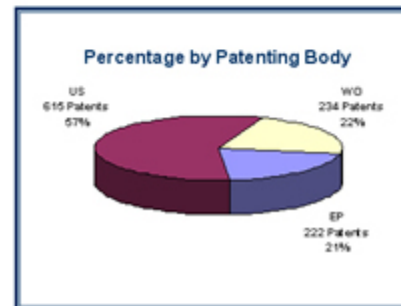
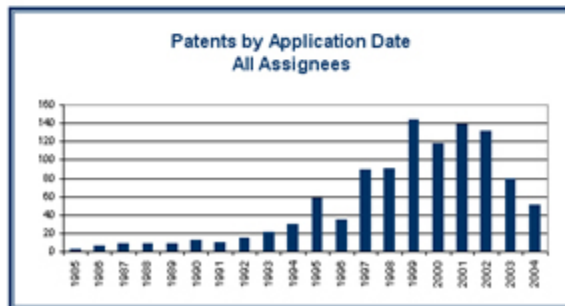
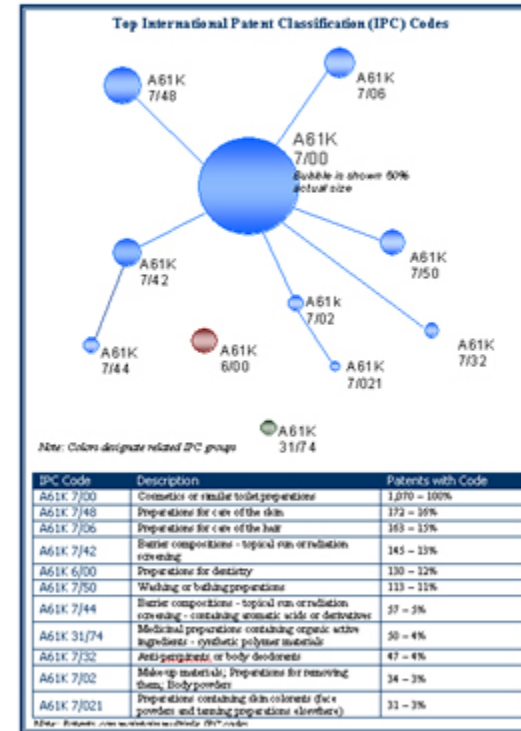


# Skin Care Patents: Cleanse/Exfoliate – 1,071 Patents

Assignee/ Number of Patents	Top Inventors	Recent Patents/Publication Date	Filing Pattern by Year
<b>L'Oréal</b> 214 Patents	<b>Cheon, Dae-Il</b> – 21 of 214 <b>Adair, Irville</b> – 19 of 214 <b>Fischer, Bern</b> – 16 of 214 <b>Ernst, Siep</b> – 14 of 214	<b>40146</b> – US 2004009541A1 <b>Cholestane</b> containing ORW emulsion US448425 Cosmetic or dermatological composition comprising an association between a compound of the <b>10-acylaminamide</b> family and at least one matrix metalloproteinase inhibitor <b>30246</b> – US449597 Cosmetic care or make-up composition for a skin care material comprising at least one photostabilizer agent and at least one ester comprising an aromatic group	
<b>Procter &amp; Gamble</b> 108 Patents	<b>Shiele, Umberto</b> – 16 of 108 <b>Decker, George Hubel</b> – 10 of 108 <b>Steele, Pat William</b> – 9 of 108 <b>Saw, Mac</b> – 9 of 108 <b>Morgan, Jeffrey Michael</b> – 9 of 108	<b>40146</b> – US2004009541A1 Compositions comprising a dispersant and microsphere containing an active material and a stabilizer <b>30246</b> – EP1110650B1 Semi-enclosed hand article with a relatively <b>adjustable</b> sheet material as substance delivery means <b>10346</b> – US2005006041A1 Compositions for wet wipe that enhance the efficacy of cleansing while being gentle to the skin	
<b>Unilever</b> 60 Patents	<b>Arnon, Michael Paul</b> – 9 of 60 <b>Shutler, Craig Stephen</b> – 8 of 60 <b>Tsai, Ling Sheng</b> – 7 of 60	<b>40146</b> – US2004009541A1 Skin radience cosmetic compositions <b>30146</b> – WO0402939A2 Skin care cosmetic compositions and methods for microencapsulation of retinol on contact <b>11354</b> – EP1405553A3 A packaged product containing an extractable multiphase composition of a free fatty acid phase and a soap phase	
<b>Kao</b> 15 Patents	<b>Shindo, Yoko</b> – 3 of 15 <b>Kawada, Masaru</b> – 3 of 15 <b>Kimori, Yutshiro</b> – 3 of 15	<b>40246</b> – US467878 External skin care composition <b>12346</b> – US4839754 <b>Anhydrous</b> lipid dispersion <b>70243</b> – EP0674963B1 Skin cleansing sheet	
<b>Avon</b> 13 Patents	<b>Wells, Armin</b> – 3 of 13	<b>160243</b> – US20030196657A1 Methods using phthal to improve the appearance of skin and compositions for such methods <b>70243</b> – US20030130467A1 Methods for improving the aesthetic appearance of skin <b>40243</b> – US20040114071A1 <b>Resonant</b> analogues	

