

# Lonzagard® DR-25aN

## Disinfectant Cleaner with Broad Spectrum Activity Against Viruses and Spores



### Benefits

- Aldehyde-free Disinfectant Cleaner
- Broad spectrum of efficacy; bacteria, yeast, fungi, enveloped & non-enveloped viruses and *C. difficile* spores\*
- Cleans and disinfects in the presence of dirt, blood and proteins
- DVG and VAH compliant
- Also registered for sale in the Netherlands according to authorisation Number: 14873N

## Technical User Information

Lonzagard® DR-25aN is an aldehyde-free, high performance disinfectant cleaner with outstanding microbiocidal performance and broad spectrum activity against bacteria, yeast, fungi, viruses and spores. Its efficacy against *C. difficile* spores and different types of viruses matches perfectly to the use of this formulation around hospitals, long term care facilities and institutions. It can also be used in restaurants, food processing plants and schools as well.

## Ingredients

### Actives

Didecyl dimethyl ammonium chloride [DDAC, CAS No. 7173-51-5]	approx. 6.9%
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### Inerts

Water, chelating agent, surfactant, formulation aid	approx. 93.1%
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## Use Information

### Direction of Use

Remove heavy soil deposits from surface. Then thoroughly wet surface with the appropriate dilution of the concentrate per litre of water depending on the application. The use-solution can be applied by a variety of methods, including cloth wipe, mop or by soaking. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Prepare a fresh solution daily or more often if the solution becomes visibly dirty or diluted.

After disinfection, all food contact surfaces have to be rinsed with potable water before use.

## Detailed Efficacy Data

### Introduction

In order to support a product through the Biocidal Product Regulation (BPR, EU (No) 528/2012), relevant European test data must be submitted as part of the dossier. The EN 14885 Standard (Chemical disinfectants and antiseptics-application of European Standard for chemical disinfectants and antiseptics) specifies the laboratory methods required to substantiate the claim set for the chemical disinfectant. European Normal (EN) Test Protocols and their associated pass criteria are outlined for different application areas e.g. “medical”, “veterinary”, “food”, “industrial and institutional” and “domestic” areas.

Each EN test specifies a limited range of microbial species that must be used. These have been chosen as representative organisms to substantiate broader product claims (e.g. bactericide, yeasticide, fungicide, sporicide, virucide and mycobactericide) taking into account their practical relevance for each of the application areas. In addition, different soil (or interfering substances) are specified depending on the end application. This supports the efficacy claimed by the product and its suitability for the specific area of use.

All of the data presented for Lonzagard® DR-25aN Disinfectant Cleaner is in accordance with the EN 14885 Standard to support a claim set for “medical”, “food”, “veterinary” and “industrial and Institutional” areas.

## Antimicrobial Performance

### Food, Industrial and Institutional Areas Tested According to European Norms (EN)

#### Activity Claim: Bactericidal

#### EN 1276

Bactericidal result (log 5), in presence of high organic load

Test strains: *E. coli* ATCC 10536, *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	1.5%	3.0 g/l BSA	5 min.
Result	1.5%	10.0 g/l Skimmed milk	5 min.
Result	1.0%	10.0 g/l Sucrose	5 min.
Result	1.5%	10.0 g/l Yeast extract	5 min.

Certificate: Eurofins, 31 May 2016

#### EN 1276 (modified)

Bactericidal result (log 4), in presence of low organic load (BSA)

Test strain: *L. interrogans* (Weil's disease)

Result	1.0%	0.3 g/l BSA	5 min.
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Certificate: Blue Scientific Test Data, August 2009

#### EN 1276 (MRSA)

Bactericidal result (log 5), in presence of high organic load (BSA)

Test strain: *S. aureus* MRSA ATCC 33592

Result	1.0 %	3.0 g/l BSA	5 min.
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Certificate: L + S AG, June 2010

#### EN 1276

Bacterial result (log 5), in presence of high organic load (BSA)

