

## Farming and Livestock Use of Ultra-Archaea

Ultra-Archaea are a proven bioremediation product, consisting of over 100 species of archaea. This consortium of organisms works to clean up hydrocarbons, fats, oils, greases, odor problems, and excessive nutrient loads. Ultra-Archaea also outcompete less-hardy organisms, such as coliform bacteria and pre-bloom algae. This leads to many uses in the farming and animal care communities.

**Ammonia Control** – Ultra-Archaea are uniquely adept at using the nitrogen in ammonia as part of the digestive process of breaking down organic waste. This enables them to consume urine and urea while also breaking down solid waste in pens or in lagoons. This keeps ammonia gas out of the atmosphere, which can be hazardous to many animals, including chicken grow-outs and horse and cattle stalls.

**Animal Health** – Ultra-Archaea will outcompete many pathogens, including coliform bacteria. This is important in locations where hoof disease may be prevalent, for cattle, horses, pigs, and zoo animals. At one zoo in Massachusetts, Ultra-Archaea reduced coliform levels on flooring substrates as well as in the creeks running through the zoo. This led to a diseased elephant hoof being cured in the process.



**Odor Reduction** – Due to the ability to remove nitrogen from urine and to digest solid waste, Ultra-Archaea is an excellent product to use to reduce the two main odor-causing elements of any farm. Whether in stalls or in ponds or lagoons, Ultra-Archaea will reduce the amount of unhealthy and odorous ammonia and hydrogen sulfide entering the atmosphere.

**Fly Maintenance** – Ultra-Archaea also outcompete fly larvae. In stalls where flies are a concern, spreading Ultra-Archaea on the substrate, or adding Ultra-Archaea to washdown water will eliminate the number of fly larvae that mature into flies, greatly reducing the number of nuisance and disease-carrying flies in barns or on farms.

**Algae Control** – Algae blooms in many agricultural ponds due to high nitrogen and phosphorus nutrient loads coming from both fertilizer and animal waste. Dosing pond perimeters with Ultra-Archaea in the early Spring, as the water begins to warm and algae starts to grow, will reduce, or eliminate, summer algae blooms while also cleaning dead organic material from the surface and bottom of the pond.



## Ultra-Archaea® Shakers



- + Ultra-Archaea are housed in a bentonite clay powder that provides the slightly moist environment needed for them to live.
- + Two sizes of shakers available for application on smaller spills or contained areas.
- + Resealable/water-proof containers keep archaea dry/dormant until they are needed.



NOTE: All Ultra-Archaea products are stamped with an expiration date and have a typical shelf life of approximately 5 years.

## Ultra-Archaea® Water Soluble Packets



- + 4 oz. water soluble packets can be thrown into oil/water separators, catch basins, grease traps and other areas to facilitate oil and grease removal.
- + Small size, big results — no measuring, scooping or spreading. Simply place the entire packet into the area that needs to be cleaned. The water soluble packet will dissolve and allow the Ultra-Archaea to spread throughout the area.



5232

## Ultra-Archaea® Bulk Bags



- + Bulk bags (25 lbs.) are available for large spills, open water applications or frequent use areas.
- + Keep on hand for refilling Shakers or other smaller containers or for large, unexpected spills.



5233

## Ultra-Archaea® Tablets



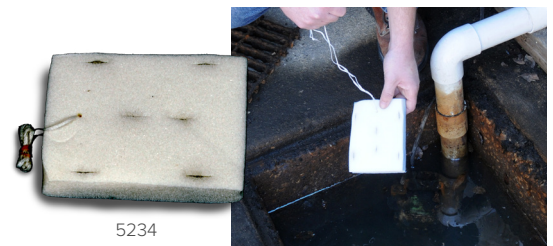
- + Small tablets with a concentrated amount of Ultra-Archaea (20-billion per gram)
- + Great for use in septic tanks, RV blackwater tanks, small grease traps, and stormwater catch basins



5252

## Ultra-Archaea Booms®

- + Specially-treated polyethylene foam used in Ultra-Archaea Booms allows it to float on the water's surface while also absorbing oil.
- + Six Ultra-Archaea tablets are inserted into slits in the foam sleeves - extended water contact causes the tablets to slowly dissolve, releasing the archaea into the water.
- + Booms can be dropped in, or tied off in catch basins (lanyards included), oil/ water separators or other areas where oily water can collect.



5234

Patents: See [www.ultratechpatents.com](http://www.ultratechpatents.com)

Part#	Description	Weight
5238	6 Ounce Shaker	6 oz (171 g)
5239	28 Ounce Shaker	28 oz (794 g)
5232	Water Soluble Packets 6-Pack	4 oz (113 g)
5233	Bulk Bag	25 lbs (11 kg)
5234	Archaea Boom (6-pack)	2.0 lbs (1.0 kg)
5252	Archaea Tablets (12-pack, 24 tablets per tube)	5 lbs (2.3 kg)

It is important to be aware that Ultra-Archaea may not be the answer or 100% effective in every application. Consult with UltraTech's technical team to determine if your needs can be met with Ultra-Archaea.