



Superior Solutions

Zep DRAIN PROGRAM



Introducing Zep® Biofilm Drain Purge

Now Resistant Microorganisms Have No Place to Hide

Eliminate the Possibility of Cross-Contamination. Kill resistant microorganisms, such as *Listeria*, *E. coli*, and *Salmonella*, in drains and trunk lines with Zep's EPA registered anti-biofilm products.

Zep BIOFILM DRAIN PURGE PROGRAM

YOUR BEST DEFENSE AGAINST **Cross-Contamination**

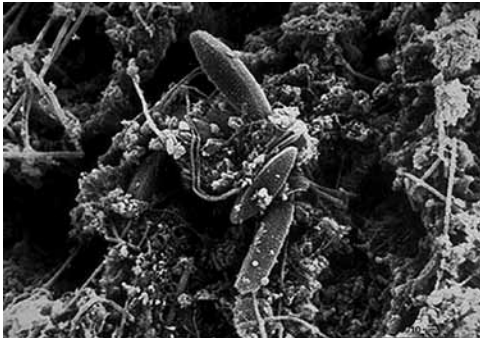
Until now, the food industry has been able to sanitize just about everything except drains and trunk lines. Unfortunately, these dark, damp places harbor dangerous microorganisms that can cause cross-contamination and potential recalls.

Now it's easy to kill harmful *Listeria*, *E. coli*, *Salmonella* and other resistant microorganisms in hard-to-reach areas of drains and lines with new **Zep Biofilm Drain Purge with PerQuat™ technology**.

ABOUT PERQUAT™ TECHNOLOGY

PerQuat™ technology is based on the discovery that a powerful combination chemistry with unique efficacy against biofilm bacteria is developed by pairing the negatively charged Peroxide ion with a positively charged Quaternary Ammonium compound. The two molecules form an intimate ion pair resulting in "PerQuat", a Hydrogen Peroxide and Quat hybrid with unique cleaning and antimicrobial efficacy. This powerful technology can be used in a variety of industrial and public health environments to remove biofilm from the surfaces.

Why You Need This Innovative, Cost Effective New Product



- Drains and trunk lines have been shown to be a breeding ground for pathogens, such as *Listeria*, *E. coli* and *Salmonella*, which form protective biofilms in wet environments.
- Zep Biofilm Drain Purge effectively removes organic debris from drains and piping, killing harmful resistant bacteria that cause odors and illness.
- Zep offers a complete sanitation program that includes drain care to ensure a safe, contamination-free food operation.

FACT A 2004 audit of food processing facilities by the USDA Food Safety and Inspection Service reported that 27.8% of floors and drains sampled tested positive for *Listeria*.

FACT According to the HACCP report, "the frequent presence of *Listeria* organisms in floors and drains does create an ever-present potential threat of cross-contamination to food contact surfaces in the post-lethality environment. It is recommended that processors work with sanitation suppliers to develop a sound floor and drain sanitation program if they don't already have one in place."

FACT Typical drain cleaners and sanitizers, such as enzymatic cleaners, drain openers or quat based sanitizers, do not have EPA approval to remove biofilm, and are ineffective against pathogens in biofilms.

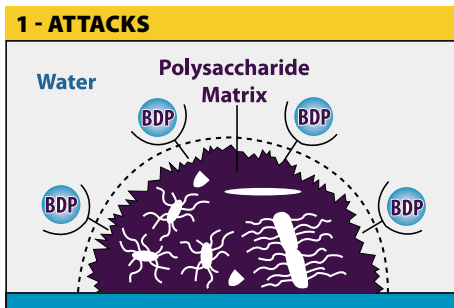
How Zep Biofilm Drain Purge Works

THIS NEW FOOD SAFETY PRODUCT WORKS BY ELIMINATING HARMFUL BIOFILM THAT ALLOWS BACTERIA TO GROW AND FLOURISH IN DRAINS.

