

THE EFFECTS OF FOUR COMMONLY CONSUMED LIQUIDS ON DNA QUANTITATION

Mark Profili, Towson University

One of the key steps in an investigation may involve the gathering of a buccal swab from an individual. This buccal swab can be used to generate a DNA profile and so it is imperative to know what effect commonly consumed liquids have on the amount of DNA obtained from an individual and whether or not this difference is enough to hinder further analysis. Previous studies have focused on the amount of DNA that can be collected from various drinking containers. This study investigates what happens to the amount of DNA shortly after consumption of four common liquids, Diet Coke, coffee, mouthwash and water. This poster describes the effects of the above liquids by comparing the amount of DNA extracted from buccal swabs (using Promega's Plexor HY System Kit) prior to consumption of these liquids to the amount of DNA extracted from buccal swabs at different intervals after consumption of these liquids. A statistical ANOVA test between the four liquids shows that the mean amount of DNA extracted is nearly the same across all of the groups. Multiple t-tests show no statistical difference between the amounts of DNA obtained at various time intervals. However, the t-tests do show that there is a statistically significant difference between samples taken after Diet Coke was consumed and samples taken after the other three liquids were consumed. This study suggests that the consumption of Diet Coke can affect the amount of DNA obtained from buccal swab samples.