

BioLiquidator

About alkaline hydrolysis:

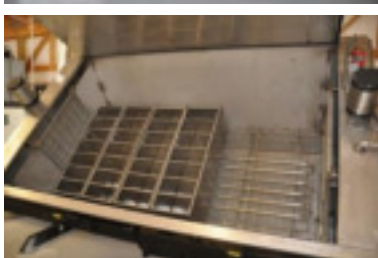
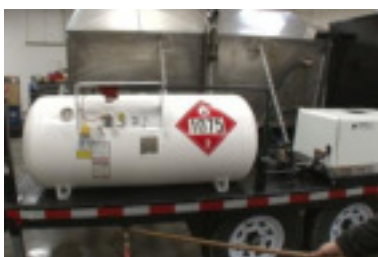
Alkaline hydrolysis is a process by which animal tissues are broken down into their basic building blocks. This naturally-occurring process is accelerated in the BioLiquidator system, producing a sterile solution of amino acids, small peptides, sugars, nutrients, and soap, along with the mineral ash of the bones and teeth (calcium phosphate).

Benefits of the process:

- Low energy consumption
- No emissions of harmful greenhouse gasses
- 1/10 the carbon footprint of cremation
- Destruction of chemicals (including euthanasia chemicals)
- Sterilization of pathogens
- Operation is less costly and cleaner than cremation/incineration
- Creation of a useful byproduct as natural fertilizer

The Bio-Response system:

- Our team has over 25 years' experience with alkaline hydrolysis
- Affordable, reliable, small footprint, and easy to install
- Available in stationary or mobile configurations



Specific uses for this technology:

Animal Shelters / Veterinary Facilities / Animal Crematory

- Processing of deceased animals as an alternative to costly cremation/incineration
- Process which sterilizes any chemicals/pathogens
- Option of recovering bone ash for pet owners by use of specialized containment bags to ensure the return of the proper remains
- Large capacity to accommodate deceased horses and/or large volumes of pet mortalities

Universities / Medical Research Institutions

- Disposal of necropsy or research animals, sterilization of any chemicals and pathogens
- Operation is less costly than incineration
- Equipment for emergency disease response programs

Meat Processing Plant / Abattoir/ Rendering Facility

- Disposal of on-site Specified Risk Materials (SRM): skulls, brains, spinal columns, and other parts that if infected would be high-titre for prion material
- Creation of a usable fertilizer byproduct

Farms / Co-Ops / Agricultural Applications

- Rapid disposal of animal carcasses for on-site processing to eliminate dependence on renderer services, unattractive disposal operations, costly incineration, and time consuming decomposition processes
- Immediate disposal of diseased animal carcasses to prevent further outbreak
- Creation of a usable fertilizer byproduct

Highway Departments / Towns and Municipalities

- Routine disposal of road kill, particularly diseased animals or species prone to carrying disease (for example, rabies and prion diseases)
- As an integral part of a disease prevention and response plan



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Routine Mortality Management and Emergency Disease Response



1. Easy to Dispatch & Transport to Site



Units have high ground clearance and pull nicely with a standard pickup truck; fifth-wheel configuration available.

2. Easy to Load System



The unit tips hydraulically via remote control to accommodate any loading method.

3. Run a Cycle Anywhere



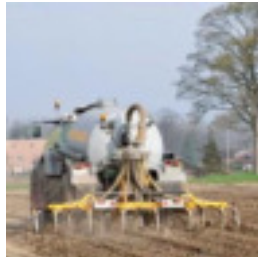
Units are completely self-contained with onboard propane and generator, alkali is available everywhere, and any water source can be utilized.

4. Easy to Empty / Sterile Remains



Units tip hydraulically for simple and FAST cycle turnaround. The final bone remains are sterile. Unit is easy to decon before transport away from the disease site.

5. Safe and Valuable Bvproducts



The sterile effluent has dozens of options for disposal and/or recycling, and every operating site will have multiple options. Effluent may be applied to compost windrows or directly land applied (via injection or top-dressing). Systems may also be discharged to the sanitary sewer, anaerobic or aerobic digesters, manure pits or lagoons for later application, or holding tanks for temporary storage.

