Antibacterial coating for sanitary products

Summary

A Hungarian SME has developed a highly durable antibacterial coating technology that can be applied on various sanitary products, for example on sinks, bathtubs and shower trays. The company is looking for possible extensive cooperation in the field of sanitary product manufacturing including partners interested in licensing the technology and manufacturing of antibacterial sanitary products.

Expiration Date 07 November 2017
Reference TOHU20160323001
Profile link

Details

Description

A Hungarian enterprise has developed a durable, non-removable, harmless nanocoating for their sanitary products, which provides anti-bacterial protection. The Hungarian SME is now looking for possible extensive cooperation in the field of sanitary product manufacturing including partners interested in licensing the technology and manufacturing of antibacterial sanitary products.

This technology represents a unique innovation in the market of sinks, bathtubs and shower trays. By applying a non-hazardous ingredient, the above mentioned sanitary products can be coated with a thin layer of antibacterial material. The anti-bacterial coating prevents bacteria, fungi and other contaminants from sticking to the surface of the products. Applying the technology results in a self-disinfecting, highly durable surface that perfectly meets hygienic needs of today's customers.

As a result of these improved hygiene conditions, the chance of infection is greatly reduced. Additionally, the use of antiseptic products can be minimized, making the coating environmentally friendly and also skin-friendly.

Advantages and Innovations

Advantages of the technology:
• Nanotechnology enabled antibacterial surface on the sanitary products;
• Prevents food/water derived disease outbreaks;
• High durability, long lifetime;
• Environmentally favorable (less cleaning needed);
• Cost-efficient (by reducing cleaning needs, it saves water, energy and labor);
• Highly resistant to abrasion;
• Easy to clean;
• Regarding the products' antibacterial activity the test were conducted according to European Union standards: ISO 22196:2011 és ISO 27447:2009;
• Side effects are not expected since the antibacterial material coating does not dissolve on the

surface of the sanitary product. It is insoluble and durable.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Comment Regarding IPR status

Patent application is under consideration.

Profile Origin

Other

Keywords

Technology

02002014	Extrusion
03004011	Care, Hygiene, Beauty

Market

08001007	Coatings and adhesives manufactures
08001013	Ceramics

NACE

C.20.3.0	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
C.20.5.9	Manufacture of other chemical products n.e.c.
C.23.4.2	Manufacture of ceramic sanitary fixtures
C.23.4.9	Manufacture of other ceramic products

Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Hungarian

Client Country

Hungary

Partner Sought

Type and Role of Partner Sought

The Hungarian company is seeking industrial partners interested in licensing the technology. The tasks of the licensee would be manufacturing and selling antibacterial sanitary products that are made of artificial marble (cultured marble).

Therefore the potential licensee should have a plant for producing sanitary products made of artificial marble or should have connections to contract manufacturing companies.

Type of Partnership Considered

License agreement
Manufacturing agreement

Attachments

Antibacterial coatig.jpg



A Czech university seeks pharmaceutical company to licence production of ultra-pure betulin and lupeol.

Summary

A Czech university has developed and patented a method of purification of betulin and lupeol for pharmaceutical purposes. The natural compound betulin has gained importance for its anti-microbial, anti-inflammatory, anti-mycotic, anti-viral, anti-cancer and hepatoprotective properties. Researchers have developed a simple and environmentally-friendly production method assuring ultra-purity level at a low cost. The university is seeking a pharmaceutical company interested in purchasing a license.

Expiration Date	30 March 2018
Reference	TOCZ20170315001
Profile link	

Details

Description

Researchers from a Czech university have developed a novel production method of betulin and lupeol of very high purity levels at a low cost. Betulin is a molecule naturally occurring in birch bark that is currently under investigation as a pharmaceutical compound.

It has been found that it has anti-microbial, anti-inflammatory, anti-mycotic, anti-viral, anti-cancer, hepatoprotective and many more valuable properties, which are currently valorized mostly in the cosmetic industry. However, scientists predict an increased demand, especially in the field of cancer therapeutics thanks to a low incidence of side effects and much reduced production costs.

For this reason, natural compounds, such as betulin have gained importance.
However, existing betulin purification methods bear significant disadvantages which can limit the pharmaceutical applications of the molecule. High purity grades are necessary for medical applications, but are difficult to achieve. Methods that do reach these medical standards, on the other hand, are often very expensive, time-consuming and/or environmentally unfriendly, e.g. due to the large amount of solvents used for purification and/or of other non-recyclable material.

In order to solve these problems, a novel purification method has been developed. The five step extraction and purification process achieves very high purity grades (99.5% for betulin) without the use of complicated technological equipment.

Additionally, almost 100% of the solvents used in this process are recycled, resulting in an extremely environmentally-friendly and cheap procedure. Without major changes to the current production technology, simultaneous purification of lupeol (another pharmaceutical molecule) and production of a basic source of suberin are also possible and can be of interest to a technology partner.

The institution is a research facility only and therefore they are seeking a pharmaceutical company interested in purchasing a licence based on a licensing agreement.

Advantages and Innovations

- High degree of purity (99.5 % for betulin, more than 95 % for lupeol)
- Simple chemical procedures
- Production possible with simple and standard technological equipment
- Use of cheap solvents, that can be almost entirely recycled, resulting in a very cheap process
- Minimal use of unrecyclable materials (e.g. NaOH and HCl, common and cheap chemicals that can easily be neutralised)
- Ecological production without toxic waste thanks to circular method in which almost everything can be recycled
- Practically unlimited production capacity

Stage of Development

Available for demonstration

IPR Status

Patents granted

Comment Regarding IPR status

Patent granted in the Czech Republic

Profile Origin

National or Regional R&D programme

Keywords

Technology

03004007	Pharmaceutics
06001015	Pharmaceutical Products / Drugs

Market

05007002	Pharmaceuticals/fine chemicals
08001019	Speciality/performance chemicals

NACE

M.72.1.1	Research and experimental development on biotechnology

Open for EOI : Yes

Dissemination

Send to Sector Group

Bio Chem Tech

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1700

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Czech

Client Country

Czech Republic

Partner Sought

Type and Role of Partner Sought

University is looking for a pharmaceutical company that has a very good expertise in production of natural compounds either for its utilization or for further distribution. The company is expected to produce ultra-pure betulin, interest in production of lupeol is welcomed but not necessary. This company is expected to buy a license based on a licensing agreement.

Type and Size of Partner Sought

SME 11-50,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement

Attachments

betulin crystal.JPG

