

Rely+On™ Virkon™

Broad Spectrum
Virucidal Disinfectant



- Excellent in-use safety profile
- Effective against a broad spectrum of disease-causing organisms
- For use in medical facilities, pathology and biosafety containment laboratories, treatment salons and residential homes

Rely+On™ Virkon™

The powerful composition of the Rely+On™ Virkon™ formulation combines a broad spectrum of activity against viral, bacterial and fungal disease-causing organisms. It has an excellent in-use safety profile and application flexibility on hard surfaces, equipment, floors and doors at varying temperatures, and in the presence of organic challenge. These qualities make Rely+On™ Virkon™ the disinfectant of choice for use in medical facilities, pathology and biosafety containment laboratories, treatment salons and residential homes.

Superior Operator Safety Profile

Rely+On™ Virkon™ has fewer handling and use constraints than many other disinfectant products and is not classified as harmful or a sensitiser in both powdered form and in-use dilutions, in accordance with EU legislation on the classification and labelling of chemical preparations.

Environmental Profile

Rely+On™ Virkon™ oxygen-based chemistry contains simple organic salts and organic acids and the active ingredient decomposes by a variety of routes within the environment, in soil and water, breaking down to form the naturally occurring substances, potassium salts and oxygen. The major organic components are classified as readily biodegradable according to OECD and EU tests.

Rely+On™ Virkon™ is not considered persistent in the environment, according to the standard European process for the classification and labelling of chemical preparations. Independent studies have shown that diluted Rely+On™ Virkon™ should not, when used as directed, pose any threat to sewage treatment facilities.¹



Mode of Action

Rely+On™ Virkon™ oxidizes key structures and compounds, such as proteins, leading to widespread, irreversible damage and subsequent deactivation/ destruction of the microorganism.

There is no evidence to suggest that bacterial disease-causing organisms develop resistance towards Rely+On™ Virkon™ as opposed to some other disinfectant types.



Proven Broad Spectrum Efficacy

Independently proven highly effective against:

- over 100 strains of virus in 22 viral families
- over 400 strains of bacteria
- over 60 strains of fungi and yeast

using a wide variety of contact times, temperatures and organic challenge levels.

Applications

Medical Facilities

- Routine disinfection of hard surfaces, furniture, floors, walls and doors in hospital wards, clinics and laboratories.
- Broad spectrum disinfection and decontamination of hard surfaces in critical clinical facilities, such as operating theatres, intensive care units and accident and emergency departments.
- Body fluid spillage clear-up and decontamination.

Pathology and Biosafety Containment Laboratories

- Routine cleaning and disinfection of hard surfaces and equipment*, such as benches, floors, walls and doors, cabinets, centrifuges and pipette discard jars.

Treatment Salons

- Routine cleaning and disinfection of hard surfaces such as floors, walls, doors and door handles.

Residential Homes

- Routine disinfection of hard surfaces, equipment*, furniture, floors, walls, doors and door handles in treatment and communal areas, corridors and bathrooms.**

Public Areas

- Routine disinfection of surfaces, including floors, walkways, walls, doors and door handles.

Hard Surface & Equipment Cleaning & Disinfection

The level of disease-causing organisms present after general cleaning can remain high enough to offer a serious disease challenge to patients and staff. Using a disinfectant proven to be effective against viruses, bacteria and fungi, such as Rely+On™ Virkon™, is essential.

Easy to Prepare

Readily soluble in warm tap water, Rely+On™ Virkon™ dissolves into a pink solution, which remains stable for up to 5 days, as a 1:100 solution. Consult your local representative for advice on stability for any alternate strength solutions.

Unused or inactive solutions may be disposed of via the sink (leading to waste water treatment facilities and in accordance with local regulations).



Task	Dilution Rate	Application
Hard Surface Disinfection	1:100 (10 grams of Rely+On™ Virkon™ to every litre of water)	Apply disinfectant solution using either a trigger spray bottle, a suitable knapsack type sprayer, cloth, sponge or floor mop. Allow to dry, before any re-use of treated areas. For disinfection of hard surfaces, apply the solution at a rate of 200ml/m ²
Equipment Disinfection (not for medical devices)	1:100 (10 grams of Rely+On™ Virkon™ to every litre of water)	Suitable equipment can either be submerged and washed in disinfectant solution or sprayed and then wiped clean with a cloth or sponge. Rinse disinfected equipment with clean water after 10 minutes when materials compatibility is of concern. Refer to the product Instruction for Use leaflet (IFU) for further specific information.

* Not for use for the disinfection of medical devices.

** Users should always check for compatibility with any sensitive materials before use. Do not use on any soft metals such as brass or copper. Not recommended for use on soft furnishings, textiles or carpets.

