With strong ammonia a change of color to yellowish green.

Protonitrate of mercury, in aqueous solution, changes the color of the oil to a greenish yellow; after 24 hours the oil becomes solidified and the color dark olive green.

Strong phosphoric acid at first hardly affects the oil, but after 24 hours the oil becomes thicker and of an olive green.

With lime water the oil becomes soon solidified and of a brownish yellow color.

Sulphurous acid gas does not discolor the oil passing through it. Neither have some metallic combinations any decoloring effect on the oil; for instance, neither chloride of zinc, chloride of tin, acetate of lead, nor sulphate of zinc, has any effect in withdrawing from the oil its peculiar color, or if even some change appears to take place, it is not permanent.

In its oxidized state, and no doubt, also, under the influence of vegetable substances met with in the oil, the coloring matter appears to have a tendency to stick to fatty matters.

The crude oil freezes at 2° to 3° Cels., or 26° to 28° Fah., and this property is applied in this country to the manufacture of stearine and winter-pressed oil—which is pure oleine, used for lubricating purposes.

The weight adopted by oil merchants is 7½ lbs. of crude or refined oil to the gallon.

The specific gravity of the refined oil which has a yellowish color and is richer in olein than in stearine, as it has been generally refined by a semi-saponification by the use of alkalies, which operation transforms a large amount of the stearine into stearates, is of 0·92647 at 61° Fah., or 16° Cels.

The crude oil is very similar in every respect to linseed oil in density and color, and can be classed among the drying oils used for painting.

In using it for painting purposes it has answered pretty well, though it appears to become sticky in damp weather. To prepare it for painting it is generally treated like linseed oil, that is boiled with oxidizing agents, as litharge, or black oxide of manganese, but I have obtained better results with another agent, as I shall prove further on.

On the Medicinal use of the Salts of Atropia.

Professor Buignet, the eminent French pharmaceutist, has recently directed attention to the various uses of atropine, or atropia as a general remedy, and not merely in affections of the eye. Two salts of this alkaloid are used in medicine, namely, the the sulphate and the valerianate of atropia. The former is to be found in our Pharmacopœia, but is intended solely for ophthalmic use, atropia and its salts being regarded by British writers on Materia Medica as unfit for internal use in consequence of their highly poisonous action even in very minute doses. The valerianate is formed by mixing a cooled solution of atropia in ether with a cooled solution of valerianic acid, and from this mixure crystals of the required salt soon crystallize. Acting on the long-established axiom in the therapeutics, that a combination of similar remedies almost always produces a greater and more rapid effect than an equivalent dose of either of the single remedies, Dr. Michea, so long ago as 1853, made trial of this salt in "affections of the nervous system," and especially in cases of epilepsy. His account of the action of this salt was so favourable that a commission was appointed to investigate the subject, and their report was that valerianate of atropia is decidedly preferable to many of the so-called antispasmodics, and that it offered the great advantage of replacing two drugs notoriously variable in their action—belladonna and valerian—by a combination of their active principles, which was far more steady and certain in action. The method of administering it is in granules, each of which contains a milligramme, or about one sixty-seventh of a grain of the salt. One granule daily is the proper dose to begin with in an adult, and, in the course of a week, a second granule may be taken daily. This is the maximum dose, any excess inducing dilatation of the pupil and disturbed vision. The author quotes the names of more than twenty physicians who have written to confirm the value of atropia and its salts as therapeutic agents. Taken internally, the salts of atropia have been found serviceable in the treatment of epilepsy, chorea, neuralgia, hysteria, tetanus, intermittent fevers, and those forms of disease of the respiratory organs in which the nervous system is specially involved, as asthma, hooping-cough, and certain forms of nervous bronchitis.

