



Creating Integrated Solutions
Since 1888

ENVIRO CHEM®

Liqui Bac TECHNICAL DATA

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ENVIRO CHEM Liqui-Bac Liquid Bacteria WITH INSTANT ODOR CONTROL

Safe, Non-Toxic, Non-Acid, Non-Alkaline

- Digests & liquefies Organic Waste, Grease & Food By-Products
- Non-Pathogenic & Non-Polluting
- Reduces Suspended Solids & Reduces Malodors

Recommended For – hospitals, nursing homes, schools, prisons, apartments, funeral homes, kennels, clinics, grease traps, industries, drain lines, down pipes, porta toilets, septic tanks, recreational vehicles, marinas, sump pumps, wet wells.

General Description – Liqui-Bac is a blend of multiple bacterial spores found in nature. The bacterial spores in Liqui-Bac have been selected to produce enzymes that efficiently degrade and liquefy sugars, starches, proteins, fats, oils and grease. It helps reduce malodors.

Characteristics – Non-toxic, non-pathogenic, non-contaminating, non-acid, non-caustic, non-corrosive, no polluting phosphates. No mixing – no mess. Liqui-Bac first build colonies and when full strength is attained, they go dormant until organic waste is present – then they become 100% active until their work is done, at which time they begin rebuilding their colonies to replace fatalities and the cycle is repeated.

Activity	200 billion/gallon
pH range	6.9 – 7.9
Storage	Store in a cool dry place
Shelf Life	2 years

Usage – Use in all waste lines and facilities to reduce BOD, to reduce H₂S odors, to keep lines open, to keep waste flowing freely, to open lines to full diameter.

Warning – Disinfectants, chlorinated products, extra hot water (160°F) or higher) will kill some bacteria. It is important to administer the daily dose of Liqui-Bac at times when they are least likely to be followed by one of the above.

Camp Green – Approved product for use in Canadian campgrounds.

Food Plants – Has a letter of non-objection from the Canadian Food Inspection Agency. Do not use on food contact surfaces. Do not contaminate food, feed or potable water during use or storage of this product.



Animals & Humans – Liqui-Bac will not harm animals or humans. However, discomfort will follow if allowed to contact eyes. Under no circumstances should it be swallowed but if it is swallowed do not induce vomiting. Give large quantities of water. Call physician immediately. If this product should come in contact with the eyes, flush with water immediately and if inflammation develops, call physician. Avoid contact with open wounds or sores. But if such contact happens and inflammation develops call physician.

Marine Life – Completely harmless to marine life. In fact it helps make water safer and healthier for marine life. Liqui-Bac is non-toxic and contains only non-pathogenic bacteria which reduce BOD. BOD is Biochemical Oxygen Demand, which describes the amount of oxygen needed for biochemical oxidation of wastes. When BOD is high, so much of the oxygen in the water has to be used to oxidize the waste that there is not enough oxygen for the marine life to live.

Plants – Liqui-Bac is harmless to plants. In fact, life down stream from the treatment area should show improvement since Liqui-Bac reduces BOD which deprives plant and marine life of adequate oxygen (for a healthy existence).

Metal & Other Surfaces – Liqui-Bac will not harm any surface it comes in contact with. There is no corrosion, discoloration or deterioration to worry about with this product. Does no harm fully cured acrylic floor finishes.

Handling – No special handling or safety equipment required.

Packaging – Litre, 12 litres per case, 4 litre, 4x4 litre per case, 20 litre pail, and 210 litre drum.

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DRAINS AND MAINS

What is "Liqui-Bac?" – Liqui-Bac is a blend of carefully selected aerobic, anaerobic and facultative bacterial spores found in nature. They are harmless to animals and marine life and are non-pathogenic. They reduce BOD and pollution potential. They oxidize Hydrogen Sulfide (H₂S) and other foul odors and gases produced from waste. Liqui-Bac is double acting! First it neutralizes the foulest of malodors with a pleasant fragrance that provides long-lasting residual malodor control while the bacterial colonies are multiplying and digesting the organic waste that is producing the odor. The digestion process eliminates the source of waste odors.

