

PURAC® Sanilac: Powerful cleaning that's making a difference



- ▶ Safe, non-toxic alternative to traditional biocides
- ▶ Biobased & readily biodegradable
- ▶ Dual antibacterial & antiviral functionality
- ▶ EPA-registered in the U.S. and BPR-notified in the E.U.

Knowledge is power, especially knowing your cleaning solutions are making a difference to our well-being and our planet. With the sanitizing strength of PURAC Sanilac, you can meet the demands of today's consumer and make a positive impact on tomorrow's generation.

PURAC® Sanilac is an antimicrobial agent consisting of Corbion's L(+) Lactic Acid. It is a safe, powerful disinfecting alternative to traditional biocides that is nontoxic to humans and the environment.

Registrations and availability

PURAC® Sanilac is a globally available product. In the United States, PURAC® Sanilac is registered as an active at the **Environmental Protection Agency (EPA)** under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is also approved for the Design for the Environment (DfE) pilot program.

In Europe, PURAC® Sanilac is notified under the **Biocidal Products Regulation (EU) No 528/2012** for the following product types:

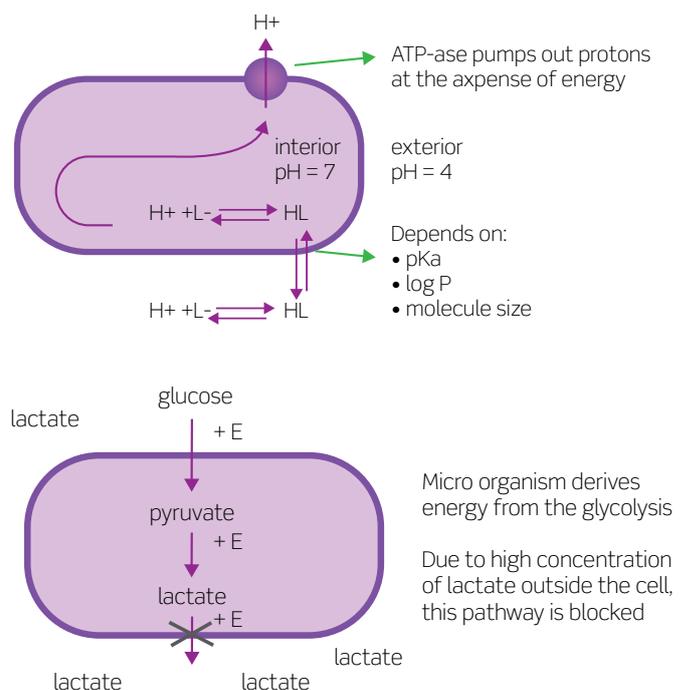
- **PT 1** Human hygiene biocidal products
- **PT 2** Household and public health area disinfectant, and other biocidal products
- **PT 3** Veterinary hygiene biocidal products
- **PT 4** Food and feed area disinfectants
- **PT 6** In-can preservatives

PURAC® Sanilac can therefore be used in registered disinfectant formulations as an active, according to Corbion's notification dossiers. In Sweden, PURAC® Sanilac is also registered as a preservative for detergents at the Bra Miljöval, the Swedish ecolabel.

High efficacy and excellent environmental profile

PURAC® Sanilac is used in several consumer, industrial and institutional sanitizing cleaning products, because of its high antimicrobial efficacy and excellent environmental profile. It is biobased and readily biodegradable and non-toxic to the environment and humans. PURAC® Sanilac has a Generally Regarded As Safe (GRAS) status. It does not sensitize skin. It is a safe alternative to many traditional biocides.

Graph 1. Antibacterial mechanism



PURAC® Sanilac: Powerful cleaning that's making a difference

Potent synergistic antibacterial efficacy

PURAC® Sanilac is not a biocide, as such, and is not comparable to traditional biocides, such as quaternary ammonium compounds and triclosan. It does have some biocidal properties at higher concentrations, however. Many commonly used detergent ingredients, such as surfactants and alcohols, strongly enhance PURAC® Sanilac's efficacy. As a result, when used in combination, PURAC® Sanilac offers potent antibacterial efficacy and is a powerful bactericidal agent at low concentrations. The antibacterial efficacy of PURAC® Sanilac has been proven with EN 1276 tests: a standard test method used in Europe to evaluate chemical disinfectants (table 1).

