



RESIDENTIAL BIO-SANITATION PROTOCOL

FOR NISUS PRODUCTS



NISUS[®]

Better science for a better world.

RESIDENTIAL BIO-SANITATION MODEL SERVICE PROTOCOL

(ALWAYS READ, UNDERSTAND AND FOLLOW THE LABEL, SDS AND REGULATIONS.)

TOOLS

Adequate supply of preferred product(s):



Foam Fresh®



Bac-Azap®



ProFoam® Platinum

INSPECTION TOOLS AS NEEDED

Professional flashlight

Inspection mirror

Notebook or electronic tablet for notes and service record documentation

Knee pads

Safety glasses

Gloves

Spatula to probe areas

APPLICATION EQUIPMENT AS APPROPRIATE FOR JOB

Drain Brush (several sizes for residential drains)

Liquid Sprayer

Hand-operated, hose-end or power foamer, or foaming attachment for larger jobs

OTHER

Possess any required government credentials to perform work

PPE as required by label for work being done

BIO-SANITATION BACKGROUND

Introduction: Bio-sanitation is the maintenance of clean conditions via the use of beneficial microbes, whereby organic matter is consistently eliminated. The accumulation of organic matter can create major concerns in a residential establishment. Clogged or slow running drains can lead to sewage and wastewater backups, equipment failures, flooded basements and sinks accidentally overflowing. The buildup of waste in washing machine drain lines, garbage disposals and kitchen sinks not only presents an array of foul odors but can also support pathogenic bacteria and a protective layer of biofilm that is difficult, if not impossible, to remove with traditional chemical cleaners. Sink drains, floor drains, bathtub and shower drains are essential in buildings; however, most drains suffer from neglect until a serious problem occurs. Foam Fresh and Bac-Azap are designed to break down and prevent the buildup of organic matter that is the cause of bio-sanitation issues, which require measures through the use of beneficial microbes.

PREPARATION INSTRUCTIONS

Removing excessive filth, dirt and grime from surfaces and drains before the application of bio-sanitation products is critical to the overall success of a program. Clean any heavy buildup, trapped grime, hair, etc. from sink and bathtub drains. Remove any heavy buildup in garbage disposals and thoroughly flush with water. Clean drain hoses if necessary. Apply 2-3 gallons of warm water into floor drains and 1-2 gallons into sink drains to wet the surface and warm the pipe, creating an acceptable environment for the beneficial microbes to do their work.

GENERAL APPLICATION INSTRUCTIONS

Initial Service: Apply Bac-Azap at full strength as a liquid or foam or apply ready-to-use Foam Fresh Bio-Sanitation Foam. Bac-Azap itself produces a wet foam when used





in proper foaming equipment. To produce a thicker dry foam, mix Profoam Platinum at a rate of 4-6 ounces per 1 gallon of Bac-Azap liquid at full strength depending on the foam consistency desired. It is best to wait several hours before running water down drains. Do not use antimicrobial cleaners in areas where bio-sanitation applications have been conducted.

Follow-up Treatments: Conduct at least a quarterly service. More frequent applications maintain a higher beneficial colony population. Use a power foamer to apply foam deep into drains and pipes past the p-trap.

APPLICATION USE RATES

Bac-Azap

Using undiluted Bac-Azap, pour 1 quart (32 oz) into all floor drains and 1/2 quart (16 oz) into all sink drains.

Foam Fresh

Use the drain actuator and extension hose. Insert the extension hose as far down the drain as possible. Depress the actuator to fill the pipe void beyond the p-trap and slowly retrieve the extension while continuing to depress the valve to fill the drain. Allow foam to reach drain grates.

Bac-Azap Plus Foaming Agent (Profoam Platinum)

If larger volume of foam is needed, foam the Bac-Azap and Profoam mixture down into the drain. To improve the distribution of foam, use a power foaming unit with a drain applicator or drain cover plate. This provides a method to apply the bio-sanitation foam deep down into the drain systems.

Follow the rates and instructions in the initial service described above until drains run clear and are free of organic debris and buildup. Reduce to a half-strength application for future applications.



It is important to push the extension past the p-trap to apply product behind the water held in the p-trap. Once foam is visible coming out of the drain, you have achieved maximum penetration down the pipe.

For a complete drain protocol using bio-sanitation products along with insecticides, see the *Nisus Drain Protocol*, available on the Nisus website at niscorp.com. Note that Bac-Azap, Foam Fresh and Profoam Platinum are not pesticides and make no pesticidal claims.

Instructions for Other Surfaces:

Apply a liberal coating of Bac-Azap liquid or Foam Fresh to all surfaces.

Garbage Disposals:

Foaming the entire garbage disposal sink is best. Use garbage disposal as normal to remove all debris and turn off. Start by placing the extension towards the bottom of the disposal sink underneath the grinders, depress the actuator, and slowly withdraw the extension until foam fills the entire disposal and covers the splash guard. As an alternative treatment, pour 8 oz of Bac-Azap into the drain area.

Dishwasher:

Use the extension hose to apply Foam Fresh to the filters (2 pre-filters: coarse and fine) and drain area. Foam all rinse drains. Do not allow foam to contact dishes, glasses or silverware.

Stains and Smells on Carpets, Car Mats, and Upholstery:

Apply a liberal coating of Foam Fresh or Bac-Azap. For deep stains, pour Bac-Azap directly on stained area and let stand for an extended period. Soak up remaining material with a dry towel. Multiple applications may be necessary.





CONCLUSION AND FOLLOW-UP

There is no replacement for cleaning; bio-sanitation is a beneficial tool, but not a miracle solution! Remember, these products can help loosen years of organic material, so you can apply them before cleaning in extreme situations. Some surfaces must be cleaned first, and proper repairs on things like missing grout, cracked tiles, missing trim, holes in the wall, leaking pipes, etc. should be done immediately.

A bio-sanitation program works best when the treatment is conducted routinely. Incorporate the service into a monthly to quarterly pest management program. Assess the current maintenance program and provide follow-up instructions for continuing the use of bio-sanitation products for light daily treatments, while limiting the use of products that can potentially kill the beneficial microbes.

5 KEY WAYS TO ENHANCE THE EFFICACY OF MICROBIAL BIOSANITATION PRODUCTS

Moisture	Extremely Important. Bio-sanitation products work best in wet environments where chronic or recurring moisture is present. Cells must stay moist or wet. Microbes will not germinate and reproduce on completely dry surfaces.
Temperature	Microbes flourish at slightly warmer temperatures. Running warm water down drains before applications can spike activity and give a jump start to the spores' ability to break dormancy. Treatments in colder environments will take longer to produce desired results.
Reduced Water Flow	Allow the beneficial microbes time to work. Refrain from flushing pipes or running water down sinks and drains for as long as possible.
Time	These products require adequate time to work. It is best to apply bio-sanitation products at the end of the day, after normal business hours, weekends or other periods of inactivity.
Cleaning	Switch to steam cleaning instead of power sprayers, bleach and antimicrobial products on non-food use surfaces. Antimicrobial products are designed to kill bacteria and will kill both beneficial and non-beneficial microbes. Steam cleaning is a good add-on service!

NOTES



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