CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	06/17/2008
Experimenters:	Jason Marshall
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Liquid
PartType:	Coupon
Contaminants:	Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Performance Test
Purpose:	To evaluate oil/water separation of supplied product following GS 34 standard.

Experimental Procedure:

Performed at the temperature suggested by the degreaser supplier for best separation performance.

The supplied product was diluted the degreaser to 12.5% with distilled/deionized water. The standard calls for 720 ml of the dilution to be used and 80 ml of oil. However, due to available equipment, this volume was not able to be used. Instead, 360 mL of the diluted aqueous degreaser solution was placed into the volumetric cylinder and then 40 ml of oil was added. The initial total height of the liquids was measured in the cylinder (A = initial height). The mixture was stirred for 30 minutes with a magnetic stirrer at the highest setting that does not result in any of the mixture spilling from the container.

Upon completion of the 30-minute stirring time, the stirrer was turned off. The mixture was allowed to sit for 20 minutes allowing the liquid mixture separate. As the mixture sits, three phases will form. The top phase will be the oil, the middle phase will be the dispersed phase, which consists of both the oil and the cleaning solution, and the bottom phase will consist only of the cleaning solution and water. After the 20 minutes has elapsed, measure the height of the dispersed, or middle, phase (B = final height).

The separation ability was calculated using the following formula: [(A-B)/A]100 = percent separation.

If the percent separation exceeds 95% in two out of three tests, the degreaser meets the performance standard for separation.

Results:

Two of the three trials had oil water separation over 95%. The third reading was just lower at 94.30%. The table lists the initial height, final height and calculated percent separation for the 12.5% dilution.

Trial	Initial Height (A)	Middle Section (B)	A-B	(A-B/A)100	exceeds 95%
1	23.1	1.1	22	95.24	+
2	22.8	1.3	21.5	94.30	-
3	23.2	1.1	22.1	95.26	+

Summary:

Substrates:	Liquid				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Keteca USA	Water Works Heavy Duty Degreaser	12.5	95.25	☑	

Conclusion:

The percent separation exceeds the 95% level specified in GS 34 in two out of three tests, therefore the degreaser meets the performance standard for separation.