

ANALYSIS OF "GLUTEN-SUPPOSITORIES."

WE were induced to take up this work by the claim, made by the manufacturers of these suppositories, that they would "*cure hemorrhoids, constipation or semi-paralysis of the lower intestine by increasing nutrition of the parts through absorption.*" (Italics are ours.)

Our results show that considerably more than ninety per cent. of the weight of the gluten suppositories purchased by us was made up of a substance freely soluble in both common (sulphuric) and petroleum ether. Moreover, this substance has the physical characteristics and properties of cacao butter (*Oleum Theobromæ*). This fatty substance was removed from a known weight of the suppositories by extraction with petroleum ether, care being taken to remove none of the insoluble residue. The results of a number of these extractions were strikingly uniform, the average weight of the insoluble residue being 5.79 per cent. of that of the original suppositories. This residue remaining after the extraction of the fat consisted of a fine white powder and a brownish granular substance. Upon applying the iodine test to these constituents after hydration, a strong starch reaction was manifested. We then caused the transformation of the starch into glucose and dextrine, and separated these latter by dialysis from the other constituents of the primary residue. When this was done there was left but 4.17 per cent. of the weight of the suppositories, indicating 1.62 per cent. of starch in the suppositories. Granting that the above 4.17 per cent. is pure gluten—for it does give the proteid reaction with Millon's reagent—we can fairly conclude that it is *all* the gluten the suppositories do contain.

The average weight of eight of the whole suppositories was 0.89 grammes or 13.735 grains; consequently each suppository would average not more than *0.038 grammes or 0.573 grains of gluten.*

We merely give a brief record of facts to define the term "Gluten Suppositories," as used by the manufacturers. Whether they deserve this title or whether the small amount of gluten contained in them, as shown by our analysis, really gives to them the beneficial properties of the above claim, is left to the judgment of the reader.

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