Liqui-Bac bacteria cannot rest in the presence of organic waste materials, they must process it. Once their job is done they immediately concentrate on building their colony population back up to full strength, then they go dormant. You might say they sleep with their eyes open waiting for work. As soon as new waste comes into their presence they swing into action. Anywhere in your plumbing system (elbows bends, joints and Q ups) where solid waste can accumulate – Liqui-Bac can build a colony. As long as you continue to apply treatment, the colony will stay – so no more foul odors, no more foul gases, no more overflows, no more back-ups. Note objects of wood, plastic or metal cannot be removed by any treatment, you will need a mechanical device.

Problem – It is the nature of plumbing and drain systems to accumulate and trap solids and organic matter. The very soaps we use for cleaning can reduce the diameter of the pipes that carry them away. It is not uncommon for a 4" drain pipe to be reduced to 1½" diameter by buildup. Foul odors mean the system needs help.

Solution – Liqui-Bac masks odors, devours grease, soap film, human waste, natural foods, scum and other solids that can build up and reduce flow or stop it.

Instructions – Pour Liqui-Bac directly into drain lines beginning in the lowest floor of the building and working up, one floor per day, until entire system is cleaned and flowing freely. After the top floor is reached, treat from top floor only. Liqui-Bac is 100% ecologically safe. It will not disturb but enhance the action of septic tanks, grease traps and sewage disposal systems. It will not harm any surfaces of fixtures it comes in contact with.

Drain Line Dosage Chart

Pipe Size	Dosage	Frequency
2"	120 ml	2 times per week
4"	240 ml.	2 times per week
6"	360 ml	2 times per week
8"	480 ml	2 times per week

Apply Liqui-Bac at the end of the day or during the lowest use period, but after your cleanup is completed.

If you pour hot water (160° or higher), chlorinated products, or disinfectants down your drain soon after treating with Liqui-Bac, you will destroy all or most of your Liqui-Bac so get these harmful agents out of the way first.

Let Liqui-Bac follow a little later and your system will soon be in good shape. During the introductory period (21-35 days), you may exceed the prescribed amounts to speed up the establishment of your colonies. Once the colonies are established, stick with prescribed quantities and follow the schedule.

Recommended dosage should be increased proportionately if significant increases are experienced in traffic (or operation) during any 30-day period.

Timing – Apply Liqui-Bac at the end of the day or during the lowest use period. After the top floor is reached, treat from the top floor only.

Results – Drains flow freer, foul odors disappear, pipes are restored to original diameter and restrooms are livable again.

GREASE TRAPS

Introducing a Bacterial-Enzyme Solution to Grease Trap Problems – The bacterial spores in Liqui-Bac have been selected to produce special enzymes. These enzymes enable the bacteria to digest soluble BOD and break down starch, protein and grease suspended solids. This digestion process results in a free-flowing grease trap, with lower discharge of BOD and fats, oils and grease from the grease trap, while also reducing odors. Also, by reducing the buildup of solids in the grease trap, you can reduce the frequency of manual removal of grease and other solids from the grease trap.

Problem – One of the most unpleasant and expensive experiences in running a restaurant or cafeteria is grease trap overflow caused by grease and solids (faster and thicker than the trap can handle) entering the trap. Since you cannot shut down the trap, nor increase its capacity, the best answer to this problem is to break down the grease and solids as they enter the grease trap. This enables them to flow freely through the trap, ending unexpected overflow, odors and manual cleaning.

Solution – Liqui-Bac breaks down the grease and solids.

Procedure – For best results, start treatment immediately after the grease trap has been cleaned. Add directly to the grease trap per dosage chart. One week later begin preventative maintenance schedule: At the close of business, run lukewarm water down each drain leading to the grease trap for 5 seconds to clear the line of any harsh chemicals which could reduce the geological activity of the product. For traps less than 566L capacity, add 120ml – 150ml of product daily, by pouring or pumping in a pipeline closest to the trap.

After adding, flush down with 1 cup of lukewarm water. For grease traps larger than 556L, add 240ml – 300ml daily using the same procedure. The next morning, run lukewarm water down each drain for 5 seconds to flush mixture into grease trap. Repeat once a week. For 24-hour businesses, use at period of lowest water flow down the drains.

For traps that have been in use where a top crust is visible, add 950ml per 1.5m³ (2qt per 503 ft) capacity directly to the grease trap. Repeat every 3-4 days until the top crust disappears and then begin the preventative maintenance schedule. If the grease trap is not treated first, it may receive more grease than it can handle and become overloaded.

