

CONUSBAT New Year Issue An Historical View Ointments, Creams & Lotions



Ancient Greeks - Indigenous to the warm Mediterranean regions are olives and its oil has been popular since humans lived there, not only for food use, but also as moisturizer. Greek Olympians greased themselves with it before the competition, and Hippocrates, who is considered 'the Father of Medicine', preferred another natural cosmetic as he is noted for saying that applying honey to the face would guarantee "a fresh and jovial look."

Roman History - Galen, the celebrated Roman physician (Galen of Pergamon, 129* - 217† AD), who became famous for advancing the known boundaries of human anatomy, also provided for historical evidence to have developed a cold cream. He melted beeswax into rose oil and then added water. Due to the feeling it left on skin upon water evaporation, the family of emulsions was categorized as cold creams. Was his recipe an O/W or W/O formulation? What percentages was oil? Water? - this is unknown, let alone no emulsifier was then yet identified.

However, it should be noted that although human dissections was then frowned upon, Galen astoundingly proved that urine was produced in the kidneys and not in what was then commonly believed as the bladder. Considering that microscopy was not yet known, making this discovery was that more difficult to make, especially to know the function of the glomerulus & its surrounding Bowman's capsule, which constitutes the renal corpuscle, the basic filtration unit of the kidney!

- wikipedia.org/wiki/Galen

- www.thesecretgreece.gr/eng/product/The-first-face-cream-1800-years-old-a-recipe-of-Galen

Archaeological findings in London - In 2003, a team of archeologists from Bristol University unearthed a 2000 year old, full canister of cosmetic skin cream, which was hidden in an ancient Roman temple drain in London-Southwark (Londonium). When the canister was opened, they found a white ointment, which was reminiscent of modern-day cold creams, like Nivea or Ponds, etc. The archaeological team announced that "the Londinium cream" was primarily made up of animal fat, probably from cattle or sheep. They also detected starch, which was likely isolated by boiling roots and grains in water. In addition, the cream contained the reddish mineral, tin dioxide (SnO₂), sometimes referred to as cassiterite. [ancient-roman-cosmetics-skin-cream-from-the-2nd-century-a-d/](#)

Modern Day Chemistry Discovery - In the early 1900, Paul Unna, a dermatologist, supported Dr. Isaac Lifschütz, developed an emulsifying agent at the then newly founded company, Beiersdorf, located in Hamburg, Germany. The emulsifier was named Eucerit, inspired by the old Greek word for "the beautiful wax", and was patented. Eucerit was the technological base to develop stable water-in-oil emulsions for the first time. It formed the basis of several product lines for Beiersdorf.

www.beiersdorf.de/marken/markengeschichte/eucerin

Regulatory affairs for cosmetics is the core service area of CONUSBAT. Knowledge on the nature of various skin preparations is important for our work, especially when performing safety assessments. The following is meant to share some of the classification knowledge:

- **Ointments** (oil 80% - water 20%) are homogeneous, viscous, semi-solid preparations, which most often possess a greasy feel. They are used as emollients or for the application of active ingredients to the skin for protective, therapeutic, or prophylactic purposes. Furthermore, their use is where a degree of occlusion is desired, as they stay on the surface of the skin and are not well absorbed.

- **Creams** (water 50% - oil 50%) are semi-solid emulsions of oil and water. They are divided into two types: oil-in-water (O/W) creams, which are composed of small droplets of oil dispersed in a continuous water phase and water-in-oil (W/O) creams, which are droplets of water dispersed in a continuous oily phase. Oil-in-water creams are more comfortable and cosmetically acceptable as they are less greasy and more easily washed off using water.

- **Lotions** (water 60-80%, remaining is oil) are low-viscosity emulsions intended for external application to the skin in order to smooth, moisturize and soften it.

As this issue is 'food for thought', the CONUSBAT Regulatory Team wishes a prosperous, healthy New Year to its clients, colleagues, partners and readership!