Soap Making

History of Soap Making

The use of soap has a long history and it is easy to image how it was discovered if you know what materials make soap. All soap is a combination of fats, oils, and an alkali salt (sodium hydroxide or lye) that is present in ashes – the lye – from burned plant material, like wood. If you imagine back to when man first started cooking meat over a fire, you can probably see an animal roasting on a spit. As it is cooking, the fats and oils drip onto the fire. After the animal is cooked and removed from the spit, the ashes from the fire are left. When it starts to rain, foam and suds form on the ground. If a person were to put their hands in it to study it and then wash it off in the river, they would notice how much cleaner their hands were after.

The origins of cleanliness are prehistoric. Early peoples lived near water and knew it had cleansing properties. Roman legend states that soap was named for Mount Sapo, a mountain where animal sacrifice occurred. Rain washed ash and animal fats down to the Tiber River below. Women who cleaned their laundry on the banks of this river noticed that it was easier to clean their clothes here. The Roman Empire soon became famous for its baths, but the soap produced during this time was too harsh for use on skin and was only used for laundry. Much later, during their military occupation of the rest of Europe, they noted that the Celts (Germans and Gauls) used soap for cleansing their bodies. However, soap has a recorded history even before the Roman civilization.

Many ancient civilizations have left behind evidence of soap making. Excavations of Ancient Babylonian ruins produced clay cylinders filled with a soap-like material that dated to 2800 B.C. The cylinders were inscribed with a recipe that described boiling fats with ashes. The use of this material was not described, so we don't know if it was used to wash themselves, their laundry, or their homes. Early Greeks bathed for aesthetic purposes, but did not use soap. Instead, they scrubbed up with sand, clay, pumice, and ashes, then they would anoint themselves with oils and scrape it all off with a tool called a strigil. The first civilization that knowingly made soap was the Romans—if only for laundry. However, by the second century A.D., the Greek physician Galen recommended the use of soap on the human body for medicinal and cleansing purposes. As these empires declined, so did their influence on hygiene.

By the Medieval Period, the collapse of the Roman Empire and the loss of education afforded by the writings of Greek philosophers led to a belief that bathing was dangerous and unsanitary. This lack of personal cleanliness and related unsanitary living conditions contributed heavily to the great plagues of the Middle Ages. It wasn't until the 17th century that cleanliness and bathing started to come back into fashion in Europe. However, there were still areas of the medieval world where personal cleanliness remained important. Daily bathing was a common custom in Japan during the Middle Ages and in Iceland, hot springs were popular gathering places.

Both the Renaissance and the following Period of Enlightenment brought about a renewal of interest in the sciences and allowed for experimentation in soap making and a resurgence in bathing and personal hygiene. Italy, Spain, and France were early centers of soap manufacturing, due to their ready supply of raw materials such as oil from olive trees.

Subsequently, the desire for soap increased. In 1790, Nicholas Le Blanc developed a method to turn common salt into sodium hydroxide using sulfuric acid, limestone, and coal that allowed soap to be produced in larger quantities. The only problem was that it produced dangerous chemicals and residue in the process and led to a growing problem with pollution.

By the mid-1800s, soap makers were using the new methods of making alkali salts and developing recipes that included regional fats, oils, and fragrances to develop regional styles of soap. While Europe progressed their soap production to include many of the fragranced soaps we are accustomed to today, the United States would not reach this stage for a few more decades. Soap Boilers, as soap makers were called during the Colonial Period of United States history, were among the first settlers of Jamestown in 1607. Early settlers also carried a large supply of soap to the colonies. Within a few years, colonists became very self-sufficient. They raised their own livestock and grew food that was easy to cultivate. The butchering of animals produced fat and cooking the animals and heating their homes produced ash. Both fat and ash were necessary for their soap making. Rather than waste these items and pay an exorbitant amount of money to ship finished soap from England, colonists developed a schedule to make their yearly supply of soap.