**Methodology**  
For purposes of this map the following parameters were followed:  

- Only US, WO and EP patents were searched
- Patents were searched by Application Date from 1995 forward
- The numbers for application years 2003 and 2004 cannot be considered complete as many patents applied for in those years have not yet been published
- The search discovered 1,071 patents



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## CSM Nederland B.V.

### Company Highlights:

- CSM is described as "an internationally operating company engaged in the development, production, sale and distribution of food products and ingredients"
- The company consists of five divisions: Bakery Supplies Europe, Bakery Supplies North America, Sugar Confectionary, Sugar and Biochemicals (*See separate document*)
- In the past several years, the company has made several acquisitions in both North America and Europe, including Unilever's European Bakery Supplies Business
- CSM has exhibited substantial financial growth, partially due to their acquisitions, over the past three years, increasing net profits 18.1% in 2001, 20% in 2000 and 13.4% in 1999
- Extra attention is being paid to support for restaurant chains and industrial bakeries
- In the two Bakery Supplies Divisions, special attention will be paid to reinforcing existing activity and to acquisition candidates in the convenience segment, especially for frozen dough and par-baked products

### Research & Development:

- The R&D budget for Bakery Supplies Europe is to be increased
- R&D in the two Bakery Supplies Divisions engage in knowledge sharing leading to joint projects such as longer shelf life
- One R&D focus is on "dry and wet" products
- In late January 2002, CMS initiated a job posting for Director R&D and QA for Bakery Supplies North America. Responsibilities will include:
  - "Initiating, leading and participating in project groups, like icing project, enzyme project, frozen technology, new technologies, new products (parbaked, thaw 'n sell, etc.)"
  - Coordinating inter-company projects
  - Cake mix development experience required

## Acquisition Unilever's European Bakery Supplies Business (EBSB)

- Acquired in 2000 for €700 million
- EBSB has sales of €860 million and profits of €60 million
- Prior to the acquisition of EBSB, CSM's European sales in bakery ingredients were €200 million
- Analysts said that EBSB's strength in bakery products would significantly enhance CSM's bakery ingredients growth profile
- EBSB operations extended over 13 countries and included businesses such as Arkady Craigmillar (*See below*), MeisterMarken-Werke and Unipro
- EBSB products focused on bread and confectionary mixes, margarines and fats and frozen bakery products

## Arkady Craigmillar (AC)

### Company Highlights:

- In 1996 when Arkady and Craigmillar merged, Craigmillar was known for margarines, butter, dairy cream, ice cream, bakery fats and British Arkady led the field in applied technology for fermented goods production – manufacturing bread improvers & conditioners
- The company has sites in Wirral and Manchester in the UK with 450 employees
- In 1998 10 million pounds was spent at the Wirral site, which tripled frozen confectionary production capacity
- The technical development area employs a significant number of Technical Application Managers & Test Bakers
- AC has a joint venture with Pura Foods to distribute Pura's boxed fats and oils within the UK bakery sector. The agreement calls for Pura, who produces pastry and cake margarines as well as shortenings, to manufacture AC's specialist oils and fats
- In January 2002 an agreement was announced with Croda Food Services for the sales & distribution of Croda's tin greasing emulsions and release agents including a vegetable oil based release emulsion for highly automated, high volume production lines of bread products and a release emulsion for difficult release situations

