



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Emily S. Herrod	Project Number J0616
Project Title Dirty Money	
Abstract Objectives/Goals The object of this experiment was to see if drug residue is located on currency. If so, where the money was from, what types of drugs were found and how much residue was present. Methods/Materials The experiment was conducted at the Drug Enforcement Administration (DEA) Drug Laboratory in Carlsbad, California. The currency used in this experiment was collected from various parts of the world. All of the machines like the Ion Scan and the LC-MS machine were provided and found in the laboratory. Other materials needed were vials, Methanol solution, a syringe, cartridges with filter paper, a vacuum, safety goggles, and a lab coat. Results The Ion Scan and the LC-MS machines showed that Washington D.C. had the most positives with 100% of the bills testing positive for cocaine residue. Cocaine was the drug that appeared most on the money. Other drugs present were methamphetamine, heroin, and marijuana. Some places that came up negative for any drug residue was Russia, China and Mexico. When the samples were run through the LC-MS machine most of the results corresponded with the ones received from the Ions Scan. Conclusions/Discussion Based on the results from the Ion Scan and the LC-MS machine, it is concluded that the United States has about 51% of their bills contaminated with drugs. Compared to other countries, the United States has the highest contamination rate.	
Summary Statement This project's purpose is to find out what place has the highest contamination rate, what drugs are on the money and to compare the results.	
Help Received DEA Drug Laboratory in Carlsbad: Provided materials and a place to conduct the experiments. Mentor: Forensic Chemist Todd Davis provided guidance during experiments. Parents and Friends: Helped to collect currency.	