

# Archeologists discover Egyptian mummies styled with fatty hair gel

August 23 2011, by Bob Yirka

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(PhysOrg.com) -- While it has long been known that the ancient Egyptians prettied up those deemed worthy of mummification, not so clear was what was done for the hair. Now, archeologists working out of the KNH Centre for Biomedical Egyptology, University of Manchester, have discovered that to keep hair looking good in the afterlife, a type of fat based hair gel was applied. Their team has published the results of their analysis of the hair gel in the *Journal of Archaeological Science*.

The team studied hair samples from eighteen mummies, of both genders, encompassing a wide age range, and found that nine of them had a heretofore unknown gel-like substance coating their hair. Fifteen of the mummies studied were found in a cemetery in an oasis in the desert (not in pyramids) the other three came from museum samples, and all are believed to have lived sometime around 300 B.C. To find out what the gel was, the team used [gas chromatography](#) to pull the molecules apart and found that they were comprised of [fatty acids](#) including palmitic (a major component of [palm trees](#)) and stearic (most commonly found in animal fat).

The team suggests that the hair gel was used then as it is now, to mold and hold hair in certain positions deemed desirable to enhance the appearance. And because some of the mummies found had become mummified naturally, due to being buried in very [dry sand](#), it is assumed that hair gel was used to style the hair of people in life as well. Also, because there were no embalming chemicals found in the hair or gel, it appears the hair was covered during the mummification process and then

styled afterwards, indicating that the early Egyptians were aware that hair would endure without assistance, though it's possible they believed the gel would help make it last even longer.

The authors note that there were a variety of hairstyles, with some having long hair, others short. Also, it appears metal implements were also used to force curling, which would then be held in place by the gel. They note that such curling tongs have also been found in several tombs in Egypt.

The team plans to continue with the analysis in hopes of pinning down just exactly what type of fat was used to make the gel.

**More information:** Ancient Egyptian hair gel: New insight into ancient Egyptian mummification procedures through chemical analysis, *Journal of Archaeological Science*, Article in Press, [doi:10.1016/j.jas.2011.08.004](https://doi.org/10.1016/j.jas.2011.08.004)

### **Abstract**

Artificial mummification in ancient Egypt involved the application of chemicals to the body mostly for the purpose of preservation; others were applied for ritual aspects. Unguents were used also in everyday toilette. Here we report a type of material which was applied specifically to the hair, a fatty material used as a 'hair gel'. Personal appearance was important to the ancient Egyptians so much so that in cases where the hair was styled the embalming process was adapted to preserve the hair style. This further ensured that the deceased's individuality was retained in death, as it had been in life, and emphasises the importance of the hair in ancient Egyptian society.

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