Timing – Treatment should take place at the close of business, at the end of use period or at the end of peak (in the case of 24 hour operations).

Results – Free-flowing grease traps, no foul odors and no manual cleaning.

Preventative Maintenance – Treatment should always be applied first on the lowest level, that is, at the point nearest the drain leading to the lateral, either in the basement floor drain, or the first floor facilities if there is no basement drain, regardless of where the blockage is. Even if the blockage is on an upper floor, always start treatment on the lowest level; then follow that treatment a day later with an application on the next highest floor. Follow this procedure each day until the floor with the stoppage is reached. Since Liqui-Bac releases large amounts of debris from plumbing, that no other methods has been able to reach, this procedure will preclude dislodging of debris on upper floors that may lodge against debris in a lower floor pipe and cause problems.

Always treat the grease trap first, heavily with a concentrated purge treatment, before treating any plumbing fixtures or lines that empty into the grease trap. **Do Not treat related plumbing until 48 hours after the grease traps last purge treatment.** If this is not done, the grease trap will receive more loosened grease and solids that it can cope with. The dirty grease trap will become over loaded and plug the line leading out from the trap. If the facility does regular deep fat frying, the grease trap should receive a purge treatment on a routine basis to prevent overloads of cooked grease from plugging the drain field or dry well.

Initial Purge Treatment

- (1) Make sure any crust or cap is broken up.
- (2) Add directly to the trap 950ml of Liqui-Bac per 1.5m³ capacity.
- (3) One week later begin preventive maintenance listed on the Grease Trap Dosage Chart.

You should use, as an initial purge treatment, 950ml of Liqui-Bac for every 1.5m³. The sooner colonies are built to full strength, the sooner you will see results. Recommended quantities will take 21-25 days to build to full strength. Certain agents used in your cleanup procedure can harm Liqui-Bac; hot water (160°F or higher), disinfectants and chlorinated products. It is, therefore, absolutely necessary that you do not treat your grease trap before flushing such agents down the drain. To apply Liqui-Bac, first get your cleanup operation completed, then flush Liqui-Bac down the drain with a quart of luke-warm water.

If you have a 24 hour-a-day operation, treat the grease trap in the slowest period following cleanup. If you have less than a 24 hour-a-day operation, treat after closing but not before cleanup. Recommended dosage should be increased proportionately if significant increases are experienced in traffic (or operation) during any 30-day period.

DRAIN TREATMENT CHART
Besides the regular direct treatment of your drains, it is recommended from time to time, at the advice of your technical representative, to treat drains from dishwashers, janitorial closets, urinals and other areas which are likely to be a source of occasional trouble even in buildings which take good care of their plumbing and drainage systems.

If main drainage System is being Treated	If main drainage system is not being treated	
Dishwasher	120ml weekly	475ml weekly
Floor drain	120ml weekly	480ml weekly
Garbage grinder	120ml weekly	480ml weekly
Grease trap	120-150ml. weekly/1920ml weekly	
Pot sink	240ml weekly	480ml weekly
Steam table	120ml weekly	480ml weekly
Mop sink	240ml weekly	480ml weekly
Horizontal branch line	120ml weekly	240ml weekly
Stack vent	120ml weekly	240ml weekly
Urinals	240ml weekly	480ml weekly
Toilet bowls	240ml weekly	480ml weekly
Ice bin drains	240ml weekly	480ml weekly
Laboratory sinks	240ml weekly	480ml weekly
Hand dishwash Sinks	240ml weekly	480ml weekly
Refrigerator Drains	240ml weekly	480ml weekly
Vegetable peelers	240ml weekly	480ml weekly
Vegetable pre-rinse Sinks	240ml weekly	480ml weekly

GREASE TRAP DOSAGE CHART

Trap Size	Daily Dose/Trap
<566L	120-150ml
>566L	240-300ml

SEPTIC TANKS, PORTA-TOILETS, CESSPOOLS, DRAINFIELDS, SUMP PUMPS AND DRY WELLS

What is Liqui-Bac? – Liqui-Bac is a blend of bacterial spores that produce enzymes that break down and liquefy suspended solids such as fats, greases, carbohydrates and proteins. Rotten egg odors (hydrogen sulfide odors) are reduced by these bacteria as they liquefy the organic solids and help the effluent flow freely and easily into the subsoil.

