

Name _____ Date _____

Pharmaceutical Sciences

Problem to Solve: How can we manufacture lip balm?

Materials Needed:

5 ½ tsp of Sesame or Avocado Oil
1 tsp Beeswax
1 tsp of Soy Wax
1½ tsp Shea, Mango or other vegetable based butter
Few drops of flavor oil
(Use one type: banana, orange, lemon)
Plastic spoons
Lip Balm Tubes
Pipettes (droppers)
Pot Plate or Microwave Oven
Glass Beaker (sterile)
Glass Rods (sterile)

(Oils can be exchanged for any type of edible oil from the grocery store such as Safflower)

Directions:

1. Melt shea butter, beeswax and sunflower oil, and coconut oil together in your beaker or cup. Make sure that the hot plate is not too hot! Do not microwave too long!
2. Use the glass rod (sterile) to mix the ingredients thoroughly.
3. Add about 10 drops of one type of flavor oil, and mix again.
4. Use a pipette (dropper) to fill your empty lip balm containers (recipe should make about 6 tubes). Fill slowly so that solution does not spill over the sides

Results: Let the tubes cool, and don't forget to label your lip balm (type of flavor used)

Pharmaceutical Sciences is a part of Engineering Technology. When we manufacture medicines and cosmetics, we are using an engineer and a pharmacist to complete the work.

Conclusion/ Results - What have you learned?

1. What is the purpose for adding ingredients like shea butter and different kinds of oils?
2. What is the purpose for adding beeswax?
3. What did you enjoy most about this experiment?

Answer key:

The answers here are uniquely liberal, but below would be a good evaluation.

What is the purpose for adding ingredients like shea butter and different kinds of oils?

Answer: To increase balm benefits, such as emollient and tactile (smooth) factors. An excellent student could identify that Avocado and sesame oils contain a good level of sunscreen.

What is the purpose for adding beeswax?

Answer: As a hardening agent.

What did you enjoy most about this experiment?

Answer: Open.

Credits: The Mabel White Company in Conjunction
with Dr. Lillian Riggs Johnson, North Carolina State University

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