Test strains: *L. monocytogenes* ATCC 15313, *S. typhimurium* ATCC 13311

Result	0.5 %	0.3 g/l BSA	5 min.
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Certificate: Dr. Brill + Partner GmbH, 24 February 2017

#### EN 13697

Bactericidal result (log 4), in presence of high organic load (BSA)

Test strains: *E. coli* ATCC 10536, *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	2.5 %	3.0 g/l BSA	5 min.
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Certificate: Eurofins-Biolab Spa, 30 July 2007

#### EN 13697

Bactericidal result (log 4), in presence of high organic load (BSA)

Test strain: *L. monocytogenes* ATCC 15313

Result	1.5 %	3.0 g/l BSA	5 min.
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Test strain: *S. typhimurium*

Result	3.0 %	3.0 g/l BSA	5 min.
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Certificate: Dr. Brill + Partner GmbH, 24 February 2017

#### EN 16615

Bactericidal results (log 5), in presence of high organic load (BSA + Erythrocytes)

Test strains: *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	6.0 %	3.0g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Dr. Brill + Partner GmbH, 28 July 2017

Activity Claim: Yeasticidal

#### EN 1650

Yeasticidal result (log 4), in presence of high organic load (BSA)

Test strain: *C. albicans* ATCC 10231

Result	0.5 %	3.0 g/l BSA	15 min.
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Certificate: Eurofins, 31 May 2016

#### EN 13697

Yeasticidal result (log 3), in presence of high organic load (BSA)

Test strain: *C. albicans* ATCC 10231

Result	2.0 %	3.0 g/l BSA	15 min.
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Certificates: Eurofins, 31 May 2016

#### EN 16615

Yeasticidal results (log 4), in presence of high organic load (BSA + Erythrocytes)

Test strains: *C. albicans* ATCC 10231

Result	4.0 %	3.0g/l BSA + 3.0g/l Erythrocytes	1 min.
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Certificate: Dr. Brill + Partner GmbH, 28 July 2017

Activity Claim: Fungicidal

#### EN 1650

Fungicidal result (log 4), in presence of low organic load (Albumin)

Test strain: *A. brasiliensis* (former "A. niger") ATCC 16404

Result	2.5 %	0.3 g/l Albumin	15 min.
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Certificate: Eurofins, 17 June 2011

#### EN 13697

Fungicidal result (log 3), in presence of high organic load (Albumin)

Test strain: *A. brasiliensis* (former "A. niger") ATCC 16404

Result	4.0 %	3.0 g/l Albumin	15 min.
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Certificates: Eurofins-Biolab Spa, 23 April 2007

Activity Claim: Virucidal Against Bacteriophages

#### EN 13610

Virucidal activity against bacteriophages in presence organic load (1 % skimmed milk)

Results:

<i>Lactococcus lactis</i> subsp. <i>lactis</i> phage P001	3.0 %	15 min.
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<i>Lactococcus lactis</i> subsp. <i>lactis</i> phage P008	3.0 %	15 min.
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Certificate: Dr. Brill + Partner GmbH, 25 February 2014

Activity Claim: Sporicidal

#### EN 13704

Sporicidal result (log 3) in presence of low organic load (BSA)

Test strains: *B. subtilis* ATCC 6633

Result	5.0 %	0.3 g/l BSA	60 min.
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Certificate: L + S, 23 April 2012

#### EN 13704

Sporicidal result (log 3) in presence of low organic load (BSA)

Test strains: *B. cereus* ATCC 12826

Result	4.0 %	0.3 g/l BSA	60 min.
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Certificate: Eurofins, 31 May 2016

## Activity Claim: Virucidal

### EN 14476

Virucidal result (log 4), in presence of low organic load (BSA) and high medical organic load (BSA + Erythrocytes)

Test strain: *Murine Norovirus strain S99 Berlin*

Result	2.0%	0.3 g/l BSA	5 min.
Result	2.0%	3.0 g/l Erythrocytes	15 min.

