

Ester Abstract

Using the process of esterification, two artificial esters were synthesized by combining an alcohol and a carboxylic acid. Salicylic acid and 1-propanol were placed into an erlenmeyer flask; then sulphuric acid was added as a catalyst. The contents were pipetted into a test tube, covered, and then were heated in a water bath set to 60°C. After ten to fifteen minutes in the hot water bath, the test tube was transferred into a cold water bath to cool for 5 minutes. Once cooled, the ester was placed on a watch glass and a few drops of distilled water were added. This allowed us to smell the minty aroma that the salicylic acid and propan-1-ol had created. The same process was done for salicylic acid and t-butyl alcohol, however, in this case the ester did not smell like blackberries, as it was supposed to. It smelt very acidic similar to acetone; the ester was most likely heated for too long. Shortly after each liquid was placed onto the watch glass, a white filmy residue built up, thus the compound was beginning to change states. Both natural and artificial esters are all around us, so it is important to know their properties and their impact on the environment. For instance, the esters in plastic pollute the air and can cause respiratory issues. Therefore, although esters may smell nice and seem harmless, it is important to remember all the negative effects they can cause in the future.