CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2011
DateRun:	05/04/2011
Experimenters:	Jason Marshall, Johnny Le
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Liquid
PartType:	Coupon
Contaminants:	Greases, Food
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Visual
Purpose:	To evaluate supplied product for kitchen grease emulsification
Experimental Procedure:	Twenty-eight grams of lard and vegetable shortening were immersed in separate 5% Groap Concentration cleaner with a magnetic spinner at room temperature. Visual observations were taken, and the contaminants were removed after one hour. A second follow up test was performed on the vegetable shortening. 2, 5, and 10 grams of vegetable shortening were immersed in separate 5% Groap Concentration cleaners at room temperature with a magnetic stir bar. The test ran until a majority of the contaminant dissolved in the cleaner. Visual observations were made.
Results:	For the first test, both the lard and vegetable shortening performed similar to an iceberg; 90% of below the solution and 10% above the solution. As the lard dissolved, it slowly dropped into the beaker and floated back to the top after hitting the bottom. This was observed after 30 seconds, 1 minute 30 seconds, 8 minutes, 9 minutes 15 seconds, 12 minutes 8 seconds, 28 minutes, 49 minutes, and at 55 minutes. The vegetable shortening looked noticeably smaller after 2 minutes. The beaker became hazy at this time as well. After 34 minutes, small particles of the vegetable shortening appeared on the surface. At 37 minutes, the beaker became foggy and very translucent. After 49 minutes, the vegetable shortening felt very soft when picked up. Both of the vegetable shortening, and lard were taken out of the beakers after 1 hour of immersion. Because the vegetable shortening dissolved more compared to the lard, two follow up test were performed with 2, 5, and 10 grams using the beaker from the first test and a second beaker with the new cleaner. With the cleaning solution from the first test, the 2 grams of vegetable shortening dissolved into two after 1 hour. After 2 hours, there were only small particles floating at the top. The 5 grams of vegetable shortening dissolved and broke into separate pieces after 1 hour and 30 minutes. After 2 hours, 3 grams of the vegetable shortening dissolved completely and there was a 2-gram chunk left. Three quarters of the 10 grams of vegetable shortening dissolved in 1 hour and 30 minutes. After 2 hours, almost 100% of the vegetable shortening dissolved. After 3 hours, the test was stopped. With the new cleaning solution, the 2, 5, and 10 grams of vegetable shortening only dissolved about 5-10% after 3 hours. When using the 10% concentration of Delta Green Degreaser with 2 grams of vegetable shortening, about 40% of the vegetable shortening dissolved after 1 hour. After 2 hours, about 60% of the vegetable shortening dissolved. The test was stopped after 3 hours with only 50% of the vegetable shortening was left. The dissolving of the shortening was slightly faster than the supplied product.

Summary:

Substrates:	Liquid				
Contaminants:	Greases, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Tap Environment	Groap	5	0.00	☑	
DeltaGreen LLC	DeltaGreen Concentrate All Purpose and Degreaser	10	0.00	☑	

Conclusion: The Groap product was effective at dissolving the grease within a short period of time.