CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	10/26/2015
Experimenters:	Alicia Melvin
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Liquid
PartType:	Coupon
Contaminants:	
Cleaning Methods:	
Analytical Methods:	Colorimeter, pH
Purpose:	Series 1 Ozone Testing Micro Beads
Experimental Procedure:	Tersano Series 1 holds 750 grams of the micro citric acid beads in the stablizer model and can be used up to 1600 gallons of water. Information was gathered on the water flow, pH, time in seconds, and temperature for both with and without the stabilizer to get an idea of how quickily a smaller scale stabilizer would need to replicate the original scale product. To do a small scale testing, a plastic enclosed bottle was used to simulate the stabilizer. The bottom of the bottle had a small circular cut with cheese cloth on the top and bottom to enclose the bottle. Fifty grams of the series 1 micro citric acid beads were placed inside. The top of the bottle was attached to the sink faucet that had the same water coming out of the original stabilizer. A small hose similar to the one at the bottom of the original stabilizer was attached to the bottom of the bottle.
Results:	The cold water was then run, timed, and recorded up to a gallon for time, pH, and temperature. Using this information The amount of liquid was divided by the time it took to completely pour through the filter to get the seconds in ml/s. Once the small scale was similar to the water flow of the original scale, a test to watch the rise in pH and temperature was recorded to see how quickly the beads lost their acidity over 16 gallons of water. The stabilizer and the small scale kept very similar so that the flow rate would be consistent. Stabilizer 1 had an average of 25 seconds to fill a gallon, and the smaller scale was 23 seconds to fill a gallon. It would take around 6.1-6.5 minutes to fill 16 gallons. Using that information and calculating on a larger scale, it would take 640 minutes to fill 1600 gallons of water with the original stabilizer with continuous flow from the same source. The pH started at a 5.4pH level that showed the beads were lowering the pH even at a small amount so that it was almost as low as a fully filled stabilizer. Overtime around five gallons, the pH went up closer to 6.1-6.2pH, dropped a little around gallon 11 and then rose again above 6 pH.
Summary:	
Conclusion:	The microbeads do lower the pH, however the process loses its acidity over time.