Atoms and molecules are small. No, really. So small that you cannot see them with the unaided eye, this makes their size all the more difficult to measure. However, using some simple materials and methods, we can get a pretty reasonable approximation of the size of a molecule. A rough idea of the length of a substance which will form a film on the water may be obtained by a method originally carried by Lord Rayleigh who was awarded Nobel Prize for physics in 1904. From chemical studies, we had known that molecules of oil and fatty acids are relatively long. The “tail” of a fatty acid is a long hydrocarbon chain, making it hydrophobic (air and oil seeking). The “head” of the molecule is a carboxyl group which is hydrophilic (water seeking). Figure 1: Simple diagram clarify the hydrophobic and hydrophilic property of oil and fatty acids. If a drop of oil is placed on a water surface, it will spread approximately in circular film / small cylinder with molecules upward. When the droplet has spread as far as it can, it is 3 possible to assume that the film is one molecule thick. If we know the volume of the acid to begin with, we can measure the area o