



- ▶ Supports lower alcohol content
- ▶ Dual antibacterial & antiviral functionality
- ▶ Lactic acid BPR approved in the EU
- ▶ Safe, non-toxic alternative to traditional biocides
- ▶ Biobased & readily biodegradable

The coronavirus pandemic is focusing attention on the importance of antimicrobial cleaning and driving demand for effective solutions. Removing health risks that live on surfaces in everyday environments, including home, office, retail and other public spaces, is a crucial part of slowing the spread of COVID-19 and other threats.

Many disinfectant surface sprays use high levels (>70%) of alcohol in order to deliver disinfectant properties and rapid evaporation. These high levels of ethanol dry out the skin with frequent exposure. Furthermore, with alcohol supplies running short due to dramatically increased demand, solutions that enable less dependence on the use of alcohol could help meet the urgent needs of the market.

Ethanol content of 40% is generally sufficient to achieve quick evaporation, but too low to provide proper disinfection of surfaces. However, when combined with lactic acid, 40% ethanol will eliminate germs, evaporate quickly and have a milder effect when in contact with the skin. Such a solution could nearly double the amount of disinfectant surface sprays produced.

An effective surface disinfectant also can be made without using alcohol at all; combining lactic acid with anionic surfactants at low pH (<5) can result in a potent disinfectant cleaner.

Registrations

Lactic acid is registered under **BPR** (PT1,2,3 and 4) for cleaning purposes in home, industrial/institutional and animal care applications.

PURAC® Sanilac is registered in the US under **EPA** for disinfectant cleaning purposes in home, industrial and institutional care, for manufacturing use only.

The following formulations are not registered under BPR product registration, although a temporary approval can be requested per country in crisis situations such as those currently underway when using an approved substance.

Formulators should seek advice from their country's registration authorities.



Disinfect surfaces effectively and cut alcohol use

Example formulation: Disinfectant Surface Spray

INGREDIENTS	INCI	WT%	FUNCTION
Ethanol	Ethanol	40	Disinfectant & evaporator
PURAC® Sanilac 80	Lactic Acid (and) Water	1.88	Disinfectant
Water	Aqua	q.s. 100	

Manufacturing procedure

Mix all ingredients until dissolved. Measure the pH and adjust if necessary.

Product characteristics

Appearance: Transparent Liquid

pH: 3.5-4.0

- ▶ Lower alcohol content
- ▶ Antibacterial & antiviral claim
- ▶ Lactic Acid EPA & BPR Approved for PT1, 2, 3, and 4

Efficacy data: Disinfectant Surface Spray

Formula pH 3.5	EN1276 (Gr-/Gr+)	EN1275 C. albicans	EN14476 Enveloped viruses	EN14476 Corona virus*
Sanitizer 1.88% PURAC Sanilac 80				

*Tested at Bluetest Laboratories. Mouse coronavirus as human surrogate.

EN1276 and EN1275:

1 min contact time, 80% solution, dirty conditions, > log 5 reduction,

EN14476: 1 min contact time, 80% solution, dirty conditions, > 4 log reduction

Example formulation: All-purpose Disinfectant Cleaner

INGREDIENTS	INCI	WT%	FUNCTION
Texapon® LS 35 ¹	Sodium Lauryl Sulfate	1	Surfactant
Glucopon® 425N/HH ¹	Alkyl poly glucoside	0.5	Surfactant
PURAC® Sanilac 80 ²	L-Lactic acid (and) Aqua	3	Disinfectant
Water	Aqua	q.s. 100	

Manufacturing procedure

Maintain a preferred formulation pH < 4 for broad range efficacy and below pH 5 for viricidal efficacy. Combine with anionic or cationic surfactants to achieve antimicrobial efficacy. A nonionic surfactant can be added, however, doing so will not increase antimicrobial efficacy. Chelating agents can boost antimicrobial performance. Usage of PURAC Sanilac at 1.5 - 3% is required to obtain kill against a broad range of microbes.

Product characteristics

Appearance: Clear liquid

pH: 4.0

Suppliers

¹ BASF | ² Corbion

- ▶ Alcohol free
- ▶ Antibacterial & antiviral claim
- ▶ Safe solution
- ▶ Lactic Acid EPA & BPR Approved for PT1, 2, 3, and 4

Efficacy data: All-purpose Disinfectant Cleaner

Formula pH 4	EN1276 (Gr-/Gr+)	EN1275 C. albicans	EN14476 Enveloped viruses*
Cleaner 3% PURAC Sanilac 80			

EN1276 and EN1275:

1 min contact time, 80% solution, dirty conditions, > log 5 reduction,

EN14476: 1 min contact time, 80% solution, dirty conditions, > log 4 reduction

*Tested at Bluetest Laboratories

- Enveloped virus: H1N1 Influenza A virus ATCC VR1469
- Enveloped virus: Human herpes-1 virus ATCC VR733
- Enveloped virus: Feline Immunodeficiency virus CRFK cells, human HIV surrogate
- Enveloped virus: Duck hepatitis B virus, human Hepatitis B surrogate



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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.

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