

Lines™

COMPLETE WATERLINE DISINFECTANT & SHOCK SOLUTION

LINESTM is a full strength antimicrobial DUWL solution and a ready-to-use maintenance product for potable water systems. Designed to shock and maintain dental unit waterlines and other water systems with narrow bore polymer tubing and mixed metal components. LINESTM provides fast and effective cleaning in the presence of biofilms, minimizing the impact on the environment, people and equipment. Fresh licorice-mint scent.



DIN 02240323

BACTERICIDAL & FUNGICIDAL

FASTER



30-Second Solution

A 30-second water purge will reduce the LINESTM content to 18 ppm of CFUs. Will not damage resin bonding.



Clean Waterlines

Nightly use of LINESTM in your DUWL will ensure the next day's water is safe.



Quick Biofilm Removal

Removes accumulated waterline biofilm. Biofilm is the main source of microbial contamination and handpiece clogging.

SAFER



Safer for Equipment

Will not corrode metals, clog valves, stain or stick to waterlines. Approved by major manufacturers for use in their equipment.



Antimicrobial

Using full strength protects patients and staff from cross-contamination. It ensures the kill of serious pathogens such as *Pseudomonas aeruginosa*.



Reduces Airborne Bacteria

Protects patients and staff from bioaerosols aerosols generated by the cutting or scaling of teeth.

KINDER



Environmentally Friendly

All products are made with biodegradable ingredients. Contains non-toxic substances.



Economical Usage

One 500mL bottle will fill approximately 166 metres of 1/16" dental tubing or 63 metres of 1/8" tubing. 30mL per unit per week.



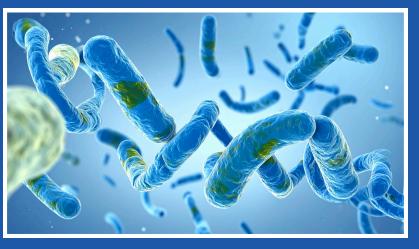
Certified Biodegradable

All ingredients are USP Pharma grade and/or food grade quality.



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WATERLINE STUDY



Average bacterial counts:

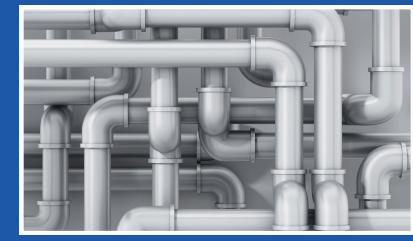
- Dentist with city water 375,000 CFU/mL
- Dentist with well water 1,200,000 CFU/mL
- New dental unit 5,000,000 CFU/mL
- Grocery misting line 512 CFU/mL
- Dentist using LINES™ <200 CFU/mL

WATER QUALITY



Ensure quality of source water: Do not pass distilled water through charcoal filters; they are excellent substrates for bacterial growth. Regularly disinfect containers used to collect distilled water with a non-toxic product such as LINES™.

CLOSED WATER SYSTEMS



Closed systems are often **contaminated** by air pressurizing them. Monitor compressor air for microbial contamination; change compressor filters and install air dryers as needed. If quality of incoming water is of good quality, then reduce use to weekends after the first month. If quality of water is excellent (i.e. Sterile Ozonated, UV treated) then weekend use once per month is all that is necessary.

HOW TO USE

1



First, air purge water lines. Then run 30-60 mL of LINES™ through the tubing until the fluid is visible at the egress.

2



Leave product in the tubing overnight, throughout the weekend or for extended periods.

3



After first time overnight/weekend use of LINES™, thoroughly flush tubing with water for at least 5 minutes. Biofilm (thick slime) may be discharged the first time. Remove handpieces to avoid plugging.

4



New users should use LINES™ nightly for 3 weeks.

5



LINES™ will maintain the unit when used weekly. To ensure the best water quality, use nightly.

6



Water heaters should be removed and dead-end tubing (low speed or QD outlets) should be drained before use and capped at the control block. Disconnect all dead waterline legs including slow speed waterlines.

PRODUCT SPECIFICATION DATA

Item Number	Product Description	Packaging
03-BLUE-005	Lines™ 5L Bag-in-Box RTU	1 Box

CUSTOMER REVIEWS



"The IPAC certified cleaners we were using before switching to Micrylium LINES™ were not really cleaning our waterlines. After a few uses of LINES™, a whole bunch of gunk came out and since then our water has been clear. The difference since switching to LINES™ has been incomparable. Micrylium LINES™ cleaner can't be beat!"

Maria Peragine, RDH, Glow Dental

LINCA4.31.10.25



Manufactured By

Micrylium Laboratories Inc
5000M Dufferin Street, Toronto, Canada
M3H 5T5
+1 416-667-7040
www.micrylium.com



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THE ECO-PACK



The Eco-Pack bag-in-a-box contains a sealed biodegradable plastic bag and dispensing spigot. This design ensures no outside air comes in contact with the solution at any point before it is dispensed. This maximizes the solution's antimicrobial properties. Square box design vs round bottles maximizes storage space. Both the box and bag collapse for easy disposal.

OUR MASCOT



Frogs are highly sensitive to their surroundings due to their permeable skin. The presence of a healthy frog population is a strong indicator of a balanced and healthy eco-system. Micrylium uses the frog as our mascot because we subscribe to creating products and packaging that are eco-friendly, biodegradable and sustainable. LINES™ contributes to keeping our water systems clean and healthy.

DID YOU KNOW?



LINES™ can be left in the dental unit for extended periods (up to 6 months). It can also be used to clean hand pieces and other instruments prior to sterilization. Always rinse before with distilled water. This solution will eliminate the bad odours and tastes that occur during procedures.