The specified uses and registered claims may vary from country to country. Please contact LANXESS to verify country-specific approved uses.

Rely+On™ Virkon™

1. EN Efficacy Studies (EU)

Type	Method	Organisms	Strains tested	Dilution rate	Contact time (mins)
Virus , suspension	EN 14476:2013 +A1:2015	<i>Adenovirus type 5</i>	ATCC VR-5	1:200	5
Virus , suspension	EN 14476:2013 +A1:2015	<i>Poliovirus type 1</i>	LSc-2ab (Chiron -Behring)	1:200	5
Virus , suspension	EN 14476:2013 +A1:2015	<i>Murine norovirus</i>	Berlin 06/06 DE Isolate S99	1:200	5
Virus , suspension	EN 14476:2013 +A1:2015	<i>Influenza virus (H3N8)</i>	A/duck/Ukraine/1/63	1:500 1:200	0.5 0.25
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Pseudomonas aeruginosa</i>	ATCC 15442	1:400	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Staphylococcus aureus</i>	ATCC 6538	1:400	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Enterococcus hirae</i>	ATCC 10541	1:400	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Enterococcus faecium</i>	ATCC 6569	1:400	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Enterobacter cloacae</i>	ATCC 13047	1:400	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Escherichia coli</i> (ESBL)	NCTC 11560	1:100	5
Bacteria, suspension	EN 13727:2012 + A2:2015	<i>Klebsiella pneumoniae</i> (ESBL)	NCTC 13368	1:100	5
Bacteria, surface	EN 13697:2015	<i>Pseudomonas aeruginosa</i>	ATCC 15442	1:133	5
Bacteria, surface	EN 13697:2015	<i>Staphylococcus aureus</i>	ATCC 6538	1:133	5
Bacteria, surface	EN 13697:2015	<i>Enterococcus hirae</i>	ATCC 10541	1:133	5
Bacteria, surface	EN 13697:2015	<i>Escherichia coli</i> (ESBL)	ATCC 10536	1:133	5
Yeast, suspension	EN 13624:2013	<i>Candida albicans</i>	ATCC 10231	1:67	5
Yeast, suspension	EN 13624:2013	<i>Candida albicans</i>	ATCC 10231	1:133	15
Yeast, surface	EN 13697:2015	<i>Candida albicans</i>	ATCC 10231	1:67	15

2. Additional Virucidal Efficacy

The table below summarises independent efficacy data of Rely+On™ Virkon™ against important disease-causing pathogens.

Organism/Disease	Strain	Dilution Rate	Contact time (mins)	Organism/Disease	Strain	Dilution Rate	Contact time (mins)
<i>Bacteriophage</i>	Strep. lactis bacteriophage 66	1:500	30	<i>Hepatitis B</i>	DHBV	1:100	10
<i>Bacteriophage</i>	Bacteriophage T2 with E.coli	1:500 – 1:4000	30	<i>Hepatitis C</i>	BVDV ATCC CCL-222	1:100	10
<i>Bacteriophage</i>	Bacteriophage MS2 with E.coli	1:500 – 1:4000	30	<i>HIV</i>	Type 1	1:100	10
<i>Bacteriophage</i>	Bacteriophage OX174 with E.coli	1:500 – 1:4000	30	<i>Influenza A virus</i>	ATCC VR-544	1:100	10
<i>Human Coronavirus 229E</i>	ATCC VR-740	1:100	10	<i>Swine Flu Influenza A</i>	H1N1	1:100 1:600	0.5 10
<i>COVID-19</i>	SARS-CoV-2	1:100†	1	<i>Orthopox virus</i>	Vaccine strain	1:100	15
<i>Feline calicivirus</i> (surrogate for Norwalk & norovirus)	ATCC VR-782	1:100	10	<i>Respiratory syncytial virus</i>	ATCC VR-26	1:100	10
<i>Hepatitis A</i>	Sattar	1:100	10	<i>Rotavirus</i>	Human Strain	1:250	10

Rely+On™ Virkon™ SARS-CoV-2 Efficacy

Rely+On™ Virkon™ broad spectrum disinfectant demonstrates extremely rapid efficacy against SARS-CoV-2, the virus responsible for COVID-19.

The efficacy testing was undertaken by Microbac Laboratories, Inc. in the USA, in accordance with the U.S. Environmental Protection Agency (EPA) compliant test methods, for products intended for virucidal hard surface disinfection, under high soiling conditions.

† Rely+On™ Virkon™ achieved rapid and complete inactivation of the SARS-CoV-2 virus at a dilution ratio of 1:100 in just 60 seconds.