Liqui-Bac will enter and colonize the lateral lines and holds tanks and keep them open and functioning continually – just treat as directed. Regular treatment with Liqui-Bac prevents foul odors, foul gases, unnecessary pumping, excavation bills, embarrassment, complaints from neighbors, ponding drain fields and inoperative dry wells.

Septic Tank Problems – A septic tank's function is to hold organic waste long enough to allow digestion and liquefaction, and to facilitate drainage of this liquid into the subsoil. However, they can overflow, emit foul odors and gases, and cause backups of sewage into plumbing fixtures, clog drain field pores, plug up drain field soil, and cause unnecessary pumping and excavation bills. These problems can occur if there are not enough bacteria to digest the grease, soap and other wastes that are in the tank. A low bacterial population may result from caustic drain cleaners or germicides entering the tank.

Solution – Regular treatment reinforces the native bacteria colonies, when toxic wastes weaken them. The extra bacteria liquifies organic wastes and suspended solids keeping the drain fields from plugging, while reducing foul odors.

Septic Tank Procedures – Use 475ml per 710L capacity for the initial purge dose. Pour into toilet and flush. Thereafter, use 240ml per 480ml per week for every 12 people using facility. If the septic tank has become clogged and odorous, add 4 L directly to septic tank through the manhole. After the tank functions properly, begin preventive maintenance schedule.

Porta-Toilets – Add 4L directly and cover the solids. Use 240ml each week for continued waste digestion. Make sure the waste surface is kept moist. Start treatment again with 4L each time the vault is pumped.

Recreational Vehicles, Boat and Marinas – Add 16ml per Litre of water in the toilet holding tank. Thereafter, use 8ml per Litre as needed. Repeat after every cleanout. For use at a dump station, add 475ml per 50L of tank capacity followed by 475ml per week. Repeat after every cleanout.

Sump Pumps – To correct a heavy solids buildup inside of the sump pit, use a Purge Treatment of 60-355ml of Liqui-Bac, depending on the size of the drain line leading to the sump and on the amount of solids buildup in the pit.

After the accumulation of solids in the pit has been digested and the sump restored to full capacity, no preventive maintenance program will be needed IF the floor drains leading to the sump are treated regularly. If the floor drains can't be treated, 60-180ml of Liqui-Bac, applied weekly to the line leading to the sump, will keep the sump free of accumulated solids and odor and insure efficient operation.

GENERAL ODOR CONTROL

This is the product of choice to eliminate odor causes. To eliminate odor caused by vomit, spoiled foods, decomposed animals, animal waste in areas as garbage cans, waste receptacles, locker rooms, carpet, etc., spray product directly on malodor and allow the bacterial action to digest the material while the pleasant fragrance immediately neutralized the odor.

CARPET DEODORIZING AND DIGESTING ORGANIC WASTE

1) Spot clean and vacuum carpet thoroughly. Mix 83-125ml product per Litre of water. Apply with pump or hand sprayer. Keep moist at least 30 minutes. Repeat if odor persists.

2) Use in conjunction with carpet cleaning equipment. Use 63ml product to every Litre of mixed cleaner.

Use with all types of carpet cleaning equipment and methods, including tank, brush, bonnet, and extraction cleaning.

MUNICIPAL WASTE TREATMENT PLANTS

When applied to municipal waste treatment plants, this product will reduce Fats, Oils and Grease (FOG), Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD). Use on a 3 to 1 ratio for the first 3 days (3 gallons to each 1 million gallons of flow per day). After the third day, 1 part per million should be used on a regular daily schedule.

FOOD PROCESSING, INDUSTRIAL, MANUFACTURING PLANTS, HOG AND CATTLE FEED LOTS

There are many food processing plants, industrial manufacturing plants and hog and cattle feed lots that have ponds, lagoons and other retention areas. These plants can successfully use this product to treat waste in these areas. The initial application should be 3 parts per million for the first 7 days of treatment (3 gallons per each million gallons of flow per day). After 7 days, the dosage is 1 gallon per million gallons of flow (1ppm).