Protein Matrix
industrial grease remediation

Highlights and Opportunities

November 2014

1. Protein Matrix is located at 299 Broadway, Suite 203, New York, NY. Information about the company is available at www.proteinmatrixllc.com or by contacting Oscar Plotkin at 212-323-2772; oscar@proteinmatrixllc.com).
2. Protein Matrix (PM) disrupts the intermolecular forces of fat molecules, minimizing the formation of large, solid blocks of fat. The result is a flowable byproduct that cleans pipes, does not re-agglomerate, and is easily digested bymicroorganisms.
3. PM is a patent-pending mixture of ingredients extracted from plant materials. It is water-based, non-volatile, and non-flammable.
4. PM converts fat to water-soluble fatty acid salts that are compatible with sewer and wastewater treatment infrastructure and processes.
5. Independent tests at Tufts University show that Protein Matrix saponifies 97% offat to a liquid byproduct in four hours, as compared to lye treatment, which converted less than 50% of fat to a solid/gelatinous material.
6. Independent tests by GZA and Atkins have proven PM is nontoxic to fresh and saltwater organisms and is safe for the environment when used and disposed of asdirected.
7. PM is in the process of becoming NSF-certified.
8. Independent tests at a private wastewater treatment operator and owner (AquaAmerica, PA and DE) and municipal operator (Incline Village, NV - IVGID)show that PM eliminates fat, oil and grease (FOG) buildup and, in turn, the needto pump wet wells, traps and feed lines, all without effecting water quality.
9. As a result of treatment, the IVGID wet well has not required cleaning since June2, 2014 (in the past, the well has required deep cleaning every 90 days), and the plant's most recent quarterly report shows its lowest-ever values in terms of compliance limits (fecal, total nitrogen, phosphate, TDS, TSS, etc.)
10. Use of PM had no adverse impact in the above WWTP, including no effects on:
    a. effluent quality
    b. settling characteristics of the plant mixed-liquor
    c. BOD or COD
11. Aqua America reports that PM controls the proliferation of "bad" bacteria due to the absence of FOG mats, allowing "good" bacteria to compete and, in turn, lowering energy costs.
12. PM controls odors in wastewater treatment plants, lift stations, interceptor and sink traps.
13. PM cleans surfaces in the food services industry, including:
    a.Grills, fryers, and baking ovens
    b.hood exhaust systems
    c. pots, pans, baking racks, counter tops, and backsplashes

14. Protein Matrix is committed to working with leading wastewater engineering companies, food service equipment and chemical suppliers to introduce PM into the marketplace. Bottom line: with the simple introduction of PM, users are no longer committed to expensive pipeline maintenance or an extensive FOG compliance program.

BEFORE TREATMENT

AFTER **PROTEIN MATRIX**