

HK INSTRUMENT SYSTEMS

PITTSBURGH, PA

SURFACTANTS: LIQUID DETERGENT PRODUCTION

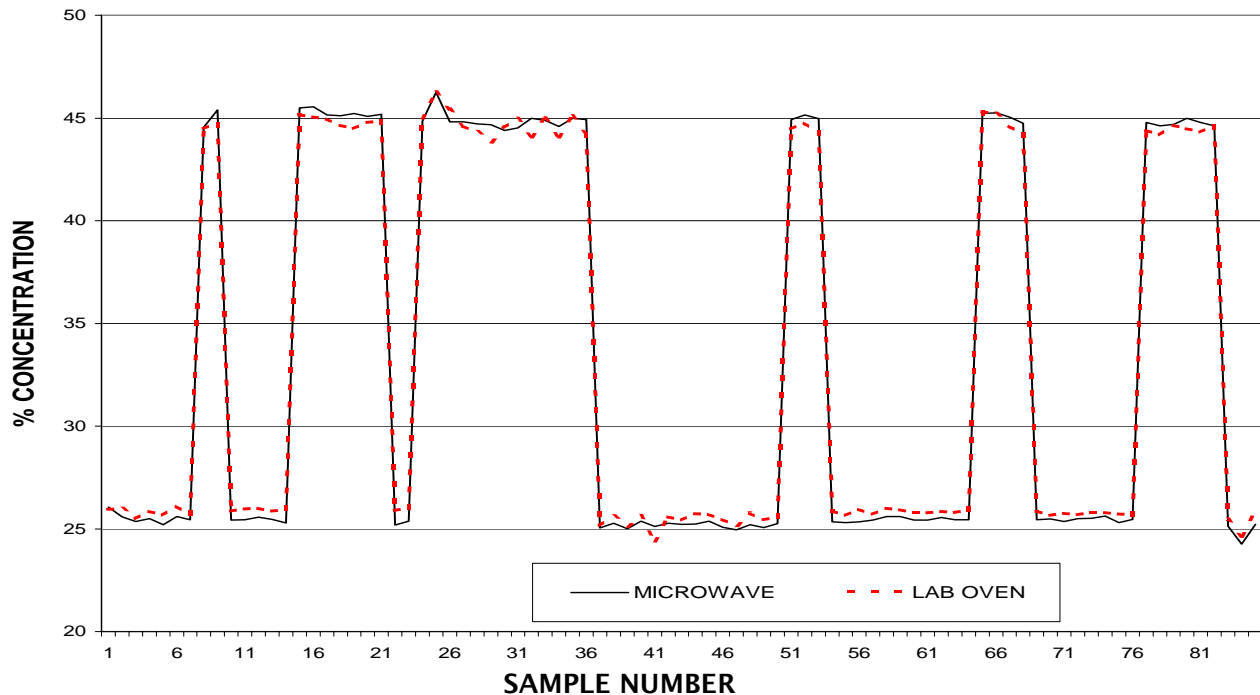
APPLICATION: TO MEASURE THE % TOTAL SOLIDS (ACTIVITY) OF A MIXTURE OF DETERGENT SOLIDS AND WATER. THIS PARTICULAR MEASUREMENT IS PERFORMED DURING THE PRODUCTION OF TWO DIFFERENT GRADES OF LIQUID DETERGENTS.

INSTALLATION: THE MICROWAVE INSERTION SENSORS WERE MOUNTED DIRECTLY ON A LARGE MIXING VESSEL USING A 2-1/2 INCH FLANGE. TEMPERATURE COMPENSATION IS INSTALLED.

TESTING: SAMPLES WERE COLLECTED AND DRIED IN A LAB OVEN TO DETERMINE % TOTAL SOLIDS BY LOSS OF WEIGHT. READINGS OF THE HK-2 MICROWAVE SYSTEM WERE RECORDED EACH TIME A SAMPLE WAS COLLECTED.

RESULTS: CORRELATION BETWEEN LAB SAMPLES AND MICROWAVE READINGS IS EXCELLENT FOR BOTH CONCENTRATIONS OF LIQUID DETERGENTS.

LAB OVEN VS MICROWAVE TWO CONCENTRATIONS OF LIQUID DETERGENT



CONCLUSIONS: THE HK-2 MICROWAVE INSTRUMENT SYSTEM IS AN EXCELLENT TOOL THAT CAN BE USED TO MONITOR AND CONTROL THE % TOTAL SOLIDS OF A LIQUID DETERGENT DURING ITS PRODUCTION OR ITS USE.