Certificate: Dr. J. Steinmann, Mikrolab, 1 April 2014

### Tested According to DVG (German Veterinary Medical Society) Food Sector, 8th List

Disinfectants for handling / processing area: Meat production and food of animal origin (except milk) and canteen kitchens.

Test strains: *P. aeruginosa*, *S. aureus*, *E. hirae*, *E. coli*, *C. albicans* and *A. brasiliensis*

General DVG recommendation: For effective disinfection, the use of 0.4 litre use solution per m<sup>2</sup> surface is normally necessary.

Deployed application concentrations are specified in volume percentage [V-%] for 5 and 30 minutes (Fungicide part C: 15 and 30 minutes)

### Low contaminated area (basic organic load)

List Part	Temp / °C	Bacteria		Yeast (Levurocicide)		Yeast and Moulds (Fungicide)		Virus	
		5a	5b	6a	6b	7a	7b	8a	8b
–	4	5'	30'	5'	30'	5'	30'	5'	30'
A	10	2	1	2	1	5	4	–	–
A	20	2	1	3	1,5	5	4	–	–
B	10	–	–	–	–	–	–	–	–
B	20	–	–	–	–	–	–	–	–
–	–	–	–	–	–	15'	–	–	–
C	20	2	1	3	1	4	4	–	–

### Contaminated area (high organic load)

List Part	Temp / °C	Bacteria		Yeast (Levurocicide)		Yeast and Moulds (Fungicide)		Virus	
		9a	9b	10a	10b	11a	11b	12a	12b
–	–	5'	30'	5'	30'	5'	30'	5'	30'
A	10	4	2,5	3,5	1,5	10	?	–	–
A	20	4	2	5	2	10	?	–	–

A Meat production and food of animal origin (except milk)

B Milk area

C Canteen kitchens

DVG committee disinfection decided that the formulation Lonzagard® DR-25aN can be DVG listed (8th list, meat production and food of animal origin (except milk) and canteen kitchens).

Prof. Rösler (DVG, chairman of the committee disinfection), Berlin

Certificates: Prof. Dr. U. Rösler (chairman of the committee disinfection), Berlin, 9 December 2014

Laboklin, Dr. B. Hunsinger, Bad Kissingen, 16 June 2014

## Veterinary Areas

### Tested According to European Norms (EN)

## Activity Claim: Bactericidal

### EN 1656

Bactericidal result (log 5), in presence of high veterinary organic load (Yeast Extract + BSA) at 10°C

Test strains: *P. aeruginosa ATCC 15442*, *S. aureus ATCC 6538*, *E. hirae ATCC 10541* and *P. vulgaris ATCC 13315*

Result	4.0%	10.0 g/l Yeast extract + 10.0g/l BSA	30 min.
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Certificate: Eurofins, 31 May 2016

### EN 14349 (non-porous surfaces)

Bactericidal result (log 4), in presence of high veterinary organic load (Yeast Extract + BSA) at 10°C

Test strains: *P. aeruginosa ATCC 15442*, *S. aureus ATCC 6538*, *E. hirae ATCC 10541* and *P. vulgaris ATCC 13315*

Result	6.0%	10.0 g/l Yeast extract + 10.0g/l BSA	30 min.
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Certificate: Eurofins, 31 May 2016

## Activity Claim: Yeasticidal

### EN 1657

Yeasticidal result (log 4), in presence of high veterinary organic load (Yeast Extract + BSA) at 10°C

Test strain: *C. albicans ATCC 10231*

Result	2.0%	10.0 g/l Yeast extract + 10.0g/l BSA	30 min.
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Certificate: Eurofins, 31 May 2016

### EN 16438

Yeasticidal result (log 3), in presence of high veterinary organic load (Yeast Extract + BSA) at 10°C

