



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Nahla Kattih	Project Number 36513
Project Title Oil Spills: Polymers vs. Detergents	
Abstract Objectives/Goals Oil spills have disastrous effects the ecosystem/environment on the environment and ecosystem. The objective of this project is to test the effectiveness of several agents, including two different polymers and detergents in cleaning up oil from oil water suspension. Methods/Materials Oil absorbing polymer, Dawn detergent, hydrogel powder (slush powder), Tide detergent, mystery oil, graduated cylinders, ruler, plastic cups, filters. The four different agents were added to 220 ml of oil and water suspension (20 ml oil and 200 ml water)each. Oil band thickness was measured and compared before and after for each of the different agents and control five times. Each suspension was then filtered and observed. Results Average oil band thickness was highest for Dawn detergent and lowest oil absorbing polymer. It was not possible to measure band thickness for slush powder since it turned the whole suspension into a heterogeneous gel substance. Oil polymer was the only agent resulting in clear water after filtration. Conclusions/Discussion The oil absorbing polymer was the most effective agent in removing the oil from the oil water suspension and Dawn detergent was the least effective. Oil absorbing polymers offer the most effective economic, and ecofriendly solution to removing oil spills from water bodies.	
Summary Statement I demonstrated that oil polymer is the most effective agent in removing oil from oil water suspension.	
Help Received I designed and conducted the experient after internet research. My mentor reviewewed my design and results.	