cephalic fluid, a procedure which has been successfully carried out by Tarnier and others.

REPORT ON FOOD AND DRUGS AND THEIR ADULTERATION.

BY B. F. DAVENPORT, M.D.

MILK.

DR. C. RICHARDSON, chemist for the District of Columbia, reports in Bulletin No. 19 of the United States Department of Agriculture, that as the result of his examination of many samples of milk sold in Washington, he has come to the belief that oleo oil, or some similar substance had been churned into them to enrich a poor or skim milk. It is well known that De Laval, the manufacturer of the much-used Swedish centrifugal skimming machine also makes a similar machine for the churning of oils back into milk.

CITRIC ACID IN COW'S MILK.

T. Henkel¹ asserts that he obtained from 0.9 to 1.1 part per thousand in cow's milk, and that the concretions so frequently found in condensed milk consist of almost pure calcium citrate. A good milking cow yields as much citric acid per day in her milk as is contained in two to three lemons. He found none in woman's milk.

BUTTER.

The German Dairy Association, under the direction of its president, Dr. R. Wollny of Kiel, has instituted an exhaustive investigation into the most accurate and convenient methods of butter analysis. As collaborators in the task they have called in the aid of a large corps of expert food chemists in all the leading countries of the world. The special occasion which has impelled this research has been the passage of an imperial German oleo statute, which allows of the presence of only 4 per cent. of true butter fat in an oleo. This therefore calls for the devising of some method of butter analysis by which the amount of butter fat present can be determined of a certainty, to within at most a single per cent. of its true amount. This is an accuracy much greater than is necessary under the oleo law of any other country. According to Dr. Wollny, the absorption of carbonic acid from the atmosphere has been the chief source of error in the Meissl-Reicherts process as commonly conducted, and the error thus introduced might exceed the equivalent of 4 per cent. butter, the whole amount allowed to be present under the German statute.

MEAT EXTRACTS.

Fabian, in *D. chem. Ztg.*, 1888, iii. No. 29, reports the following as the result of his examination of a sample of Cibils' Beef Extract, which upon its label claimed to contain 8 per cent. pepton:—

Water,	10.02 per cent.
Salts,	25.79 per cent.
Organic matter,	64.17 per cent.
	100.00

Of these 64.17 per cent. organic matter, 1.22 per cent. was albumin, and 62.97 per cent. extractives, and there was not a trace of pepton. He therefore concluded that Cibils' Extract of Beef is not to be con-

¹ *Ztsch. f. Nahrungs. Unters.*, 1888, 135.

sidered as a food, but as a condiment. H. Trillich reports in *Pharm. Centralh.*, 1888, ix. p. 137, that Coleman's Liebig's Extract of Meat and Malt Wine, according to the results of his examination, is simply a port wine containing a small quantity of meat extract, but not a trace of malt extract. It does, however, contain a large amount of salicylic acid.

PEPTONS.

There has been much uncertainty regarding the true chemical nature of these, the final products of digestive action upon albuminoids, ever since they were thus first called in Prof. Lehman's "Physiological Chemistry." Of recent years they have been viewed as simple hydrated forms of their original albuminoids, but more lately R. Palm claims to have shown them to be simple solutions in acids, such as lactic and some others. As the peptons formed during stomach digestion contain both lactic and hydrochloric acids, this explains why they are not coagulated by heat; for lactic acid, like acetic, will dissolve coagulated albumin, and it likewise prevents its precipitation by alcohol, alkali, or neutral salts, as the precipitates which might be formed by these are all soluble in lactic acid. The combinations of mercuric salts or tannic acid with peptons are, however, not soluble, and they therefore form precipitates. A very distinctive test, therefore, between albumin and peptons is xanthogenate of potassium, for this will form a precipitate with albumin from a neutral solution only after the addition of an acid, while with peptons it will precipitate at once, for the simple reason that they already contain the necessary free acid.

SACCHARIN.

Portugal has prohibited the general importation of saccharin into that country, for the assigned reason that its common use would be calculated to cause injury to the public health. For pharmaceutical purposes, however, it is allowed when first specially licensed, but even then it is allowed of only in small quantities. In France the Paris Conseil de Hygiène has reported that saccharin is not to be considered as a food but as a drug, that its use in food is dangerous to the public health, and therefore its presence in food should be considered as an adulteration. Saccharin, as might have been expected from its chemical relationship to some other compounds, has been found to have a decided antiseptic and germicidal action. From its sweetness and innocuousness, when properly used as a drug, it may very possibly prove to be the most eligible drug of its class for internal use as an antiseptic. The following simple method for detecting its presence, even in minute traces, may be of interest. Pulverize any solid to be tested, and if it contains any fatty matter, exhaust it with petroleum naphtha, then moisten it with a few c.c. of diluted phosphoric or sulphuric acid, dry and exhaust with ether; evaporate the ether extract, and add a little resorcin to the residue, a few drops of strong sulphuric acid, and a little water; this causes the evolution of sulphurous acid gas with vigorous ebullition. The fluid turns yellow, then red, and then dark green. Allow the liquid to cool, heat again to boiling or evolution of gas, and again let cool, then add an excess of alkali, when a

solution is obtained which is reddish by transmitted light, but shows a strong green fluorescence by reflected light, this last being distinct in the presence of as little as one part in five to six millions.