Test strain: *C. albicans ATCC 10231*

Result	2.0%	10.0 g/l Yeast extract + 10.0g/l BSA	30 min.
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Result	1.0%	10.0 g/l Yeast extract + 10.0g/l BSA	60 min.
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Certificate: Dr Brill + Dr Steinmann, 5 October 2016; Eurofins, 31 May 2016

## Activity Claim: Virucidal

### EN 14675

Virucidal result (log 4), in presence of high-level soiling (BSA + Yeast extract) at 10°C

Test strain: *Modified Vaccinia Virus Ankara (MVA)*

Result	3.0%	10.0 g/l Yeast extract + 10.0g/l BSA	30 min.
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Certificate: Dr. J. Steinmann, Dr. Brill + Partner GmbH, Bremen, 25 January 2017

## Medical Areas

### Tested According to European Norms (EN)

#### Activity Claim: Bactericidal

##### EN 13727

Bactericidal result (log 5), in presence of high medical organic load (BSA + Erythrocytes)

Test strains: *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	2.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
Result	1.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.

Certificate: Eurofins, 17 June 2011

##### EN 13697

Bactericidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strains: *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	7.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min
Result	1.0 %	3.0 g/l (BSA + Erythrocytes)	60 min.

Certificate: Eurofins, 6 June 2016

##### EN 14561

Bactericidal result (log 5), in presence of low organic load (BSA)

Test strains: *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	2.5 %	0.3 g/l BSA	15 min.
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Certificate: Eurofins, 23 September 2011

##### EN 16615

Bactericidal results (log 5), in presence of high medical organic load (BSA + Erythrocytes)

Test strains: *S. aureus* ATCC 6538, *E. hirae* ATCC 10541, *P. aeruginosa* ATCC 15442

Result	6.0 %	3.0g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Dr. Brill + Partner GmbH, 28 July 2017

#### Activity Claim: Yeastcidal

##### EN 13624

Yeastcidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *C. albicans* ATCC 10231

Result:	1.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
Result:	0.25 %	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.

Certificate: Eurofins, 31 May 2016

##### EN 13697

Yeastcidal result (log 3), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *C. albicans* ATCC 10231

Result:	3.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
Result:	1.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.

Certificate: Eurofins, 6 June 2016

##### EN 14562

Yeastcidal result (log 4), in presence of low organic load (BSA)

Test strain: *C. albicans* ATCC 10231

Result:	3.0 %	0.3 g/l BSA	15 min.
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Certificate: Eurofins, 23 September 2011

##### EN 16615

Yeastcidal results (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strains: *C. albicans* ATCC 10231

Result	4.0 %	3.0g/l BSA + 3.0g/l Erythrocytes	1 min.
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Certificate: Dr. Brill + Partner GmbH, 28 July 2017

#### Activity Claim: Fungicidal

##### EN 13624

Fungicidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *A. brasiliensis* (former "A. niger") ATCC 16404

Result	4.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.
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Certificate: Eurofins, 6 June 2016

##### EN 13697

Fungicidal result (log 3), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *A. brasiliensis* (former "A. niger") ATCC 16404

Result	6.0 %	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.
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Certificate: Dr. Brill + Partner GmbH, 17 February 2017

#### Activity Claim: Sporicidal

##### EN 13704

Sporicidal result (log 3), in presence of low organic load (BSA)

Test strain: *C. difficile* ATCC 9689

Result	5.0 %	0.3 g/l BSA	60 min.
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Certificate: Dr. Brill + Partner GmbH, 13 March 2009

##### EN 13704

Sporicidal result (log 3), in presence of low organic load (BSA)

Test strain: *B. subtilis* ATCC 6633

Result	5.0 %	0.3 g/l BSA	60 min.
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Certificate: L+S, 23 April 2012

## Activity Claim: Full Virucidal

### EN 14476

Virucidal result (log 4), in presence of low organic load (BSA) and high medical organic load (BSA + Erythrocytes)

Test strain: *Poliovirus Type 1 strain LSc-2ab*

Result	4.0%	0.3 g/l BSA	30 min.
Result	5.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.