Soap was traditionally produced during two times of the year: spring and fall. Settlers who raised and slaughtered animals typically chose to make soap in the autumn. Soap smelled better if the fats were fresh and most animal slaughtering occurred in the fall. Homesteads where they did not slaughter animals on a large scale had an abundance of ash after the winter and would make their soap in the spring. At this time, soap was not produced as hard bars, but rather in large containers of gelatinous goop that was scooped out and used. The job of making soap was seen as a woman's task, and was also considered one of the most difficult jobs in the home.

Soaps can be made in two basic ways: the cold process or the boiling kettle method. In the cold process, saponification takes several days to complete. Glycerin, a natural by-product of saponification, remains in the soap. Cold soap is easier to make because it does not need to boil—the sun does the work of the fire. However, most European settlers used the kettle method. Through the process of boiling, steam is directed through the soap mixture. After saponification takes place, salt is added, causing the soap to rise to the surface and glycerin to sink to the bottom. Traditionally, soap making took place right after animal slaughtering so the fat was available for the process or after the winter using the collected ashes from hearth fires.

In fact, they might have saved themselves a lot of dangerous work if they had observed Native Americans and their natural soap-making techniques. Long before European Colonists arrived, the indigenous peoples of the Americas had discovered a much simpler method of making soap. Many plants that naturally grow in the United States produce a substance known as saponins. This term should sound familiar (Mount Sapo). Saponins produce a natural lather, and just like manmade soap, help to bind dirt and oils to water.

For hundreds of years before the arrival of Europeans, local indigenous people in the Southwestern borderlands used the sap from Yucca and Gourd to wash hair, clothing, and in ceremonial baths. Yucca produces an interesting lather. This comes from the saponins in the yucca. Until the introduction of commercialized soap-making, plants were the only washing medium used by Indigenous peoples of New Mexico and Arizona as well as the New Mexican Spaniards. Many Indigenous peoples including the Tewa, Navajo, Ute, and Apache used yucca suds in washing ceremonies. The saponins in the yucca plant also help to dye wool in the wool-making process.

With the introduction of Spanish colonists into the region in the 1500s, Puebloan soap making saw some changes. In Spain, olive trees were regularly used in production of soap. In New Mexico, the Spanish replaced olive trees with the oil that came from animal fat – particularly their livestock. This introduction of animal fat into soap making was adopted by the Puebloans, although it did not entirely replace plant-based soap making.

By the beginning of the 19th century, city merchants in the United States dedicated themselves to making soap year round and became known for making dependable soaps, while rural homesteaders still used unscientific methods that would occasionally produce useless batches. In Europe, soap was a heavily taxed luxury item. In order to be able to store soap for longer periods, merchants added slat at the end of production; this hardened the slimy soap into bars that could be wrapped and cut. It was at this time that people in cities and towns started purchasing soap rather than making it. As bathing came back into fashion in the 19th century and railroads made the shipment of goods easier, smaller towns and rural areas started purchasing bar soaps by the pound rather than making it. By the early 1900s, soap production had become a major industry.

During World War I, commercial soap, made with detergents, came into existence. The injuries of war, as well as the scarcity in resources, brought an increased need for other cleaning agents. By 1953, detergents outsold soaps for laundry and household cleaning. Eventually, detergent along, or in conjunction with soap, was used for personal cleansing.

Cleansing bars people buy at the story today and use in the shower or bath are actually detergents. Soaps are made using a combination of animals fats and/or vegetable oils with lye and water in a process called saponification. Detergents are made using a combination of petroleum distillates instead of the fats and oils.

Since the 1930s, commercial soaps use the “continuous process,” in which ingredients are under pressure in a large vat. This method permits raw ingredients to be added continuously to one end of the vat while soap is removed from the other end. The high pressure and temperatures in the vat and the addition of a catalyst cause immediate saponification of the ingredients. In addition, glycerin is regularly removed in this process as its removal extends the shelf life of the soap.

Today there is a heightened awareness of the possible adverse effects of many of the synthetic additives and chemicals in commercial soaps. As a result, the last decade has seen an increase in the number of people turning to soaps with all natural products and privately and independently made soaps.