

Cross-contamination is of major housekeeping concern not only in hospitals, but in schools, institutions, and industry. **LONZA FORMULATION S-21** has been formulated to aid in the reduction of cross-contamination in these areas.

LONZA FORMULATION S-21 is a one-step disinfectant cleaner that is effective against a broad spectrum of bacteria, is virucidal, fungicidal, and will prevent the growth of mold and mildew and their odors when used as directed.

LONZA FORMULATION S-21 is an effective one-step sanitizer-cleaner for use on non-food contact surfaces.

When used as directed, **LONZA FORMULATION S-21** will deodorize surfaces in toilet areas, behind and under sinks and counters, garbage cans and garbage storage areas, and other places where bacterial growth can cause mal odors.

Precautionary Statements

Hazards to Humans and domestic animals

DANGER

Keep out of reach of children. Corrosive. Causes eye and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed. Avoid contamination of food.

STORAGE AND DISPOSAL

LONZA FORMULATION S-21

Disinfectant-Cleaner-Sanitizer-Fungicide
Mildewstat-Virucide*-Deodorizer
for Hospitals, Institutional and Industrial Use

Effective in hard water up to 400 ppm hardness
(calculated as CaCO_3) in the presence of 5% serum
contamination

Active Ingredients

Octyl decyl dimethyl ammonium chloride	1.650%
Dioctyl dimethyl ammonium chloride	0.825%
Didecyl dimethyl ammonium chloride	0.825%
Alkyl (C_{14} , 50%, C_{12} , 40%, C_{16} , 10%) dimethyl benzyl ammonium chloride	2.200%

Inert Ingredients

94.500%
100.000%

KEEP OUT OF REACH OF CHILDREN

DANGER

Statement of Practical Treatment

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

SEE LEFT PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Registration No.

6836-75

EPA Establishment No.

6836-IL-1

Net Contents

MANUFACTURED BY
LONZA INC., 22-10 Route 208, Fair Lawn, N.J. 07410

Directions for Use

GENERAL CLASSIFICATION

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

LONZA FORMULATION S-21 is a proven "one step" disinfectant-cleaner-sanitizer-fungicide-mildewstat-virucide which is effective in water up to 400 ppm hardness in the presence of 5% serum contamination.

Apply **LONZA FORMULATION S-21** to walls, floors and other hard (inanimate) non-porous surfaces such as tables, chairs, countertops, sinks, tile, porcelain, and bedframes with a cloth, mop or mechanical spray device so as to thoroughly wet surfaces. For heavily soiled areas, a preliminary cleaning is required. Prepare a fresh solution daily or when use solution becomes visibly dirty.

Disinfection - To disinfect hard, non-porous surfaces in hospitals add 2 oz. per gallon of water. Treated surfaces must remain wet for 10 minutes. At 1 1/4 oz. per gallon of water, **LONZA FORMULATION S-21** will disinfect hard non-porous surfaces in school, industry and non-medical institutions.

2 oz. per gallon use-level. The activity of **LONZA FORMULATION S-21** has been evaluated in the presence of 5% serum and 400 ppm hard water by the AOAC 1975 dilution test and found to be effective against *Staphylococcus aureus*, *Salmonella choleraesuis*, *Escherichia coli*, and gram positive organisms as represented by:

Pseudomonas aeruginosa
Staphylococcus aureus
Salmonella choleraesuis
Escherichia coli
Streptococcus pyogenes
Klebsiella pneumoniae
Enterobacter aerogenes
Streptococcus faecalis
Shigella dysenteriae
Brevibacterium ammoniagenes
Salmonella typhi
Serratia marcescens

For schools, industry and non-medical institution use: At 1 1/4 oz. per gallon of water, **LONZA FORMULATION S-21** disinfects non-cleaning and germicidal effectiveness. It is effective against *Staphylococcus aureus*, *Salmonella choleraesuis*, *Escherichia coli*, and *Serratia marcescens*. The same AOAC tests used to confirm performance for hospitals were used.

Fungicidal Control - **LONZA FORMULATION S-21** is an effective fungicide against *Trichophyton mentagrophytes* (the athlete's foot fungus) when used on surfaces in areas such as locker rooms, dressing rooms, showers and bath areas, exercise facilities, etc. at 2 oz. per gallon.

Mold and Mildew Control - At 1 1/4 oz. per gallon, **LONZA FORMULATION S-21** will effectively inhibit the growth of mold and mildew and the odors caused by them when applied to hard non-porous surfaces (as indicated in general instructions above). Allow to dry on surface and repeat when mold or mildew growth returns.

Virucidal Performance - At 1 1/4 oz. per gallon use-level, **LONZA FORMULATION S-21** was evaluated and found to be effective in the presence of 5% serum and 400 ppm hard water against the following viruses: Influenza A, B, and C.

Herpes Simplex Types 1 and 2 and Vaccinia on inanimate environmental surfaces

Sanitizing Non-Food Contact Surfaces (such as floors, walls, tables, etc.) At 1 oz. per 2 1/2 gallon use-level, **LONZA FORMULATION S-21** is an effective sanitizer against *Staphylococcus aureus* and *Klebsiella pneumoniae* on hard porous and non-porous environmental surfaces. Treated surfaces must remain wet for 30 seconds.

BEST DOCUMENT AVAILABLE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

26 JUN 1984

Lonza, Inc.
22-10 Route 208
Fair Lawn, NJ 07410

Attention: Joseph A. Conti
Manager, Governmental Relations

Gentlemen:

Subject: Lonza Formulation S-21
Registration No. 6836-75
Amendment Dated May 31, 1984

BEST DOCUMENT AVAILABLE

The amendment referred to above, submitted in connection with registration under FIFRA, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- a. The statement: For sale for use and storage by Maintenance personnel only, must be retained on the label.
- b. Revise the statement: "...viruses: Influenza A/Brazil, Herpes Simplex 1 and 2 and Vaccinia on inanimate environmental surfaces." to read:

"...viruses: Influenza A/Brazil, Herpes simplex type 1 and type 2, and Vaccinia on inanimate hard nonporous environmental surfaces.

2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

Your release for shipment of the product labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Note for your records that the viral data submitted was previously reviewed. In addition, the Bardac 205M matrix (not requested) was not required for this type of amendment. It will not be reviewed at this time *but* only placed into your file.

Sincerely yours,

[Signature]

CONCURRENCES			
SYMBOL			
NAME			
DATE			
EPA Form 1320-1 (12-70)			

Product Manager (1)		
Manufactants Branch		
Registration Division (15-7670)		

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