Certificate: Dr. J. Steinmann, MikroLab, 27 July 2010; Eurofins, 23 June 2017

### EN 14476

Virucidal result (log 4), in presence of low organic load (BSA) and high medical organic load (BSA + Erythrocytes)

Test strain: *Adenovirus Type 5 strain Adenoid 75*

Result	2.0%	0.3 g/l BSA	15 min.
Result	2.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.
Result	4.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	15 min.

Certificate: Dr. J. Steinmann, MikroLab, 27 July 2010

### EN 14476

Virucidal result (log 4), in presence of low organic load (BSA) and high medical organic load (BSA + Erythrocytes)

Test strain: *Murine Norovirus strain S99 Berlin*

Result	2.0%	0.3 g/l BSA	5 min.
Result	2.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	15 min.

Certificate: Dr. J. Steinmann, MikroLab, 1 April 2014

### prEN 16777

Virucidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *Adenovirus Type 5 strain Adenoid 75*

Result	5.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	60 min.
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Certificate: Eurofins, 23 June 2017

## Activity Claim: Virucidal Against Enveloped Viruses

### EN 14476:2013+A1:2015

Virucidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *Modified Vaccinia Virus Ankara (MVA)*

Result:	1.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Dr. J. Steinmann, Dr. Brill + Partner GmbH, Bremen, 7 February 2017

### EN 14476

Virucidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *Influenza A (H7N9) Virus*

Result	0.5%	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Microbac Laboratory, Sterling VA20164 (USA), 13 September 2013

### EN 14476:2013+A1:2015

Virucidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: *Influenza A (H1N1) Virus*

Result	0.5%	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Dr. J. Steinmann, Dr. Brill + Partner GmbH, Bremen, 8 February 2017

After evaluation with Poliovirus, Adenovirus and MNV (murine Norovirus) the surface disinfectant Lonzagard® DR-25aN can be declared as having “virucidal” properties according to EN 14476. Furthermore, Lonzagard® DR-25aN has passed prEN 16777, which is a viral surface test. prEN 16777, which was introduced in 2016, is based on similar methodology to EN 13697.

Lonzagard® DR-25aN now has data to support a claim for cleaning with mechanical action, as it has passed EN 16615 for both bactericidal and yeasticidal claims.

### EN 14476

Virucidal result (log 4), in presence of high medical organic load (BSA + Erythrocytes)

Test strain: Duck Hepatitis B (as a surrogate for Hepatitis B (HBV))

Result:	5.0%	3.0 g/l BSA + 3.0g/l Erythrocytes	5 min.
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Certificate: Blu Test Laboratories Ltd., 27 July 2016

### EN 14476

Virucidal result (log 4), in presence of low organic load (BSA)

Test strain: *Bovine Corona Virus (BCoV)* (as a surrogate for other members of the Coronavirus family including MERS-CoV)

Result:	1.0%	0.3 g/l BSA	1 min.
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Certificate: Dr. J. Steinmann, MikroLab, 25 May 2014

### Test According to VAH

Test strains: *P. aeruginosa*, *S. aureus*, *E. hirae* and *C. albicans*

Results low organic load	2.0%	15 and 30 min.
	1.0%	60 min.
	0.5%	240 min.
Results increased organic load	2.0%	15, 30 and 60 min.
	1.0%	240 min.

Certificates:

Prof. Dr. R. Schubert, Frankfurt (M), 29 December 2002

Prof. Dr. H.-P. Werner, Schwerin, 4 October 2002

### Virucidal Performance

#### Tested According to BGA (now RKI) and DW

Equivalence expertise based on formulation Lonzagard® DR-25a regarding virus inactivating properties of Lonzagard® DR-25aN.

### Poliovirus

With soil load	5.0%	15 min.
	4.0%	60 min.

Certificate: Dr. J. Steinmann, Bremen, 15 February 2002

### ECBO Virus

With soil load	5.0%	30 min.
	3.0%	60 min.