SALICYLIC ACID.

M. Lambert of Lyons, France, has shown that salicylic acid is present in eggs which have been preserved by the use of salicylated water employed in the same way that lime water has so long been used. It was claimed that it did not penetrate the shell, but he has proved its presence both in the white and yolk of eggs thus treated. The acid is easily separated from an acidified water solution of the egg by shaking it out with ether, which upon evaporation leaves the acid sufficiently pure for identification by the ordinary chemical tests. M. Million, in *Review Internat. der Falsification*, has shown that the addition of a 10 per cent. solution of mercuric nitrate in diluted acid to a solution containing salicylic acid will cause an intense red coloration, which is quite characteristic even in the presence of only about one part in a million. This test has the advance over the more usual iron one in that the color is not so fugitive.

BENZOIC ACID.

The French Conseil de Publique Hygiène has decided that benzoic acid should not be allowed to be used for the preservation of any food or drink, their reason being that as an antiseptic it would interfere with a normal digestion of food, any antiseptic doing the same.

CREOLINE.

Creoline does not appear to be free from all danger in use, as had been claimed. Behrings, in *Deutsch. Militärärztl. Zeitsch.*, 1888, H. 8, reports that he has found it not to be so; and several others have done the same. Hiller says that its apparent harmlessness depends upon its slight solubility in water; that in a water mixture it is rather in the state of very fine division or emulsion than in a true solution. Rosni, in *Therapeut. Monatsheft*, 1888, 480, reports a case of death, with the symptoms of carbolic acid poisoning, which occurred where a woman had several times used a 2 per cent. emulsion of creoline as a uterine douche.

SPICES.

A so-called Bombay mace has recently appeared in our spice market, and is offered for sale as a dilutant or cheapener of true mace. Upon examination it proves to be the so-called long, wild, male, or false male, which is well-nigh destitute of flavor. Its microscopic appearance in a powder is the same as the true mace, but it can be identified from the fact that its absolute-alcohol solution gives a yellow stain to white filter paper, which the true mace does not do.

PEPPER.

Recently there has been offering in the New York spice trade what is claimed to be a new variety of pepper, under the name of Malla-quetta and Demerara peppers. Upon examination it proves to be nothing else than the old well-known drug, grains of paradise. It is to be recognized, when in powder, by the different appearance under

the microscope of its granules, and by the chemical reaction for the presence of tannic acid, which it gives with iron salts. The tannin is best extracted by the use of a mixture of ether with alcohol as a solvent; true pepper will not yield any tannin to this.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES M. GREEN, M.D., SECRETARY.

NOVEMBER 10, 1888, the first Vice-President, Dr. O. W. DOE, in the chair.

Dr. C. W. TOWNSEND reported

TWO DIFFICULT CASES OF BREECH PRESENTATION, WITH REMARKS.¹

Dr. T. E. FRANCIS, a guest, had always found delivery to be slow in breech presentations; he had never applied forceps to the breech, nor to the after-coming head. It was his practice to hook his fingers into the groin to facilitate extraction; and when this was impossible or ineffectual, it was his custom to bring down a foot. To the ankle he applied a fillet, not for purposes of traction, but to keep the child within easier reach.

Dr. EDWARD REYNOLDS said the value of forceps in delivery of the breech was not given a fair test in the case reported. The forceps used was that of Miles, and this instrument was too weak and bendable. The Simpson forceps with axis-traction rods he believed would give much more satisfactory results.

Dr. BLAKE had always succeeded in delivering the breech by bringing down the feet, and had never used breech forceps, fillet, nor blunt hook. But he knew nothing more difficult than the delivery of the after-coming head when arrested in the superior strait. He had not succeeded with forceps in such cases, perhaps due to want of skill; but he thought the principle of axis-traction, which he regarded as one of the greatest of modern achievements, must prove of great value in delivering the after-coming head.

In reply to a question by Dr. Blake, the reader said he had used Simpson's forceps, applying them under the belly, the child's body being raised in air. He had found the application easy, as was also the adjustment of the traction-rods.

Dr. EDWARD REYNOLDS believed that it was the rapid use of the traction-rods which saved the child's life in the case reported.

Dr. GREEN said that he had never used forceps in extraction of the breech, as, in some experiments on the cadaver by Prof. Richardson and himself, the results had not been satisfactory. When extraction was indicated before the groin was within effective reach of the fingers, he would prefer to bring down a foot. In regard to the after-coming head, when there was no marked pelvic disproportion, he thought the Smellie-Veit method of extraction was efficient, provided that a trained assistant was at hand to keep the head flexed and to exert judicious supra-pubic pressure. In cases of marked disproportion, however, the amount of

¹ See page 5 of the Journal.