

Biodiesel Byproducts

When making soap, using biodiesel byproduct is much different than using the whole oils. Whole oils have a known SAP number and are saponified in a consistent manner. Using biodiesel byproducts can vary quite a bit in terms of their properties and their contents. One of the goals of this book is to provide a method to determine a consistent way to use these byproducts in making soap. Once we can use the byproducts consistently, we can then use our byproducts with traditional soap making ingredients and recipes.

Biodiesel Glycerin Byproduct

If you or a friend of yours makes biodiesel, you are probably familiar with biodiesel glycerin byproduct produced during biodiesel production.

The glycerin byproduct is the dark colored liquid that settles to the bottom and contains the leftovers after biodiesel production. These leftovers include methanol, mono-glycerides, di-glycerides, soaps, free fatty acids, oils, biodiesel and glycerin. That's probably quite a bit more than you expected.

The biodiesel glycerin byproduct can be thought of as a bad batch of soap -- one that is unbalanced and under-saponified.

A consistent way to handle these leftovers is needed, specifically, the saponifiable elements. Rather than using expensive chemistry equipment to determine exactly what is contained in the glycerin byproduct, a percentage of the saponifiable elements can be calculated for the glycerin byproduct. Using this percentage a SAP value can be determined for the glycerin byproduct. Having a SAP value will give you a consistent way of dealing with your glycerin byproduct. Provided you have some consistency in your oil supply and processing methods, the same SAP value can be used for future batches.

Now armed with a SAP value for your glycerin byproduct, you can treat the glycerin byproduct just like another ingredient in your soapmaking arsenal. You can formulate soap recipes with the properties you are interested in adding to your soap. Some of these properties include hardness, conditioning, and/or latherability. You can also be a purist, and use only the glycerin byproduct to make soap. By having a SAP value, you can also be confident that you have fully saponified your byproduct and that your soap isn't *hot*, due to an excess of caustic.