

Everyday Testing of Drugs and Chemicals.

BY ALBERT SHAW DENHAM, LECTURER IN THE BRISBANE COLLEGE OF PHARMACY.

Barnard Proctor, in the preface to his "Manual of Pharmaceutical Testing," says: "Every pharmacist should test his chemicals occasionally to see that their quality is up to the required standard." But I think that with us in Australia, with the sources from which our wholesale dealers draw their supplies constantly changing, something more is necessary, and that it is desirable to form a habit of subjecting to examination every parcel of drugs and chemicals before it is received into stock. I do not mean that each chemical should be quantitatively, or even in some cases qualitatively analysed, as that would be quite unnecessary for the purpose of ascertaining what we want to know as practical pharmacists, namely, Is the article that which was ordered, and is it fit for use at the dispensing counter? And having given an answer to this, it is in many cases better and simpler to reject that which is faulty than to make an exact analysis and allow for deficiencies. My experience is that, with the exception of a few articles, such as a porcelain crucible, separating funnel and the like, everything necessary can, as a rule, be found at or near the dispensing counter, and I do not think the little time necessary can be better spent than in ascertaining that we are really fit to hold our positions as in part guardians of the public health and suppliers of better and purer articles than it is possible for the general public to obtain at a grocer's store. I believe that if the examination of materials in daily use at the dispensing counter became more general, and care was taken to impress upon the public that such a course was adopted, the reputation of the chemist and druggist would be greatly enhanced. He also will have the satisfaction of knowing that he is doing everything possible to guard against mistakes in the supply of materials to him and by him, as to my own knowledge there have been such made as that of sending P. Ammonii Nitrat. for P. Sodii Nitrat., Sodii Sulph. Essiccant for Mag. Sulph. Essiccant, &c.

Some months ago I began a systematic investigation of every parcel of drugs and chemicals that entered my shop. In the case of organic materials, such as roots, barks, leaves, and the like, to see that their physical characters were what they ought to be, and in that of organic and inorganic chemical salts the application of a few generally simple tests was enough to declare whether the sample under examination was sufficiently pure to be admitted into a retail establishment for general use. I have found that this can be easily and readily done without interference with my usual business. The advantages of such a course are obvious. The eye is trained to habits of correct observation, manipulative dexterity is ac-

quired in the use of apparatus, and if, as I would suggest, a record is kept of the work done, in time a very valuable synopsis of practical chemistry is obtained, and possibly a way opened for an original research which may be found of universal benefit. In most works on pharmaceutical chemistry a table will be found of the official chemicals with their probable impurities, and tests for the same; but I have found it most useful to make a condensed table for one's self, with additional columns for the date of examination of the sample, the source from which it was obtained, the result of experiments thereon, and the inference drawn.

I hope that before many years are over we shall have a B. P. standard, fixing the percentage of extractive matter obtainable from all our liquid pharmaceutical products, and this will, I believe, be one more step in the direction of uniformity in dispensing, and to a certain extent do away with the well worn complaint—"The mixture you made up is so different from that obtained at Mr. Jones's." Such work, as I have endeavored to point out, carefully and conscientiously performed, will enable us to say with our usual regard for truthfulness, "Prescriptions accurately dispensed with the purest drugs only."—*Chemist and Druggist*.

Notes on New Antiseptics.

BY S. A. WALTON.

If we trace back the list of antiseptics and disinfectants to an early date we find that those mostly in use were sulphur, the halogen compound, mercury, coal tar products, and some essential oil. If we again follow up the development of antiseptics we find that these materials form the basis of most of our new antiseptics in a more defined and definite composition. Thus, in place of the old method of burning sulphur, sulphurous acid in many cases replaces it, and compounds of sulphur, as sulphonates, are used in combination, as in the case of ichthyol (ammoniumichthyol sulphonate), soziodol (diiodoparaphenol sulphonic acid), and many others. The same may be said of the halogens, iodoform, iodo and di-iodo-salicylic acids and iodol being iodine derivatives, while the other elements forming this group have corresponding compounds in a greater or less variety.

The mercurial preparations are well known to us, the mercurio-zinc cyanide being one of the developments of chemistry with regard to antiseptics.

The coal tar products are both numerous and varied, and many varieties of new combinations are continually being found that promises to be of use as antiseptics.

Essential oils have been combined with other elements to form valuable antiseptics, aristol (dithymoliodide) being one of these, while oxidized pine oil with camphoric acid forms one of the most popular disinfectants of the present day.

Time does not allow me to formulate or describe the following preparations fully.

I will therefore give such description as is necessary, with the hope that the members of the Association will look into the matter for themselves for further information.

Amongst new antiseptics from coal tar derivatives may be mentioned pyoktanin, methyl-violet, the most antiseptic of the aniline colors. A solution of 1 in 1000 is used in various eye diseases, phthisis, ulcers, etc. There is a yellow variety commonly known as auramine, also used antiseptically.

Lysol is a saponified phenol derived from cresols, and contains the higher homologues of carbolic acid. It is said to possess higher antymycotic power than carbolic acid; and to be less poisonous. This preparation is much used in Germany at the present time.

Retinol, a distillation product of pine resin, is a viscid fluid hydrocarbon. It is a non-irritating and stable antiseptic.

Europhen, iso-butyl-ortho-cresyl-iodide, contains 23 per cent. of iodine, and is non-poisonous.

Dermatol, a basic gallate of bismuth, forms a powerful antiseptic and desiccant.

Sulphaminol, thiooxydiphenylamine, the antiseptic action of which is due to its decomposition in contact with the fluids of the body into sulphur and phenol.

Monochlorophenol is prepared by the action of chlorine on cooled phenol. It is a powerful antiseptic and less irritating than trichlorophenol.

Camphoid, though only a mild antiseptic in itself, is a valuable adjunct to this class of bodies, as it forms a ready method of applying antiseptics to the surface of the skin, and owing to its composition (of spirit, camphor and pyroxylin) it forms a valuable solvent for substances such as salicylic acid, resorcin, hydro-naphthol and many others.

ETIQUETTE is an artificial flower, politeness a natural one.

FENNEL OIL.—A volatile oil obtained by distillation from the fruits of *Feniculum vulgare*, Gaert., which are rich in oil, yielding 3 to 3½ per cent.; sweetish and aromatic, containing much anethol; density, 0.968 to 0.990.

GOOSEFOOT OIL.—A volatile American oil distilled from the seeds of *Chenopodium anthelminticum*, a perennial variety of *C. ambrosioides*, Linn.; used medicinally as a vermifuge, since it is also called worm-seed oil. It is of a pungent and bitter taste. It is largely prepared at Baltimore to the extent of several thousand pounds yearly. The yield is from 1½ to 2 per cent. from the fruits; specific gravity, 0.92.

GINGER OIL.—An oil distilled in Germany from the rhizomes of *Zanzibar officinale*. It is yellowish, very thin; density, 0.893. From 1 cwt. of Jamaica ginger only 12 ounces of volatile oil can be obtained. A dilute alcoholic solution of it is a remarkably good flavoring agent, capable of imparting to a very considerable portion of aqueous fluid the very pleasant aroma of ginger.