

EXAMINATION OF TUT-ANKH-AMEN'S COSMETIC

A. Chaston Chapman, F.R.S., and Dr. H. K. Plenderleith have pointed out that the tomb of King Tut-Ankh-Amen at Luxor was opened by Dr. Howard Carter in 1922 after having remained sealed for 3,300 years, and tests made with sterile swabs, indicated the absence of bacteria within prior to opening. Among the many objects discovered was a sealed calcite cosmetic jar of peculiar design, which contained a yellowish brown fatty substance having an odor at first suggestive of cocoanut. A unique opportunity was here afforded of studying the stability of a fatty substance which had been preserved in sterility over such a long period. Chemical examination of the material showed it to be almost entirely organic in nature, consisting of (1) a fatty portion representing nearly 90 per cent of the whole; (2) a resinous portion; and (3) a small inorganic residue of calcium salts—the latter obviously derived from the action of fatty acids upon the jar. The fatty matters consisted partly of saturated acids of the ordinary fatty acid series, chiefly palmitic and stearic acids, and partly of the so-called "oxidised acids." Assuming that the latter had been formed by the oxidation of acids of the oelic acid type, the quantity found would point to the presence in the original fat of 25-30 per cent of oelin or other unsaturated glycerides. Glycerol, free and combined, still existed in the fatty portion to the extent of 5.46 per cent, which was equivalent to 4.8 per cent of the cosmetic itself. The quantity of unsaponifiable matter was very small, and it was found impossible to detect the presence of cholesterol, phytosterol or other similar crystalline substance. The bulk of the evidence seemed to suggest that the cosmetic consisted originally of about 90 per cent of a neutral animal fat, with about 10 per cent of some resin or balsam. (*Chemical Age*, August, 1926.)