Mobile Models | 2500 and 4000 lb Capacities



BioLiquidator System Features and Specs

Models Available	<ul style="list-style-type: none"> • S2500, S4000: Stationary models for permanent indoor installation • M2500, M4000: Mobile models on a trailer to be pulled by a pickup truck
Capacity (min-max)	<ul style="list-style-type: none"> • S2500, M2500: 500-2500 pounds (227-1134 kg) • S4000, M4000: 750-4000 pounds (334-1814 kg)
Operating Temperature	<ul style="list-style-type: none"> • 199-205°F (93-96°C); User-Selected
Turnaround Time	<ul style="list-style-type: none"> • 18-20 hours for typical installation and use (from start of one cycle to the start of the next) • One cycle per day is standard, however special accommodations can reduce cycle times for some applications (please inquire for details) • For Emergency Disease Response: <ul style="list-style-type: none"> – Poultry (chicken, turkeys): 2 hours turnaround – Medium (pigs, deer): 6-8 hours turnaround – Large animal (equine, bovine): 12 hours turnaround
Drain Procedure	<ul style="list-style-type: none"> • Standard draining is initiated by the user via the PLC; a cool water co-flush is optional • Discharge temperature control is available as an option
pH Control <i>Optional Feature</i>	<ul style="list-style-type: none"> • Optional pH reduction system <i>Required for systems draining to wastewater treatment facilities that require a reduced pH</i>
Heating Source	<ul style="list-style-type: none"> • Stationary units — natural gas, propane, steam, diesel, and electric available • Mobile units — on-board propane is standard (connection to a larger off-board propane source is possible); diesel configuration is available as an option (please inquire)
Required Utilities	<ul style="list-style-type: none"> • Water Supply: Minimum 40 psi hose connection • Power Supply: <ul style="list-style-type: none"> – Stationary units — 220V Single Phase 50/60Hz (other voltages available) – Mobile units — Onboard propane generator or local electricity (see above)
Suggested Ancillary Equipment	<ul style="list-style-type: none"> • Weighing device/scale • PPE and compliant wash station (portable units available for mobile systems) • Optional for pet crematories: <ul style="list-style-type: none"> – Specialized baskets with individual pet compartments – Drying method for final bone remains – Remains Processor (to process final bone remains into a returnable ash)
Dry Weight	<ul style="list-style-type: none"> • Stationary: S2500 6000 lb (2722 kg) S4000 6500 lb (2948 kg) • Mobile: M2500 8300 lb (3765 kg) M4000 8800 lb (3992 kg) • <i>Crane attachment adds 750 lb (340 kg); contact us for operating weights</i>
Dimensions	<ul style="list-style-type: none"> • Stationary Models: 184"L x 81"W x 81"H (467cm x 206cm x 206cm) <i>(includes tank and all necessary components)</i> • Mobile Models: 232"L x 95"W x 100"H (589cm x 241cm x 254cm) <i>(includes trailer, tank, and all other necessary components)</i>
Additional Options	<ul style="list-style-type: none"> • Crane Hoist with attachment for lifting and loading animals • Effluent Receiving/Transfer Trailer (1000 gal/3785L) • Liquid Chemical Feed Kit (pump and chemical metering system for liquid chemical); <i>Note: Dry chemical is added manually and does not require a chemical tank or injection system</i> • Field Operation Package (mobile units only) <ul style="list-style-type: none"> – <i>Includes a self-priming pump and pond water siphon hose kit with mobile unit; generator comes standard with mobile units</i> • Highway Department Package (mobile units only) <ul style="list-style-type: none"> – <i>Includes traffic arrow and crane; generator comes standard with mobile units</i> • Onboard Propane Electric Generator 115/230V (standard on mobile unit) • Custom plaque with choice of labeling and/or graphics
Notable Benefits	<ul style="list-style-type: none"> • Not a pressurized system— operates at atmospheric pressure • No need for a boiler or other complex components common with pressurized systems • No submerged pump seals • Dual auto-variable agitation provides optimal circulation of solution • Hydraulically-tipping tank tilts to accommodate a variety of loading equipment • Operator does not need to be present during operation • Substantially lower operating cost than incineration/cremation • Low equipment cost, simple operation, and reliability • All parts available locally; all components serviceable locally • Mobile units allow for shared location operation, on-site emergency disease response, in increased containment for disease mitigation • High ground clearance of mobile units allows access to rugged and remote areas • Byproducts are valuable fertilizers