### Products and Claims:

- AC's Filling and Toppings Unit claims "broad sugar and fat based technology"
- Products Lactofil Classic and Lactofil Supreme are described as being reformulated and ideal for whipping, topping or filling. Improved attributes are said to include greater tolerance to bakery conditions, enhanced stability to prevent separation and greater whipped volume yield
- UHT cream alternatives include Elmica and Debonair Light
- For their Fluid Dough Conditioners, AC claims their "fat based infrastructure and powder dough conditioner technology" helps them to make "unbeatable fluid dough conditioners"
- Additionally the company claims their dough conditioners have favorable attributes for crumb structure, extended shelf life, tolerance to variations in flour quality, dough development and handling, and ability to rise in a uniform and acceptable manner. AC has liquid, powder and paste dough conditioners:
  - Liquid for the manufacture of bread and morning goods is touted as water-free, homogenous, oil-based and offers handling, production and end product benefits. AC has pioneered inclusion of full fat enzyme active soy flour in recently launched fluid dough conditioners and claims it gives manufacturers the ability to automatically dose the functional ingredients used in dough conditioners, which until now was a manual process
  - Powder has options for individual formulations including extended shelf life, low fat and organic
  - Fat-based pastes are said to deliver reliable, high quality results giving stability and tolerance during processing. One paste, Pearl is soy free
- AC is also involved in the development of a prototype batch dosing unit that allows for "consistent and accurate dosing... and eliminates the need for messy hand weighing"
- For glazings, fillings & toppings, the company sees the ability to overwrap becoming more important with trends including indulgence products, lowfat and functional foods
- The company has introduced Karp's and Simpson's lines of foods with American taste for the European market
- The only existing patents for the company stem from patents obtained by British Arkady from 1974 to 1983 (*See separate document*)

# CSM Technology Map: Acquisition of Unilever's European Bakery Supplies Business

## Bread Improver

- EP0572051: Liquid Bread Improvers
  - A composition of a vegetable oil, a hydrogenated vegetable oil, a partly hydrogenated vegetable oil, emulsifiers, flavors, bread-improving enzymes and oxidants
  - Patent transferred to CSM 1/2/02
  - It is interesting to note that on April 8, 1998 Boehringer Backmittel filed an opposition to the patent, which was rejected May 10, 2000
  - Boehringer Backmittel is now owned by CSM

## Flour-related Patents

- EP0727143: Improver for Baked Goods, Containing Rye Flour
  - An improver comprised of sugar, emulsifiers, stabilizers, enzymes, oxidative agents, a rye fraction, soy bean flour, a cold-gelling thickening agent, a malt product, vegetable fat and a wheat flour
  - Patent transferred to CSM 1/2/02
- EP0713365: Rye Flour
  - A rye flour, which has a protein less than 7 wt%, a reduced dietary fiber content and particles of a certain size
  - Patent transferred to CSM 1/2/02
- EP0555901: Air Classification of Flour
  - A method whereby the water content of flour is enhanced by prewetting, is remilled at least once, collects a protein-enriched fraction as a fine fraction and a starch-enriched fraction as a coarse fraction and is of a specific size
  - Patent transferred to CSM 1/2/02
- EP0459551: Improved Flour
  - An improved flour having a small particle size for baking achieved by remilling a flour
  - Patent transferred to CSM 1/2/02
- NL1011763: Parbaked Bread
  - Patent transferred to CSM 1/2/02

## Fermented, Pasteurised Preferment

- EP1094715: Fermented, Pasteurised Preferment
  - A fermentation product of a mixture of gluten and or bran resulting from the hydrolysis with a protease and/or lipase or glycanase followed by a fermentation with an acid forming bacteria and a yeast (*Note: The process described in this patent could be derived through biotechnology. Unilever is known to have in-house biotechnology expertise.*)
  - Patent transferred to CSM 10/10/2001