Dual-action antibacterial mechanism

The antibacterial mechanism of PURAC® Sanilac penetrates the lipid membrane of bacterial cells easily, and once internalized, dissociates into anions and protons. Exporting excess protons requires consumption of cellular Adenosine-triphosphate (ATP) and this depletes cellular energy. In addition to this depletion effect, Sanilac causes lactate to be produced in the cell, which slows the energy pathway.

Antivirus efficacy

The antivirus efficacy of PURAC® Sanilac has been proven with EN 14476 tests: The European standard test method for antivirus activity of Consumer and I&I products (table 2).

Antivirus mechanism

PURAC® Sanilac's antivirus effectiveness is achieved through a number of mechanisms that can act on various types of viruses at different stages within their life cycle. PURAC® Sanilac permanently inactivates the protein or lipid coats of some viruses, such as herpes. Against influenza A, it deactivates certain molecules in the virus essential for binding to host target cells.

Product use and handling

PURAC® Sanilac is available as a highly concentrated, low viscous liquid in solution (80% or 88% active content). It can be handled and mixed into detergent and I&I cleaning formulations by standard, liquid-mixing equipment. It is fully compatible with a wide range of detergent ingredients, such as anionic surfactant-based formulations.

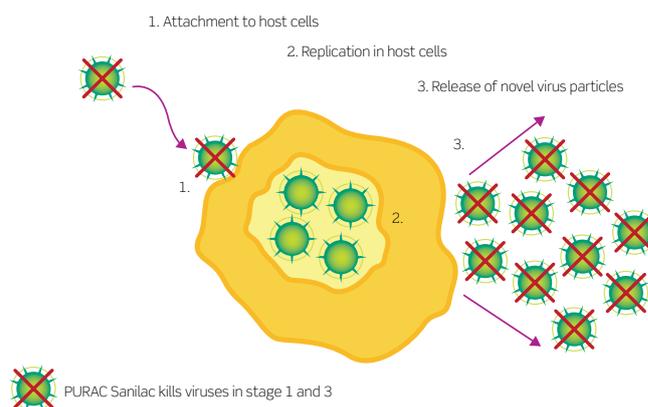
Table 1. Antibacterial efficacy of PURAC® Sanilac according to EN1276 test (at pH3).

Log reduction according to EN 1276	E.coli	P.aeruginosa	E.hirae	S.aureus
1.0% SLS pH 3	>5	>5	<1	>5
1.0% PURAC® Sanilac 80 + 1.0% SLS pH 3	>5	>5	>5	>5
0.75% SLS + 0.25% APG pH3	>5	>5	<1	<1
0.75% SLS + 0.25% APG + 1.0% PURAC® Sanilac 80 pH3	>5	>5	>5	>5
1% SLS pH 4	<1	<1	<1	<1
1.0% PURAC® Sanilac 80 + 1.0% SLS pH 4	>5	>5	>5	>5

Table 2. Antivirus efficacy of PURAC® Sanilac according to EN14476 test.

Log reduction according to EN 14476	H. Simplex1	H1N1 Influenza
3.0% PURAC® Sanilac, pH2	Pass >3	Pass >4
3.0% PURAC® Sanilac + 1.5% SLS pH3	Pass >3	Pass >4
3.0% PURAC® Sanilac + 1.5% SLS pH5	Pass >3	Pass >4

Graph 2. Antivirus mechanism



Request your free sample

Samples and detailed usage instructions, delivered right to your doorstep
corbion.com/HomeCare



Sample Support

With R&D facilities on every continent, we are always close by to help you with your application development.
corbion.com/contact

Interested in solutions for Home Care? Go to corbion.com/Sanilac



HomeCare@corbion.com

For the home and I&I industry, Corbion offers Lactic Acid and Lactic Acid derivatives. Corbion's products are highly effective and yet readily biodegradable therefore an ideal choice for environmentally safer and more sustainable scale removers and disinfectants. Corbion operates 10 production plants, in the USA, the Netherlands, Spain, Brazil and Thailand, and markets its products through a worldwide network of sales offices and distributors.