

***THE INFLUENCE OF ADDITION CONCENTRATION OF SURFACTANT  
ABS (ALKYLBENZENE SULFONATE) ON SURFACE TENSION VALUES  
OF 4 STROKE ENDURO LUBRICANTS***

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**ABSTRACT**

*The aim of this research is to determine the effect of ABS (Alkybenzene Sulfonate) surfactant molarity on the surface tension of the lubricant 4 stroke Enduro, and to determine the effect of ABS surfactant volume fractions on the 4 stroke enduro lubricant surface tension.*

*To determine the value of the surface tension of the lubricant 4 stroke Enduro used Du Nouy ring method. The surfactant used is ABS with a concentration of 0.5 M, 0.75 M and 1 M at each concentration in the input into the lubricants with volume fractions is 2%, 4%, 6%, 8%, 10 %, 15%, 20%, 25%, and 30%.*

*The results show that the smaller the surfactant molarity the higher the surface tension of Enduro 4 stroke lubricant. However there are some mismatches. This may be due to the creation of small agregates or possibly inverse micelles. The motion of these agregates causes the concentration of surfactant moleculs around the surface to fluctuative. This fluctuation of concentration of surfactant molecules also causes the surface tension to fluctuate. The same reason goes to surface tension fluctuation due to the additional of volume fraction.*

*Keywords: 4 stroke engine lubricants, surfactants, and Surface Tension*