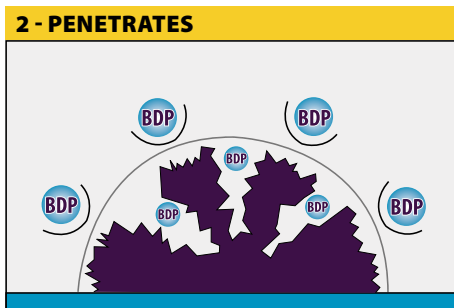
- Since biofilms allow pathogens, such as *Listeria*, *E. coli* and *Salmonella*, to become resistant to chemical and heat treatments, conventional chemicals, such as chlorine, quats and peracetic acid, have limited effectiveness against biofilm, allowing dangerous pathogens to grow and flourish in drains.
- Without removing the biofilm matrix, it is impossible to kill the pathogens in drains.
- Zep Biofilm Drain Purge has a patented phase transfer technology (PerQuat™ Technology) that is specially formulated to penetrate and remove biofilm while acting as a bactericide, slimicide and algicide.

THE RESULT: effective penetration and removal of biofilm, and inactivation of harmful microorganisms in it.

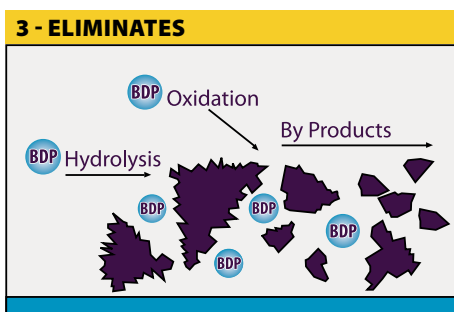
Zep Biofilm Drain Purge In Action



Step 1 - Attack and bombard the biofilm matrix



Step 2 - Penetrate the outer layer and dissolve into the matrix



Step 3 - Destroy and eliminate the biofilm matrix by a unique combination of hydrolysis, oxidation and solubilization

Product Highlights

- EPA registered with biofilm claim
- Unique anti-biofilm, bactericidal, slimicidal, algicidal activity
- Effective against mold and mildew
- Easy to use
- Apply as a foam or pour directly into drain
- Can also be used to remove biofilm from walls, floors and ceilings

Product Benefits

- Destroys and controls microorganisms in the biofilm in the drains
- Eliminates fruit flies in the drains
- Allows for easy, quick and effective foam application into drains and down into trunk lines
- Allows for disinfection past the trap and a full coverage of the entire trunk line at 360°
- No scrubbing is required (reduces labor)
- 20-30 seconds/drain

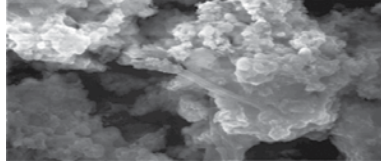
Key to Diagram



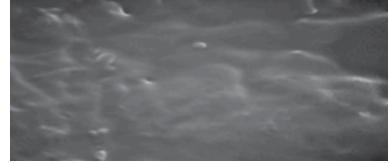
Superior Action Against Super-Tough Microbes

