ChemTreat
Case History

Prominent Packaged Foods Company's Wastewater Quat Problem Resolved By ChemTreat's QuatKill™ Test Kit & QK1000 Solution

BACKGROUND

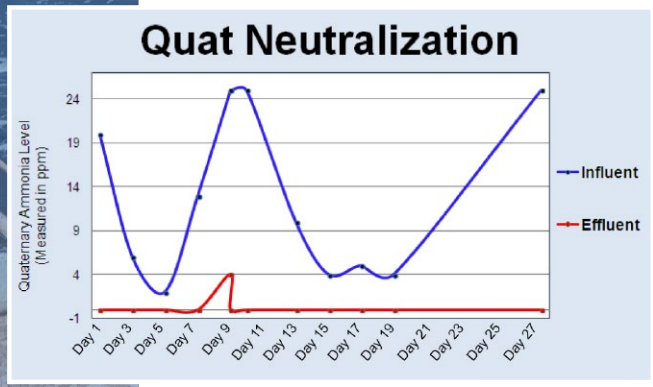
A leading food processing company had a problem. Tighter restrictions in regulatory standards for bacteria on food contact surfaces required that they increase the use of quaternary amine biocides. This increase led to a reduction in waste treatment plant bacteria, which meant a significant reduction in the efficiency of BOD removal from the waste stream.

Quaternary amines can be neutralized to prevent the loss of bacteria essential to waste plant efficiency. However, existing test methods produced inaccurate quat measurements, meaning proper treatment was wasteful, expensive, and created a conflict between the waste processing and cleaning departments.

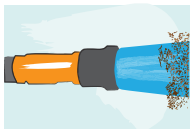
SOLUTION/RESULTS

A solution was delivered by means of ChemTreat's QuatKill™, an innovative colorimetric test kit that measures free quat concentration in wastewater treatment systems, delivering fast results over a wide concentration range (0–50 ppm of quat).

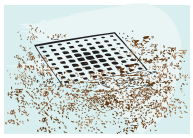
Using the QuatKill™ Test and QK1000 treatment solution, quaternary ammonia levels in the company's wastewater stream were effectively reduced. This simple down-feed process at a 5X level created additional savings and kept wastewater system performance at a high level when compared with a more expensive, proposed clay-based solution.



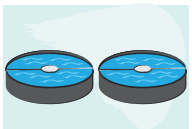
	Quaternary Ammonia (ppm)			QK1000
Date	Influent	Effluent	Limits	Daily Feed Rates (GPD)
Day 1	20	0	<0	5
Day 3	6	0	<0	5
Day 5	2	0	<0	5
Day 7	13	0	<0	4
Day 9	25	4	<0	3
Day 9	25	0	<0	12
Day 10	25	0	<0	12
Day 13	10	0	<0	6
Day 15	4	0	<0	6
Day 17	5	0	<0	
Day 19	4	0	<0	6
Day 28	25	0	<0	8



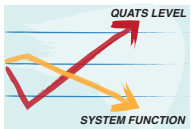
cleaning process using quaternary ammonium



runoff flows into wastewater



enters aerobic or anaerobic wastewater treatment system



rise in Quats harms process efficiency

fast & efficient testing

balances Quat levels in system

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