CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1999

DateRun: 02/16/1999

Experimenters: Jason Marshall

ClientType: Aerospace Industry

ProjectNumber: Project #2

Substrates:

PartType: Coupon

Contaminants:

Cleaning Methods:

Analytical Methods:

Purpose: Request for Information

Experimental Procedure:

Results: Here is the data and calculations performed at SCL.
The % Contaminant removed is calculated using the equations 1, 2 and 3.

	A	B	C	D	E	F
Coupon #	Initial wt	Cont. wt	Clean wt.	Initial wt of cont.	Final wt of cont.	%Cont Removed
1	313.4	315.2	313.4	1.8	0	100
2	321.4	324.3	321.6	2.9	0.2	93.1
3	328.5	332	328.9	3.5	0.4	88.6
4	314.8	317.3	315.3	2.5	0.5	80
%Cont Removed						
Eqn 1	D = B - A					
Eqn 2	E = C- A					
Eqn 3	F = ((D-E)/D)*100					

The water break method utilized at the lab here involves submerging the part into water and then removing the part. Observations are made as the part is taken out of the water.
The method you described would seem to mask what was really taking place during the cleaning cycle. If you use the acid to remove the wetting agents, you wouldn't really be testing the surface as it would be after cleaning.
On the other hand, if the dipping was performed as part of the cleaning cycle, (required so that the wetting agents were destroyed on all parts), then the method would be acceptable.

Summary:

Conclusion: We do not have any wetting agents on hand that are not already in cleaning products. If you can find a handbook of surfactants, the book would list several wetting agents. I think one handbook has McLeod's Surfactant Directory. I am not sure of the exact title.
If you have any other questions, just let me know.