

Using Surfactants to Fight Fire

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Wildfires are common in our area and need to be controlled. This project tests surfactants and their effectiveness in fire suppression and their potential applications in firefighting. This experiment involved burning straw in a controlled environment and then putting out the fire with different surfactants that were added to water. I found that adding a surfactant to water decreased the amount of water and time it took to put out a fire. I also tested surfactants at different concentrations and found that a higher concentration of surfactant is more effective. Surfactants could help firefighting efforts because when putting out a fire, water and time are a limiting factor. The results prove my hypothesis correct that if a surfactant is added to water, it will put out the fire more efficiently using less water.