HNO_3 heated to boiling and filtered. On adding NH_4OH to this filtrate a heavy precipitate of $Al(OH)_3$ formed. A confirmatory test with $Co(NO_3)_2$ gave positive results. The only basic radical present was phosphate. This would indicate that aluminum was present in the form of the phosphate.

SUMMARY.

The principal results of the above experiments may be summed up as follows:

1. The fruit contains a drying oil having the following properties.

Specific gravity .9116; Solidifying point —24° C.; Refractive index (20° C.) 1.475; Iodine number 145.3–155.2; Saponification number 157.3–163.2.

2. The chemical composition of the fruit is as follows:

Moisture 5.30%; Ash 8.82%; Crude protein 25.07%; Crude fat 17.23%; Crude fiber 20.37%; Carbohydrate (by difference) 23.21% = 100.00%.

3. The fruit contains aluminum phosphate.

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PHARMACY IN THE DAYS OF THE PHARAOHS.*

BY CASWELL A. MAYO.

Our knowledge of medicine and pharmacy in Ancient Egypt is largely drawn from four papyri though there are five others which contain references to medicine and the practice of the healing art. But these five are mainly devoted to mystical incantations. The four which give us most of our knowledge of medicine in the days of the Pharaohs (1) are the "Berlin Medical Papyrus," a photostat of which is shown here,[1] and which covers 23 pages; (2) "The Ebers Papyrus," of 109 pages, a reproduction of which is shown here[1] through the courtesy of the Lloyd Library; (3) the "Edwin Smith Papyrus," of 22 pages, one page of which is shown,[1] and (4) the "Hearst Papyrus," owned by the University of California, which has been published with notations, this published form being shown.[1] This contains 18 pages.

From these we learn that in Egypt, as in most of the early civilizations, medicine was a part of the priestcraft. The Egyptians seem to have had a very good idea of the circulation of the blood, and of the function of the heart.

A great many of the drugs named are still in use, while others are known to us though their use has been discontinued. The preparations used were made up for each individual case, and were generally polypharmacal, containing anywhere from three to two dozen ingredients. Little or no attention seems to have been paid to appearance or palatability. Beer was much used as a vehicle.

Something like 150 drugs have been identified as having been used by the pharmacists of the Pharaohs, a list of which will be found in the "Handbuch der Pharmacognosie" by Tschirch, Vol. 1, part 11, page 463. This included absinthe,

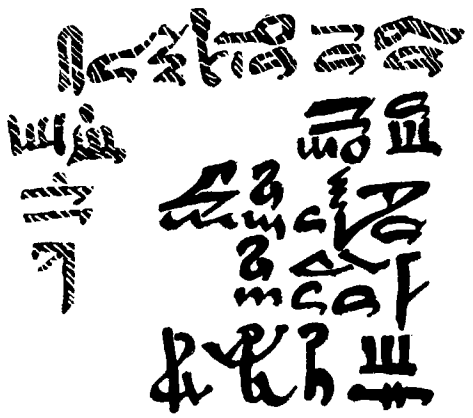
* Abstract of paper presented before the Section on Historical Pharmacy, Buffalo meeting, 1924.

[1] Exhibited during the meeting of the Section.

aloes, acacia, anise, calamus, cannabis indica, cardamom, cassia, cumin, chicory, conium, coriander, galbanum, hyoscyamus, juniper, peppermint, myrrh, opium, castor oil, squill, styrax, thyme, triticum, cantharides, honey, wax and the excrement and entrails of various animals, and several insects.

PRESCRIPTION FROM PAPYRUS EBERS.

Written about 2,550 years before Christ.



The shaded letters are in red in the original prescription. The prescription reads from right to left. The column on the left gives the quantities.

The line in red across the top and the prescription have been translated as follows:

To cure the bowels which are diseased.

Cumin	1/64 drachm
Goose grease	1/8 drachm
Milk	1 tenat (0.6 liter)

Boil, pour out and drink.

The formulas appear in very much the same manner as they appear in modern formularies, the writing being indented on both sides. As a rule, the title of the formula, usually including the name of the disease to be treated, is in red, and the quantities of the article used are also in red.

In all the papyri mentioned the writing is of what is known as the hieratic or cursive form which is in effect a kind of shorthand of the hieroglyphic writing. The hieroglyphic writing consists of pictorial representations. The hieratic writing is not pictorial but uses arbitrary signs to represent the pictorial figures used in the hieroglyphics. As used in these manuscripts, the hieratic writing is the combination of the syllabic and ideistic writing, that is the ideas are sometimes conveyed as a whole, while in other cases the words are given in syllables. The writing is read right to left. It is interesting to note that one of the characters used to indicate a weight closely resembles the drachm sign now used in medicine, and it seems probable that this arbitrary sign has come down to us from Egyptian hieratic writing through the Greek, for it seems to have been used by the Greeks.

It is interesting to note that the "Edwin Smith Papyrus," the contents of which are even more purely scientific than that of any other, and the Hearst Papyrus are both in United States.

More details regarding the "Ebers Papyrus" are given in an article printed in the *Druggists' Circular* in March, 1888. For much of the information which I have used in the compilation of these remarks I am indebted to Baron Felix Von Oefele, who is one of the highest living authorities on medicine in ancient Egypt and many of whose reprints on various phases of the subject are shown herewith.

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