Certificate: Dr. J. Steinmann, Bremen, 21 August 2002

### Adenovirus

With soil load	4.0%	30 min.
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Certificate: Dr. J. Steinmann, Bremen, 24 May 2005

### Norovirus

Test strain: *Feline calici virus (FCV)*

With soil load	4.0%	30 min.
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Certificate: Dr. J. Steinmann, Bremen, 25 May 2005

### Rota Virus

Without soil load	3.0%	15 min.
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Certificate: Dr. J. Steinmann, Bremen, 8 June 2005

### Vaccinia Virus

With soil load	2.0%	5 min.
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Certificate: Dr. J. Steinmann, Bremen, 30 July 2005

### Polyoma Virus SV 40 (formerly Papova Virus)

With soil load	2.0%	30 min.
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Certificate: Dr. J. Steinmann, Bremen, 9 March 2006

## Product Information

### Material Compatibility

Suitable for hard washable surfaces. As surfaces vary in quality the product suitability should be checked by testing first on a small inconspicuous area. Aluminium, linoleum, acrylic glass or surfaces coated with polymers could be affected depending on the use concentration. Plasticized PVC could be discoloured. Usage of disinfectant followed by common rinse procedures is advised.

### Compatibility Testing

Samples of typical materials used for medical devices which were tested for material compatibility:

- Anodized aluminium
- Aluminium coated with powder technology
- Nickel plated mild steel
- Polished martensitic steel
- Stainless steel coated with gold
- Polyethylene
- Polymethacrylmethacrylate
- Composite material from tungsten carbide and nickel
- Polyvinylchloride flooring
- Flexible polyvinylchloride tube
- Two types of butyl rubber
- Optical glasses made from polycarbonate
- Optical glasses made from silicate

Product test concentration 3.0%

Test conditions: submersion of material samples at 20°C for up to 30 days.

### Conclusions:

Lonzagard® DR-25aN is suitable for the disinfection of hard surfaces in hospitals, institutional applications and the food industry. Lonzagard® DR-25aN is compatible with ceramics, PVC and polyethylene.

Items containing high concentrations of plasticizers lost some of their properties and may be affected in their properties.

The disinfection of the following items is not advised:

Linoleum, flexible PVC-tubes, polymer coated surfaces and high quality butyl rubber.

The corrosive potential of Lonzagard® DR-25aN against anodized aluminium, tungsten carbide-nickel compounds limits its use for the disinfection of medical devices.

Certificate: Dr. Brill + Partner GmbH, Hamburg, 20 January 2011

## Phys-Chem Properties

Appearance	clear liquid
Odour	slightly saponaceous
Density at 20°C	1.06 g/cm <sup>3</sup>
pH of concentrate	approx. 12.9
pH of 1 % aqueous solution	approx. 11.2
Surface tension, 1 % aqueous solution	29 mN/m
Viscosity at 23°C	30 mPa · s (spindle 1, 10 rpm, Brookfield)
Shelf life	3 years

## Perfumes and Dyes

It is possible to add a perfume and / or a dye to the formulation. We recommend that you contact Lonza to ensure that selected perfumes or dyes are part of Lonza's BPR registration plans.

## Patents

Patent pending on the combination of QUAT plus MEA

## Regulatory Status

Contact Lonza for details of the latest registration position.

## Recommendation for Classification and Labelling.

See Safety Datasheet

## Safety

See Safety Datasheet

## First Aid

### If in Eyes

- Hold eyes open and rinse slowly and gently with water for 15–20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.

### If on Skin or Clothing

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15–20 minutes.

### If Swallowed

- Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control centre or doctor.
- Do not give anything by mouth to an unconscious person.

### If Inhaled

- Move person to fresh air.
- If person is not breathing, call the emergency service or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

## Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

### Storage

Store in original container in areas inaccessible to children. Open dumping is prohibited.

### Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess product may violate national laws.

### Container Disposal

Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying.

### EMEA Region

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