

Ultra-Archaea®

Safe, Versatile, Proven Bioremediation



#1 RATED BIOREMEDIATION
FORMULA IN RECENT
BP - LOUISIANA STATE
UNIVERSITY TESTING

Naturally occurring microbes help bioremediate oil spills and other contaminated areas

What are Ultra-Archaea?

Ultra-Archaea are the oldest living organisms on the planet, and one of the 3 domains of life (along with bacteria and eukaryotes). They can survive in a wide range of living conditions, including extreme environments (such as hot springs and salt lakes).

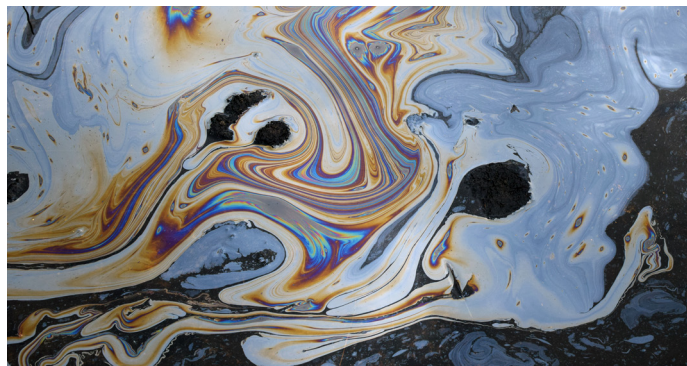
Where do they come from?

Ultra-Archaea are an archaea-based collection of over one hundred different species of microbes that are cultivated from rugged environments such as undersea vents or sites where there is volcanic activity. They are then cultivated with crude oil as the only food source. Therefore they grow on thousands of organic compounds from benzene to polycyclic aromatic hydrocarbons. 100% natural. Odors are eliminated within a few hours to a day.

The result is 100% natural, hardy and fast-acting microbes that have an affinity for oil and other hydrocarbons, as well as organic waste. This specific collection of microbes (Ultra-Archaea) has not been genetically altered or engineered. These naturally occurring microbes have been on the EPA National Contingency List since its inception.

How do they work?

Ultra-Archaea will digest hydrocarbon and other organic molecules and break them down into harmless byproducts of carbon, carbon dioxide and lipids (a natural, soluble fatty material that is food for fish and plants). The more complex the hydrocarbon, the longer this process may take (for example, kerosene and diesel will be consumed more quickly than motor oil). This naturally occurring process is supercharged by adding these specific archaea to any oil spill or contaminated area (see below). It infuses 5 to 90 billion archaea per gram into an oil spill, greasy catch basin, oil/water separator, etc. and within hours these archaea have reproduced from billions per gram to trillions. With water, oxygen and an organic food source (such as oil, human and animal waste, compost, etc.) these microbes will form vast colonies and digest and remediate soil and water, as well as grease traps, septic tanks, storm drains and almost any other area where contaminants are present.



Ultra-Archaea Compared to Bacteria

Ultra-Archaea's cell membranes lack receptors for "phages" which carry virulent genes to animals and humans. They also have a more diverse metabolism - one species of Ultra-Archaea can target a wide range of compounds, while bacteria generally focus on one specific food source (for example, alkanes, nitrates, etc.) but cannot digest other contaminants.

Markets for Ultra-Archaea

- Oil Spills
- Soil Remediation
- Agricultural Waste
- Algae Control
- Wastewater (Fats, Oils, and Grease)
- Septic and RV Blackwater Tanks



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



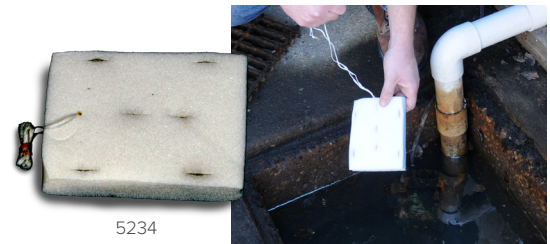
- + Small tablets with a concentrated amount of Ultra-Archaea (20-billion per gram)
- + Great for use in septic tanks, RV blackwater tanks, small grease traps, and stormwater catch basins



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

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.