

e-mail from **Sumptuous Skincare Ltd**

From: Melanie Williams
To: Science Consultants
Subject: The Pastillator

Dear Science Consultants,

You have seen on the website how we make lanolin from sheep wool grease. Lanolin can be mixed with other ingredients to make lots of other products. You saw one of our lanolin products on a machine called a pastillator. The lanolin product is runny when it enters the pastillator and falls through holes onto a conveyor in the form of drops called pastilles. The pastilles travel along the conveyor, cool, go solid and then are put into bags.

Sumptuous Skincare Ltd is always trying to improve the efficiency of its processes. Our scientists think that there may be a way to increase the number of pastilles produced and how quickly they are made.

They would like you to help them in their experiments.

1. Would you investigate some different ways of making drops, using sample liquids instead of the real ingredients as the ingredients we use are expensive? Our customers like the pastilles to all be the same size, so you should try to make your drops the same size too if you can.
2. Would you also investigate whether the runniness of the liquids affects the quality or size of drops or how quickly the drops can be made?
3. Finally, they would like to know whether the surface the liquids are dropped onto affects the size or shape of the drops.

Would you record your evidence and report your results to our scientists? We look forward to hearing from you.

Melanie Williams

Melanie Williams
Technical Manager, Sumptuous Skincare Ltd