

Title (en)

NANO-SIZED MATERIALS IN HYGIENE PRODUCTS

Title (de)

NANOSKALIGE MATERIALIEN IN HYGIENE-PRODUKTEN

Title (fr)

SUBSTANCES DE TAILLE NANOM TRIQUE DANS DES PRODUITS D'HYGIENE

Publication

EP 1343539 A2 20030917 (DE)

Application

EP 01994777 A 20011212

Priority

- DE 10063092 A 20001218
- EP 0114557 W 20011212

Abstract (en)

[origin: WO0249559A2] The invention relates to the use of body-compatible substances for the production of hygiene products. The substances are present in the form of nanoparticles which have been chemically or physically modified on the surface thereof. The body-compatible substances are selected from oxides, oxidhydrates, hydroxides, halogenides, phosphates, sulfides, nitrides and carbides of Al, Si, of alkaline and alkaline-earth metals in addition to subgroup elements including mixed salts of said groups such as hydroxides/halogenides, halogenides/phosphates or hydroxides/halogenides/ phosphates. The chemical or physical modification of the particle surface is carried out with the aid of organic compounds such as: (a) carboxyl acids (mono, di and polycarboxylic acids) or derivatives thereof; (b) amino acids, particularly naturally occurring amino acids; (c) hydroxy-carboxyl acids and sugar acids such as glucaric acid, gluconic acid, glucuronic acid; (d) polyglycolic acids of general formula $\text{HOOC-CH}_2\text{-O-(CH}_2\text{-CH}_2\text{-O)}_n\text{-CH}_2\text{-COOH}$, whereby n represents 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12; (e) ethercarboxylic acids of general formula $\text{R-(O-CH}_2\text{-CH}_2\text{)}_n\text{-O-CH}_2\text{-COOH}$, whereby n represents 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12, whereby R = C6-, C8-, C10- C12- C14- C16- C18- alkyl, alkenyl or alkynyl; (f) alkylhalogenides or (g) silanes of the type $(\text{OR})_4\text{-nSiR}'_n$, whereby R = methyl, ethyl, propyl, i-propyl, butyl, t-butyl and R' represents an organic, particularly an aliphatic radical with functional groups such as OH, -COOH, ester, amine or epoxy, whereby preferably R' = C6-, C8-, C10- C12- C14- C16- C18-alkyl, alkenyl or alkynyl, aminopropyl, N-aminoethyl-3-aminopropyl, n- or l-propyl-N,N,N, -dimethyloctadecyl-ammonium chloride, n- or i-propyl-N,N,N-trimethyl ammonium chloride, n- or l-propyl succinic acid anhydride.

IPC 1-7

A61L 15/18; A61L 15/46

IPC 8 full level

A61F 13/15 (2006.01); **A61K 8/02** (2006.01); **A61K 8/27** (2006.01); **A61L 15/18** (2006.01); **A61L 15/46** (2006.01); **A61Q 19/00** (2006.01)

CPC (source: EP US)

A61F 13/8405 (2013.01 - EP US); **A61K 8/0208** (2013.01 - EP US); **A61K 8/27** (2013.01 - EP US); **A61L 15/18** (2013.01 - EP US); **A61L 15/46** (2013.01 - EP US); **A61Q 19/00** (2013.01 - EP US); **B82Y 5/00** (2013.01 - EP US); **B82Y 30/00** (2013.01 - EP US); **C09C 1/043** (2013.01 - EP US); **A61F 2013/51117** (2013.01 - EP US); **A61K 2800/413** (2013.01 - EP US); **A61K 2800/75** (2013.01 - EP US); **A61L 2300/102** (2013.01 - EP US); **A61L 2300/106** (2013.01 - EP US); **A61L 2300/112** (2013.01 - EP US); **A61L 2300/114** (2013.01 - EP US); **A61L 2300/404** (2013.01 - EP US); **A61L 2300/41** (2013.01 - EP US); **A61L 2300/624** (2013.01 - EP US); **C01P 2004/64** (2013.01 - EP US)

Citation (search report)

See references of WO 0249559A2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0249559 A2 20020627; WO 0249559 A3 20020926; AU 2492502 A 20020701; DE 10063092 A1 20020620; EP 1343539 A2 20030917; US 2005234416 A1 20051020

DOCDB simple family (application)

EP 0114557 W 20011212; AU 2492502 A 20011212; DE 10063092 A 20001218; EP 01994777 A 20011212; US 46300303 A 20030617