

## Soap and Soap Making: The Oldest Organic Reaction

### Objectives:

1. Use web resources to answer questions about soap (below).
2. Research the soap making process and come up with a recipe that your lab team will use to make the soap in class.

### Web resources:

1. The American Cleaning Institute- [http://www.cleaninginstitute.org/clean\\_living/soaps\\_detergents.aspx](http://www.cleaninginstitute.org/clean_living/soaps_detergents.aspx)
2. The Home-Handcrafted Soapmakers Guild- [www.soapguild.org](http://www.soapguild.org)
3. A Beginners Guide to Soapmaking- <http://smallnotebook.org/tutorials/beginner-soapmaking/>
4. How to Make Soap- [www.soap-making-resource.com](http://www.soap-making-resource.com)
5. NBC Learn Chemistry Now- <http://www.nbclearn.com/portal/site/learn/chemistry-now/chemistry-of-detergents> There is a video listed here on the chemistry of soap.

### Questions to answer. Please type your responses in a google doc and share it with me.

1. What is the origin of the word “soap”?
2. Describe a saponification reaction. What are the reactants? Products?
3. What are the types of acids found in triglycerides?
4. What is a surfactant?
5. What are micelles and describe how they enable soap to remove nonpolar dirt and grease particles.
6. What is a saponification table and how is one used in soap making?

There are many soap recipes and tutorials on how to make soap. Your lab team will be making a “cold process” soap in class. You need to research the process and choose a recipe that you can follow and complete in one lab period. You can also come up with your own recipe. You will need to provide all of the ingredients and materials to make a small batch. This includes the tools as well. The websites above have plenty of information. I will provide the sodium hydroxide.