of hypophosphites. Dowzard has pointed out some slight errors in the calculations of the percentages of purity of chemicals. A. J. Cownley has demonstrated that the test for the purity of sulphate of quinine is defective and allows six per cent. of cinchonidine to be present. A. H. Allen expressed his regret at the continued defective nature of the test for strength of pepsin. Martindale would have preferred the tinctures of decimal strength and liquid extract of cascara made by extraction with twenty per cent. alcohol instead of water only, but advanced no proofs in favor of this. There have been numerous minor complaints, such as objection to the deletion of old favorites and alterations in established formulæ, and to most of these objections the only reply that has been forthcoming was to the effect that the changes were made at the instigation of the medical committee and the pharmacists had no option but obey.

This opened up the whole question of the methods of pharmacopœia production, and a comparison with other countries is not favorable to the present British system, whereby all the directing is done by medical men, pharmacists merely carrying out their suggestions or making recommendations which may or may not be accepted by the authorities.

CHEMISTRY.

Had it not been for the introduction of the new B.P. chief importance would have been assigned to the liquefaction of hydrogen and helium by Dewar, and the discovery of krypton by Ramsay, as epoch marking events of 1898. Not satisfied with liquid air and detailing its properties, which are sufficiently remarkable, Dewar has succeeded in producing appreciable quantities of liquid hydrogen and determining its boiling point and density hitherto unaccomplished with exactitude. It is true that Olszewski claimed to have performed this feat, but details were lacking and his figures proved incorrect. When it is remembered that the boiling point of liquid hydrogen is 238°C., it seems as if the lowest possible degree of cold has been reached. Indeed, it is Dewar's own opinion, as this is within 30° of absolute zero. Krypton is of no less interest, and its discoverer, who has added argon and terrestial helium to our elements, has recently lectured on the subject at the Berlin Chemical Society. This is confirmatory of Ramsay's address at Toronto in 1897 that there was possibly an element between argon and helium. The spectrum has been carefully differentiated from that of argon, and the density is about 22.5, oxygen being 16. Besides this element Crookes has added another spectroscopic discovery in monium, wrested from the rare earth group of yttrium, samarium, etc., and found its density to be about 118, that is between yttrium and lanthanum. Nacini, of Padua, adds another element, discovered by spectroscopic investigation in the gases evolved from Vesuvius, and has identified it with coronium, long known to exist in the corona of the sun. The crystalline form of iodoform has been definitely setled by Pope as hexahedræ when crystallized from acetone. Rimini has introduced a new test for formaldehyde, depending upon the reaction with phenylhydrazine hydrochloride and hydrochloric acid with formaldehyde yielding a red coloration. Acetylene has gained greatly in popularity as an illuminating agent and is becoming so important as to require literature devoted to it. There have been several accidents with it, and the best generator has not yet been devised that will provide safety, efficiency and economy. In a bicycle lamp acetylene is a distinct success. Hubons has patented the method of preparing pure lamp-black by decomposing acetylene under pressure in a steel cylinder by an electric spark. Colloidal mercury is Lottermoser's description of a soluble form obtained by reduction with staunous nitrate. Colloidal gold is prepared by Zzigmody by reduction with formaldehyde and then dialysing. Liebermann has directed fresh attention to the alkaline reaction given by some glass apparatus, which might affect analyses. Robin revived the well-known test for nitrites in drinking water, where iodine acts upon starch when acidulated with acetic acid in the presence of iodide of potassium and nitrites. The use of formaldehyde in pharmacy as a preservative has caused the various tests in use for its detection to be compared, and C. E Smith has published a modification of Legler's ammonia method which is quantitative. Endemann has given a useful table showing the action of formaldehyde on phenolic compounds by evaporation and addition of strong sulphuric acid and noting the coloration. Fenton has discovered a volumetric method of estimating sodium by means of dihydroxytartaric acid in the presence of permanganates. Work on the various alkaloids steadily progresses, and gradually the compositions of these complex organic molecules are being revealed as the result of patient research. Martindale, in Schmidt's laboratory, has investigated corydaline and examined its reduction compounds. Orloff has prepared pure physostigmine in a crystalline form, and F. da Silva has devised a new reaction for this alkaloid which depends upon the fact that a solution in strong nitric acid yields on evaporation a green residue. Merck, Harnack and Petit have worked on pilocarpine and pilocarpidine. A new color reaction for veratrine has been detected by Laves depending upon the action of strong sulphuric acid with a small quantity of furfuraldehyde. The separation of brucine from strychnine is of interest as the new B. P. method in assaying extract of nux vomica is open to objection. Sandor has recommended treatment with permanganate in acid solution, which completely destroys brucine but leaves the strychnine unaffected. Bailey and Lange show that the action of sulphuric acid on strychnine by charring, as usually pursued in forensic investigations, resulted in a loss of fully 50 per cent. of the strychnine. Emetine and cephaeline have been further examined by Paul and Cownley, and also by Hasse, in order to affix their formulæ. Puckner proposed a modification of Keller's method for the assay of belladonna and henbane. New alkaloidal reactions have been published by Brunner and Strychonski, in which tables are given of the effect obtained by means of chloral hydrate and sulphuric acid, bromal hydrate and acid, paraldehyde and acid, furfural and acid, and also nitrophenolpropionic acid.

The chemistry of essential oils is still going strong. Umney has given particulars and constants for oil of dill, oil of lemon, and oil of spike. Schimmel have continued their regular reports and researches. Parry has described the physical constants of the oil of eucalyptus toxophleba; tardy, the oil of bitter fennel; Bertram and Walbaum, oil of basilicum from the island of Réunion; Bialobrzeski, oil of buchee. The characteristics of oil of spearmint as given in the American pharmacopœia are not inconsistent, according to Kremess and Schreiner with an adulteration of 33 per cent. of cedar wood oil and 16 per cent. of gurjuse balsam.

The preparation of synthetical perfumes or of the odorous principles of essential