aceto-acetic acid and then, finally, the product is submitted to a methylation. We have at last the dimethyl-phenyl-pyrazolon that constitutes antipyrine. It is very soluble in water, and this property permits of administering it under the most varied forms a quality that is highly appreciated in pharmacy. It must be observed, however, that, as a general thing, solubility has no relation whatever with the quickness of action and assimilation of a medicament. Phenacetine, while being but slightly soluble in water, acts nevertheless as quickly as antipyrine.

The success of antipyrine has evoked a series of experiments with the object of either preparing substitute antipyrines and of analogous pyrazolons or of associating it chemically with other substances. In the first order of ideas has been produced *tolypyrine*, which is paramethylated antipyrine in the phenylic nucleus, and then chlorated, bromated, &c., antipyrines. In the second series antipyrine has been associated with salicylic acid, and this has given *salypyrine*. *Tolysal* is the salicylic combination corresponding to tolypyrine. Apropos of hypnotics, we may mention *hypnal*, which is a derivative of antipyrine and chloral.

Thalline and *kairine* are quinoleic products that have been proposed likewise as antiseptics.

Among the oldest analgesics and antithermics, we find *acetanilide* and *antifebrine*, which are prepared by treating aniline with anhydrous acetic acid. If, instead of operating with aniline, we start from hydroxylated aniline, that is to say, from a product which is both phenol and amine, and etherify it before acetylation, we shall have *phenacetine* or *phenedine*

Thymatecine is the phenedine of thymol, and *exalgine* is derived from the acetylation of methylaniline.

Salycilate of soda has been for some time employed as an anti-rheumatic. Salicylic acid is a carboxylated phenol, that is to say, a body that is at once phenol and benzoic acid. It is prepared by passing a current of carbonic acid over phenate of soda at a high temperature. Several applications have been found for its derivatives, among which may be mentioned salipyrine, that we have spoken of above, and salol, which we shall find among the antiseptics.

Asaprol has the same action as salicylate of soda. It is obtained by treating beta-naphthol with sulphuric acid at a low temperature. It is the sulphuric ether of beta-naphthol. It is offered in the state of calcium salt very soluble in water. Under the name of *abrastol* it has been used as a microbicide.

2. *Hypnotics and various Medicaments.*—One of the most frequently employed hypnotics is *chloral*, which is the hydrate of trichlorated acetaldehyde.

An endeavor has been made to associate it with various organic substances. In this way have been prepared: *Chloralose*, which is a combination of chloral and glucose. *hypnal*, which is due to the union of one molecule of antipyrine and one of chloral; and *somnal*, which is obtained from chloral and urethane.

Sulphonal is likewise a very efficacious hypnotic, but its constitution has no relation with that of chloral. Chemically, it is called the diethyl sulphone of dimethyl methane. It is formed by the combination of acetone with ethyl-mercaptan. *Trional* and *tetronal* form part of the same series.

For skin diseases there have been proposed *dermatol*, which is the subgallate of bismuth, *sulphaminol*, obtained by the action of sulphur upon metaoxidi phenyl amine, *resorcinol*, which is a combination of iodoform and resorcine, and *lysophane*, which is chemically called triiodo meta-cresol.

Tumenol, *thioline* and *sulphonated thiophene* are designed for the same use.

Piperazine, a nitrated product of the closed chain series, is diathylene diamine. One of the processes of preparing it consists in causing ammonia to act upon bromide of ethylene.

Orexine serves to stimulate the appetite. It is a hydrochlorate of phenyl-dihydro quinazoline.

3. *Antiseptics.*—Among the morganite antiseptics, we find, especially bodies with phenolic and aldehydric functions, halogenated derivatives.

Phenol, beta naphthol and guaiacol are characterized by the phenolic grouping OH directly connected with the benzoic or naphthalic nucleus.

The use of a large number of phenolic derivatives has been recommended. Thus *salol* is salicylate of phenol and *betol* is the salicylate of beta-naphthol. The union of benzoic acid with naphthol gives *benzonaphthol*.

Abrastol, of which we have above spoken under the name of asaprol is the salt of calcium of the sulphuric ether of beta-naphthol. It is a micro bicide at present proposed for the preservation of wine.

Among the phenolic products of less importance, we may mention *alumnol*, *sozal*, *daphtherine*, *phenoline*, *cresine* and *microcidine*. *Iodoform* is triiodated methane, analogous to chloroform as regards constitution. This antiseptic has, as well known, an insupportable odor. An endeavor has therefore been made to substitute odorless and likewise iodated substances for it. Among the bodies proposed to this effect we may mention *diiodoacetylene* or *diiodoform*. In order to prepare this alkaline hypoiodites are made to act upon an aqueous solution of acetylene, or water upon a mixture of iodine and carbide of barium, or else by treating acetylene with iodine in the presence of an excess of potassa at a low temperature. There likewise exists a *tetraiodo-acetylene*. The other iodated derivatives are: *Traumatol* (iodocresylol), *aristol* (iodo thymal), *iodol* (tetraiodopyrol) and *sozoiodol* (diiodo-paraphenate of sodium).

Formal, which has recently been proposed as an antiseptic, is form-aldehyde. It has the great advantage of being volatile, and consequently of penetrating to the very interior of the objects to be disinfected.

Ichthyol, *anytine*, *thiol* and *thiolinic acid* are sulphonated and sulphuretted derivatives of organic and mineral oils employed in this state, and that serve as solvents for products insoluble or but slightly soluble.

Among the substances mentioned, a small number only will doubtless receive the sanction of practice, but the road is laid out On the one hand, syntheses are multiplying with the object of finding new series, and on the other, the natural alkaloids are the object of numerous studies. With the means now at the disposal of chemistry, it is possible to study the active principles of digitalis, belladonna and a host of other natural products. We shall certainly succeed in giving such alkaloids a greater energy, perhaps new properties, and even replace them by substances of which the syntheses will be only the results of a study of the products, of their reduction and of their decomposition. (*Le Genie Civil* through *Oil and Color Journal.*)—*Mfg. Chemist.*

Coughs and Cough Mixtures.

By G. Suthe, Ph.C., M.D.

Coughs are now fashionable. They are, besides, one of the things for which the ordinary druggist is asked to prescribe, and for which he can scarcely avoid prescribing. His customers will not go to seek medical advice even when he urges it, they have come into his store for the purpose of getting "something for that cough," and if he refuses they will travel all over town till they get a druggist or some minister who will oblige them—they will not go to a medical man; they are not sick enough, they say. Of course they do not travel very far as the druggist accepts the situation thus forcibly presented to him, and consequently gives "something for that cough" of his own compounding, or else shirks all responsibility whatsoever—and I might almost say profit too—by recommending some one or two patent medicines concerning the composition of which he knows nothing. He who gives something of his own certainly comes nearer to what is commonly called counter-prescribing than he who offers somebody's ready-made cure all, but if the former will endeavor to act intelligently and under, as it were, the compulsion of circumstances, he will receive praise rather than blame from the members of the medical profession who deal at his store. In the opinion of the writer it is worse counter-prescribing, besides being degrading to the druggist himself, to tender or recommend a patent medicine of unknown make-up, even although it be well known by its advertising—any grocer or department store can do as much.

Since it all hinges on the word intelligently, we may ask what amount of in-