It has been found by Bouchardat and Crosio that cases of severe neuralgia, in which opium, henbane, and sulphuric ether have failed to give relief, have yielded to the local application of an ointment composed of five centigrammes (three-fourths of a grain) of atropia and four grammes (about a drachm) of lard. Pescheux has reported a case of tetanus which he cured by the aid of subcutaneous injection of sulphate of atropia, and Béhier, Richard, and other French physicians have practised the same treatment with success in cases of severe localized pain. One part of sulphate of atropia may be dissolved in 100 of water, and from one to five drops injected. Slight symptoms of belladonna poisoning sometimes exhibit themselves in these cases, but are merely transitory. The smaller dose should be first tried.

As a caution to our opthalmological friends not to let solutions of atropia fall into the hands of their patients, we may mention a case recorded by Béhier, in which an old man *drank* a solution of sulphate of atropia (·013 to 100 grammes of water) which had been prepared for the purpose of dropping into the eye to facilitate an opthalmoscopic examination. The dose swallowed was one-fifth of a grain. The following were the most marked symptoms:—An acrid taste in the throat, slight embarrassment in the management of the tongue, muscular weakness, a difficulty in walking, which soon became an impossibility, and disturbance of vision. Knowing the antagonism of morphia and atropia (described by Graefe in 1852), M. Béhier prescribed ten drops of laudanum every ten minutes. Each dose diminished the intensity of the symptoms. The patient took, on the whole seventy-six drops,—a dose which, if he had not previously taken the atropia, would undoubtly have produced symptoms of poisoning by opium.

The rapidly increasing use of the ophthalmoscope will probably cause a considerable augmentation in the number of cases of poisoning by atropia. Liebreich (in 1863) remarked that the symptoms of poisoning consequent on the instillation of atropia do not so much depend upon the quantity absorbed by the eye itself as upon the quantity which makes its way through the lachrymal passages into the nose, pharynx, and stomach. When these lachrymal passages are completely obliterated, a strong solution may be applied to the eye for any length of time without inducing the slightest general disturbance. He consequently recommends that, in order to prevent as far as possible this mode of escape of the solution into the nose, etc., the patient should incline his head as forward as possible during the period of installation, should blow his nose and gargle frequently, and should press one of his fingers against the inner angle of the eye, so as that the lower lachrymal point should be drawn down. In cases where these rules cannot be attended to (as when a patient is confined to bed), he recommends the application of a small wire apparatus which affectually prevents the escape of the solution. Professor Buignet's excellent memoir concludes with a description of this instrument and of the method of applying it. —*Medical Times and Gazette.*

Hints on Practical Dispensing.*

The most important of the several duties of one intending to enter life as a Pharmacist is, without doubt, Dispensing; and with reason, for it is in the making-up of prescriptions that the amount of scientific knowledge is required which elevates Pharmacy, and which, by rendering absolutely necessary a certain educational cultivation and scientific training—not required in the case of the ordinary seller of goods—places the mind on a higher level, and the man in a more refined position.

We will now consider, in detail, the *modus operandi* of the compounding of a prescription.

Read the prescription throughout.

It is always advisable to go through the prescription carefully, even to the directions. By this means, *first*, a good idea of the formula as a whole is acquired; and, *secondly*, any overdose, or poisonous proportions, or the presence of incompatibles, are noticed,

See that the ingredients are at hand.

This avoids the necessity, when half through the work, of being compelled to stop while a powder, &c., is got ready. The several ingredients ought to be brought forward (or seen to be in their places) before commencing.

Examine the accessories.

The fittings of the dispensing department ought to be of the most perfect description, clean to the last degree; the bottles, scales, measures, &c., in repair, and of the kind adapted to the work on hand.

Set to work quickly.

Despatch is necessary to good dispensing, and in its turn is much aided by neatness and a *thorough* completion of each part or division of the work on hand, before taking up another portion. But waste no time: from the very nature of the business, there are times when there are an unusual number of prescriptions will have to be made up, and despatch, at all times advisable, will then become a necessity.

*From Lescher's Introduction to Elements of Pharmacy.