



CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

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| Name(s) Krista M. Hobbib | Project Number J2110 |
| Project Title Pucker Up: Putting Long-Lasting Lipstick to the Test | |
| <p style="text-align: center;">Abstract</p> <p>Objectives/Goals Many people spend money on lipsticks marketed as long-lasting (eg, "16-hour kiss-proof lip color", etc.). My goal was to i.d. which brand of 6 long-lasting lipsticks is the most durable when tested in 2 conditions (Blot & Humidity). Based on previous research, I believed Maybelline would prove to be the most durable, & L'Oreal would be the 2nd most durable. My study saves consumers money & time by proving what brands are more durable & also reveals what key ingredients to look for when buying lipsticks claiming to be long-lasting.</p> <p>Methods/Materials A Blot Test simulated what causes color to fade/smear as lips press against a surface (speaking, kissing). A Humidity Test simulated what causes color to transfer/run in heat & moisture (eating/drinking, humid weather). I applied each color to 3-D synthetic lips (soft flexible silicone), since real lips vary in size, shape, firmness, & texture. I conducted both tests 8 times x 6 brands (98 total data points). I devised a 1-6 rank order scale to score brand durability (1 is most durable; 6 least durable), then analyzed & score the data & pre/post photos.</p> <p>Results Maybelline proved to be the most durable brand in both test conditions. The L'Oreal brand didn't perform as expected, scoring a 2 (2nd most durable) in the Blot Test but only a 6 in the Humidity Test (tied for least durable). MAC brand costs the most but was the 2nd least durable in the Humidity Test & just average (3) in the Blot Test. Wet N Wild was the 2nd most durable of the 6 brands, which was unexpected given the limited research on it & its low price.</p> <p>Conclusions/Discussion Maybelline was the most durable in both tests because it contains 3 ingredients key to sustaining color, while other brands have just 1 or 2. Somewhat surprising is the performance of Wet N Wild, the least costly, yet proved to be the 2nd most durable. My study proves Maybelline to be more durable than Wet N Wild, Revlon, MAC, & Covergirl or L'Oreal. As a result, consumers know what ingredients to look for in a long-lasting lipstick, saving time & money. My findings also support previous research that more expensive cosmetics don't necessarily guarantee higher quality.</p> | |
| Summary Statement I tested the durability of 6 long-lasting lipstick brands in 2 test conditions (Blot & Humidity), applied color to 98 3-D synthetic skin lips, devised a 1-6 rank order scale, & proved 1 brand to be the most durable. | |
| Help Received I designed the study & scoring system myself, & found the synthetic skin product; My advisor reviewed my notes & suggested Humidity Test modifications; My mentor read my research paper & clarified info. re. the chemistry of product ingredients; My parents timed 48 Humidity tests & aligned graphs | |