CONTACT TIME

Pathogen Type	Strain	Effective Contact Time
Bacteria	Salmonella choleraesuis (ATCC 10708)	6 hours
Bacteria	Pseudomonas aeruginosa (ATCC 15442)	6 hours
Bacteria	Staphylococcus aureus (ATCC 6538)	6 hours
Bacteria	Escherichia coli (NCTC 10541)	6 hours
Fungi	Trichophyton mentagrophytes (ATCC 9533)	6 hours

Note: Initial Formulation Batch (aged 60 days) tested on 60 replicates as indicated in AOAC method 955.15 for confidence level of 95%. Each Production Batch is tested with 10 replicates (0% failure) to monitor ongoing quality control specifications for each product.

* Testing performed at Nuero-Technics Laboratory, 2000 Ellesmere Road, Unit 16 Scarborough, Ontario
All other tests performed at Micrylium Laboratories, 117 Dolomite Drive, North York, Ontario



1. IDENTIFICATION																				
Product Name	Lines™			Manufacturer	Micrylium Laboratories Inc.															
Registration	CAN DIN	02240323			Address	5000M Dufferin Street, Toronto, Canada, M3H 5T5 www.micrylium.com														
	US FDA	973765																		
	EU CE	Class I																		
Indication	Medical Device Disinfectant / Cleaner			Phone	416-667-7040															
Emergency Phone #	CHEMTRIC			Fax	416-667-0071															
1-800-424-9300					CANUTEC	1-613-996-6666														
2. HAZARD IDENTIFICATION																				
Symbol Pictogram	Not Applicable			Signal Word	Not Applicable															
				Symbol	Not Applicable															
Classification	Not Applicable																			
Health Hazard	No Serious Health Hazards			Environmental Hazards			Biodegradeable													
Precautionary & Hazard Statements	H302: Harmful if swallowed.			P102: Keep out of reach of children. P301: IF SWALLOWED: Drink large quantities of water or milk. P305: IF IN EYES: Flush eyes with large quantities of water.																
3. COMPOSITION																				
Chemical			CAS #	LD-50 (Oral, mg/kg) - Rat		Concentration (%)														
Ethanol	64-17-5			7,060		9.5%														
Chlorhexidine Gluconate	18472-51-0			2,000		0.1%														
Xylitol	87-99-0			4,000		0.6%														
4. FIRST AID MEASURES																				
Inhalation	If breathing is difficult, remove individual to fresh air.			Ingestion	Drink large quantities of milk or water to dilute.															
Skin Contact	No adverse effects.			Eye Contact	Flush with plenty of water.															
Most Important Symptoms and Effects (Acute and Delayed)																				
May cause mild reversible irritation if inhaled.																				
Indication of any Immediate Medical Attention and Special Treatment Needed																				
Not Applicable.																				
5. FIREFIGHTING MEASURES																				
Non-Flammable.																				
6. ACCIDENTAL RELEASE																				
Use all means to prevent spillage.																				
7. HANDLING & STORAGE																				
Store in a cool, dry, well-ventilated location. Keep away from heat, sparks and flames. DO NOT mix with bleach or peroxides. Storage and Transport: 0° - 30°C																				
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION																				
No specific measures required.																				
9. PHYSICAL AND CHEMICAL PROPERTIES																				
Physical State	Colour	Odour	Solidification point	Boiling point OECD 103	Flash Point ASTM D56	Density g/ml @ 25°C	pH	Kinematic Viscosity@23°C												
Transparent, Liquid	Light Blue	Licorice-Mint	-5°C	105°C	45°C	0.99	6.0	12mm²/s												
10. STABILITY AND REACTIVITY																				
Stable under normal conditions. Incompatibility: Strong oxidants, acid chlorides, silver salts Decomposition: Products: CO ₂ , CO																				
11. TOXICOLOGICAL DATA																				
Acute Dermal Toxicity	Not found to be dermal sensitizer			Acute Oral	N/A															
Ocular Irritation	0.0 severity after 7 days			Acute Inhalation Toxicity	N/A															
Reproductive Hazards	Ingestion/inhalation can be harmful. (TDLo 300mg/Kg Ethanol)			Carcinogenicity	Ingestion of Ethanol IARC Group 1.															
CAUTION: Xylitol is toxic to dogs, rabbits, cows, baboons and horses when consumed.																				
12. ECOLOGICAL INFORMATION																				
Surfactants are readily biodegradable in soil and water. Persistence unlikely based on available data.																				
Ethanol	EC50 (72h) = 275 mg/l (Chlorella vulgaris)		Fathead minnow (Pimephales promelas) LC50 = 14200 Mg/L/96h		Photobacterium Phosphoreum:EC50 = 34634 Mg/L/30 min Photobacterium Phosphoreum:EC50 = 35470 Mg/L/5 min	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h														
13. DISPOSAL CONSIDERATIONS																				
Domestic.																				
14. TRANSPORT INFORMATION																				
Not regulated																				
N/A	Land			Sea	Air (IATA)															
	N/A			N/A	N/A															
	N/A			N/A	N/A															
	N/A			N/A	N/A															
15. REGULATORY INFORMATION																				
TSCA – No reporting required.					CERCLA – No hazardous pollutants or ozone depletion.															
16. OTHER INFORMATION																				
The information and recommendations contained herein are based on information believed to be correct. It is offered in good faith, without guarantee. Micrylium Laboratories Inc. make no warranty expressed or implied.																				
Effective Date: 2025/10/31			Document: LINES 2.0																	