## Custard-related Patents

- EP0685171: Bake-stable custard
  - A bakery custard in which organoleptic properties are combined with storage properties and bake-stability
  - Patent transferred to CSM
- EP0776610: Process for the Preparation of Bake-Stable Custard
  - A process for a sterilized bake-stable custard comprised of modified starch, proteins, gelling thickener, salt that interacts with the gel agents, sweetener, flavors and other optional ingredients
  - Patent transferred to CSM 8/16/01
- EP0655889: Bakery Custard
  - A ready-to-use bakery custard with a long shelf life
  - Patent transferred to CSM 1/2/02

## Legend

- Parent Company
- Acquisition
- Acquisition Subsidiary
- Acquired Technology From Unilever



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## Methodology Patents

- EP0845426: Method and Apparatus for Positioning of Articles
  - A method for positioning slab-like articles, such as food product slabs
  - Patent transferred to CSM 10/17/01
- EP0770330: Method and Device for Rolling a Planar Piece of Material
  - A method for rolling a planar piece of material, which involves multiple turnings
  - Patent transferred to CSM 8/22/01

## Dough-related Patents

- EP0796560: Labelled Dough Products
  - For labelled dough products made from unproofed, paraproofed or fully proofed dough with an edible, bake stable support, provided with an image or text, followed by freezing
  - Patent transferred to CSM 10/10/01
- EP0945068: Fermentation Tolerant Preadough
  - A fermented pre-dough that can be applied in dough systems for obtaining a dough with an improved fermentation tolerance
  - Patent transferred to CSM 10/10/01
- EP0735823: Ready-to-Bake Doughs
  - A ready-to-bake, frozen laminated dough comprising consecutive layers of dough and fat
  - Patent transferred to CSM 1/2/02
- EP0874551: Ready-to-Bake Parproofed Laminated Doughs
  - For a ready-to-bake, frozen, par-proofed laminated dough comprised of specific weights of flour, water, yeast, emulsifier, pectin, protein and modified starch
  - Patent transferred to CSM 10/10/01
- EP0788743: Process for Preparing an Edible Laminated Dough and Lamination Dispersion Therefor
  - An edible laminated dough such as that used in croissants or puff pastries, is prepared by combining a pre-dough with a lamination dispersion and subjecting the combination to rolling and folding for Multilayers
  - Patent transferred to CSM 10/17/01
- EP0824866: Patterned, Three Dimensional Dough Systems
  - A dough system that will form three dimensional patterns on heating in the oven
  - Patent transferred to CSM 8/29/01 (*Ownership of this patent is unclear. The legal status shows that on 10/10/01 there was an applicant reassignment to Unilever.*)

## Patents for Fat Products

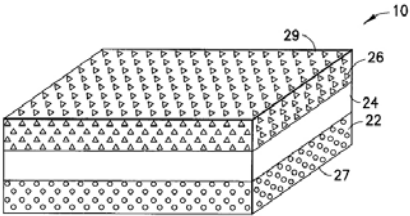
- EP0786209: Lamination Fat Product
  - A lamination fat product with a continuous fat phase and an optional dispersed aqueous phase and the fat phase comprises less than 10 wt% trans unsaturated fatty acid residues
  - Patent transferred to CSM 10/10/01
- EP0705540: Fat Product, in Particular Lamination Margarine
  - A fat product is provided in the form of sheets or blocks wherein at least two are positioned horizontally on top of each other and wrapped in a single enclosure
  - Patent transferred to CSM 10/10/01
- EP0875152: Low Safa Puff Pastry Fats
  - Low safa puff pastry fats made from fat blends comprised of liquid oil, and triglycerides
  - Patent transferred to CSM 8/29/01

## Miscellaneous Patents


- EP0873688: Pourable Premix for Bakery Applications:
  - Pourable premixes for bakery applications comprised of sugars, eggs, fat, a water binder and a gas generating system with deferred gas generating properties
  - Patent transferred to CSM 8/29/01
- EP0988792: Food composition comprising a Carrier Material and a Liquid Malt Extract
  - A storage stable food ingredient composition comprised of a carrier of a liquid malt extract and free of emulsifiers and gas expanding agents
  - Patent transferred to CSM 10/10/01

Note: For patents transferred to CSM, it appears Unilever transferred only the EP rights and retained the rights for countries outside the European community.

