Super-Efficient Condiment and Detergent Storage Containers

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Introduction

Bottles have been manufactured by many different companies for a variety of different products for hundreds of years. These bottles have typically balanced being cost effective while also fulfilling the minimal requirements to adequately hold the different products that the company produces. While the bottles serve their basic purpose, our purpose is to find advancements that can be made that can eliminate the need for excessive force to make use of all the product in the bottles that has a hard time coming out.

Purpose

• The purpose of this project is to find more suitable storage containers that will store condiments, shampoo and detergents more effectively. When the condiment is at almost at the end, the consumer must tap the bottle repeatedly to force the product out of the bottle. 

• Currently, the bottles are made of an inexpensive type of plastic that will not allow the consumer to attain the maximum amount of the product. Our goal is to create containers which result in minimal waste of these condiments and easily allow for the product to exit the container.

Test Results

As can be seen from the graphs, the time taken to drop decreased significantly each time the angle of inclination increased, as expected. The detergent had no issue of quickly sliding to the bottom, however the ketchup and shampoo took significantly longer. The charts and graphs display the time taken for each material (ketchup, shampoo, and detergent) at each different angle (48, 63, 85 degrees) for the different combinations of materials tested.

Conclusion

The combination which produced the most efficient material for condiments, shampoo, and detergent storage was glass mixed with neverwet. However, neverwet is poisonous and would not be FDA approved, so the next best result was glass mixed with candlewax, which is safe. When the glass was covered with candlewax, it resulted in the fastest times of all the condiments sliding down with minimal leftovers. However, the glass and neverwet mixture is optimal for detergent storage, since they are not for consumption and will not require FDA testing.

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