COMPARE ZEP BIOFILM DRAIN PURGE WITH OTHER COMMON DISINFECTANTS

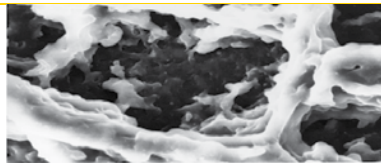
Before Zep Biofilm Drain Purge



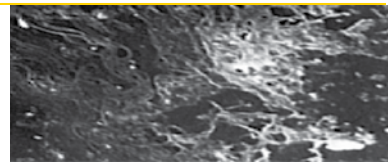
After Zep Biofilm Drain Purge



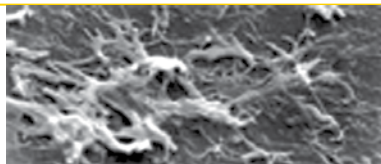
Before Bleach



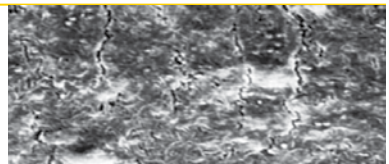
After Bleach



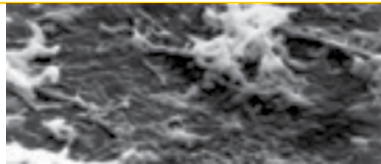
Before Quat



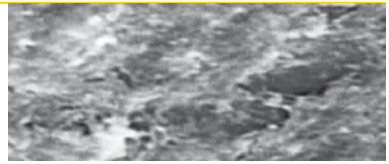
After Quat



Before Glutaraldehyde



After Glutaraldehyde



Testimonials

I would like to take a moment to thank you for providing us with a great product. As a processor of fully cooked deli meats, control of *Listeria* is a major concern. We incorporated daily use of your product into our sanitation program. We have practically eliminated positive *Listeria* spp. results in our environmental testing program. It's been simple and safe to use and very effective.

QA Director

In tests of sanitizers - including hot water at 180°F, chlorine at 20, 50, and 200 ppm and iodine at 25 ppm - the bacteria on stainless steel chips survived, even after immersion in the sanitizer for five minutes. The hydrogen peroxide/quat based product was found to be effective against biofilms at 3% and 6% solutions.

Source: Food Protection Report

It's This Easy to Use Zep Biofilm Drain Purge:

For Drains

- Use a Zep Biofilm Drain Purge foaming device or use in-house foaming device.
- Add 6-15 ounces of Zep Biofilm Drain Purge A and 6-15 ounces of Zep Biofilm Drain Purge B for every gallon of water to a foaming device.
- Place plunger attachment over drain and apply foam for 5 seconds or until entire drain cavity is full of shaving cream-like foam.
- Allow 10 minutes for foam to subside.
- Rinse product down the drain.
- Once mixed with water, activated Zep Biofilm Drain Purge should be used within 24 hours.



For Trunk Lines

- Attach the appropriate foaming pipe attachment
- Add 6-15 ounces of Zep Biofilm Drain Purge A and 6-15 ounces of Zep Biofilm Drain Purge B for every gallon of water to a foaming device.
- Fill trunk line with thick foam until pipe is entirely filled.
- Allow 10 minutes for foam to subside.
- Rinse pipe line with water.
- Once mixed with water, activated Zep Biofilm Drain Purge solution should be used within 24 hours.



Zep Biofilm Drain Purge Technical Data

Biofilm Drain Purge Solutions

Biofilm Drain Purge A	
Appearance:	Clear Liquid
pH at 1% Solution:	4-6
Odor:	Mild
Foaming:	Moderate
Specific Gravity:	1.0-1.2
Rinsing:	Excellent
EPA Reg. #:	63761-3-1270
Container Size:	5 & 55 Gallon

Biofilm Drain Purge B	
Appearance:	Clear Liquid
pH at 1% Solution:	10-12
Odor:	None
Foaming:	None
Specific Gravity:	1.0-1.2
Rinsing:	Excellent
Container Size:	5 & 55 Gallon

Equipment

Zep Foamers					
Foamer Name	Type	Mix Capacity	Amount of FilmPurge added	Amount of foam generated	# of drains that can be treated
M79401	2 gal Manual pump-up	1 gallon	6-15 ounces of each solution	10 gallons	5-8 drains
796401	Air operated	15 gallons	3/4 gallon of each solution	150 gallons	75 drains



Required Attachments



Just Apply – No Scrubbing Needed!

Ideal for use in:



Food Processing



Food Service



Hospitality



Industrial



Supermarkets



Restaurants



Dairy Farms



Egg Washing Plants & Hatcheries



Beverage Industry

Zep's Complete Sanitation Solution For Your Food Safety Program

No other company offers the depth of effective cleaning resources, green solutions and safety innovations that Zep offers your food service operation.

To learn more about Zep's complete sanitation solution –
contact your Zep Representative or go to www.zep.com

Superior Solutions with **Zep® Biofilm Drain Purge**



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