## Patent Analysis: Materials, Processes & Applications

Patent Number/ Assignee	Materials	Process	Application
<p><b>US6485735</b></p> <p><b>Phelps Dodge High Performance Conductors of SC &amp; GA, Inc.</b></p>	<p>The invention is for a thermoset structure with multiple thermoset layers bonded together to function as a single layer.</p>  <p><b>10</b> – thermoset polymer matrix sheet  <b>22</b> – the first layer is of a thermoset polymer resin, preferably polyimide, and a friction reducing agent such as PTFE. The PTFE powdered particles are suspended in the resin with some of the particles at the exposed surface <b>27</b> act as a lubricant for the first layer  <b>24</b> – the second layer is a thermoset polymer resin, preferably polyimide, without any additives  <b>26</b> – the third layer thermoset polymer resin is preferably a polyimide and contains an antimicrobial powdered particles suspended in the resin with some of them located at <b>29</b> the surface of the third layer</p> <p>It is noted that each of the layers can be the same resin or different resins, provided they will cross-link or bond to each other via hydrogen and/or adhesion bonding.</p>	<p>To obtain the thermoset structure:</p> <ul style="list-style-type: none"> <li>• the liquid resin is mixed with any of a variety of agents (eg. Antimicrobial) in a powdered, particulate form until well dispersed throughout the resin – no chemical bonding between the powdered particulate and the liquid resin occurs</li> <li>• a first layer of the liquid polymer thermoset resin, with or without additives, is poured into the form of a flat sheet</li> <li>• the first layer is heat cured</li> <li>• the process is repeated for successive layers – bonding between these layers is achieved through adhesion, cross-linking and hydrogen bonding as one layer is cured on top of another</li> <li>• Additionally, the process can be used to coat a wire.</li> </ul>	<p>The invention is said to be used in the medical as well as other industries. Such as packaging, insulating, textiles, and personal care.</p>

## Patent Analysis: Materials, Processes & Applications

Patent Number/ Assignee	Materials	Process	Application
<p><b>US6103358</b></p> <p><b>Chemische Fabrik Stockhausen</b></p>	<p>The invention is for a multilayered product comprised of foamed plastic and latex layers and at least one superabsorbent polymer layer.</p> <div style="text-align: center;">  </div> <p><b>Foam</b> – the plastic or latex foam layer is composed of commercial plastic materials and/or latex dispersions for rigid, semirigid, flexible and nonrigid foams, preferably copolymers formed of at least two monomers of (meth)acrylates, styrene, butadiene or vinyl acetate</p> <p><b>Superabsorbent</b> – fillers can be chalks, betonites, silica gels and silicic acid, activated carbons, pigments and/or natural and synthetic fibrous materials</p>	<p>The invention, which can be multiple layers, is formed by:</p> <ul style="list-style-type: none"> <li>• the plastic or latex foam is spread out over the surface and may be completely or partially vulcanized under suitable known conditions, such as by single or multiple heating, for example in the IR-field or by treatment in the UV-field, after each application of the polymer</li> <li>• the superabsorbent, particulate polymer is applied on the spread-out foam, at a preferred ratio of 1:5 to 10:1, using at least one stencil, perforated disk and/or sieve and optionally fixing by a heat treatment</li> <li>• Finally, a vulcanization is effected to completely cross-link the plastic or latex layers – this may be connected with additionally drying the body</li> <li>• Optionally, the body may be processed with a calendar and/or embossing roll.</li> </ul>	<p>Although primarily intended for use in hygenics as an absorbent for bodily fluids such as blood, sweat, urine and other liquid excretions, the invention can also be used as a component in a wound dressing and further in packaging and insulating materials, in textiles for clothing and cleaning materials and in the cultivation of plants.</p>