3. Additional Bactericidal Efficacy

Organism/Disease	Strain	Dilution Rate	Contact time (mins)
<i>Acinetobacter baumannii</i>	Carbapenem resistant strain	1:200	10
<i>Bacillus cereus</i> (veg)	ATCC 14579	1:100	10
<i>Bacillus subtilis</i> (veg)	NCTC 10073	1:100	10
<i>Campylobacter jejuni</i>	ATCC 29428	1:100	10
<i>Chlamydia psittaci</i>	VR-125 (strain 6BC)	1:100	10
<i>Clostridium perfringens</i> (veg)	ATCC 13124	1:100	10
<i>Coxiella burnetii</i>	Nine mile (RSA 493)	1:100	30
<i>Escherichia coli</i> 0157	ATCC 43895	1:100	10
<i>Escherichia coli</i>	CIP 54.127	1:200	5
<i>Escherichia coli</i>	ATCC 10536	1:200	5
<i>Enterobacter cloacae</i>	ATCC 13047	1:400	5
<i>Enterococcus hirae</i>	CIP 58.55	1:400	5
<i>Enterococcus faecalis</i> (VRE)	ATCC 51299	1:100	10
<i>Enterococcus faecium</i>	ATCC 10541	1:400	5
<i>Legionella pneumophila</i>	NCTC 1192	1:5000	100
<i>Listeria monocytogenes</i>	ATCC 19117	1:100	10
<i>Klebsiella pneumoniae</i> (ESBL)	NCTC 13368	1:200	10
<i>Pasteurella multocida</i>	ATCC 12947	1:100	10
<i>Proteus mirabilis</i>	ATCC 14153	1:100	5

Organism/Disease	Strain	Dilution Rate	Contact time (mins)
<i>Proteus vulgaris</i>	NCTC 4635	1:100	10
<i>Pseudomonas aeruginosa</i>	ATCC 15442	1:400	5
<i>Pseudomonas aeruginosa</i>	CIP 103467	1:200	5
<i>Pseudomonas aeruginosa</i>	ATCC 15442	1:100	5
<i>Pseudomonas aeruginosa</i>	CIP A22	1:100	5
<i>Pseudomonas aeruginosa</i>	NCTC 6749	1:200	2.5
<i>Pseudomonas aeruginosa</i>	PaFH72/a	1:100	5
<i>Salmonella enteritidis</i>	CVI – WVR – Lelystad	1:200	30
<i>Salmonella typhimurium</i>	DT104	1:200	30
<i>Salmonella typhimurium</i>	ATCC 23564	1:100	10
<i>Shigella sonnei</i>	ATCC 25931	1:100	10
<i>Staphylococcus aureus</i>	ATCC 33592 (MRSA)	1:100	10
<i>Staphylococcus aureus</i>	ATCC 6538	1:400	5
<i>Staphylococcus aureus</i>	NCTC 4163 (MRSA 2 clinical isolates)	1:100	10
<i>Staphylococcus aureus</i>	CIP 4.83	1:200	5
<i>Staphylococcus epidermidis</i>	ATCC 12228	1:100	10
<i>Streptococcus faecalis</i>	NCTC 775	1:100	10
<i>Streptococcus pyogenes</i>	ATCC 11229	1:100	10
<i>Streptococcus suis</i>	ATCC 43765	1:100	10

4. Additional Fungicidal/Yeasticidal Efficacy

Organism/Disease	Strain	Dilution Rate	Contact time (mins)
<i>Aspergillus niger</i> (spores)	AnFH85/a	1:33	15
<i>Candida albicans</i>	CaFH69/a	1:40	15
<i>Candida albicans</i>	Gbl 648	1:100	10
<i>Candida albicans</i>	ATCC 10231	1:200	30

Organism/Disease	Strain	Dilution Rate	Contact time (mins)
<i>Fusarium moniliforme</i>	ATCC 10052	1:50	10
<i>Saccharomyces cerevisiae</i>	ScFH68/a	1:40	60
<i>Trichophyton interdigitale</i>	ATCC 9533	1:100	60

Presentations

Rely+On™ Virkon™ Powder

- 50 g sachet – makes 5 litres of disinfectant
- 500 g container – makes 50 litres of disinfectant
- 5 kg drum – makes 500 litres of disinfectant

Rely+On™ Virkon™ Tablets

Convenient to store and easy to handle; simplifies accurate dosing of a disinfectant solution.

- 10 x 5 g tablets – makes 5 litres of disinfectant
- 50 x 5 g tablets – makes 25 litres of disinfectant



Use biocides safely. Always read the label and product information before use.

Reference

1. WRc, 1997. Study to determine the toxicity of the virucidal disinfectant Virkon™ to the waterflea (*Daphnia magna*), the earthworm (*Eisenia foetida*) and anaerobic sludge.

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