## **Encapsulation Technology**

## How Our Micro-Encapsulation Technology Works



Untreated Organic Material	Application	Encapsulated/Treated Organic Molecules
Untreated organic material ranging from oil and grease to animal fats, food waste, sewage, soil/grime, sludges, and many others (waste).	This technology consists of a unique formulation of natural extracts of plants (essential oils and similar) which act to break surface tension between large often hard to biodegrade molecules. With the surface tension broken, the technology works to micro-fractionalize the molecules and form tight negatively charged micelles. These micelles not only allow oils and greases to float on the surface of water for easy recovery, but they also repel each other preventing coalescence and re- adherence. Powerful builders in the formula bond with free calcium (concrete, hard water, urine) further reducing saponification and system blockages.	Our Encapsulation Technology is a bioremediation process that allows naturally occurring microbes to: (1) Reproduce, (2) Produce enzymes to break down waste, and (3) Digest and consume the waste. Bio- Stimulants in the formulation increase the efficiency of existing bacteria. Artificial enzymes and emulsifiers are not utilized to aid in the natural bioremediation process. Final stage of encapsulation results in the biodegradation of waste into non-odorous inert substances such as $C_2O$ and $H_2O$ .
<ul> <li>Use wherever fats, oils, and grease (FOG's) are present</li> <li>Drains, Lift stations, Grease traps, collection line, oil/water separators</li> <li>Hard surfaces like counters, appliances, hard surface flooring, and many others</li> </ul>	<ul> <li>Cuts oil and grease into tiny pieces rather than emulsifying</li> <li>New technology complexes with free calcium and inhibits saponification and grease buildup</li> <li>Meets city effluent discharge requirements as formulation does not include enzymes or emulsifiers</li> <li>De-tackifies oil from surfaces so that it cannot re-adhere to sidewalls of drain lines, grease traps, lift stations, and separator walls</li> </ul>	<ul> <li>Encapsulated grease becomes a more attractive food source for existing bacteria</li> <li>Biological recovery from chemicals and pH swings is accelerated due to nutrient rich extracts now surrounding the food source</li> <li>Grease and odor nuisances are eliminated</li> </ul>