

As is the case with sulphur dioxide, the vapor of the aldehyde has great penetrating powers, and destroys the microbes even when the dust has accumulated to a great depth.

In the direct experiments made upon cultures in *bouillon*, 1 part of formaldehyde in 2,000 stopped all growth, whilst to produce the same effect with corrosive sublimate twice this proportion was necessary.

The author has also satisfied himself that no risk is run through breathing the vapor, and states that a person can breathe freely for several minutes in a closed room in which a 10 per cent. solution was left to evaporate, without suffering any inconvenience.

Briefly summarizing the results, formaldehyde combines all the qualities of an excellent disinfectant: promptness of action, considerable penetrative power, energetic action at low temperatures; innocuousness towards metals and other objects exposed to the vapor, and to inhalation at the strength used for bactericidal purposes.

The author, continuing the study of aldehydes in this connection, arrives at the conclusion that formaldehyde, trioxymethylene (polymerized formaldehyde), and benzoyl chloride may be classed in the order named as absolute disinfectants; two others, viz., benzylic aldehyde and chloral as relative disinfectants.

The author has also determined the relative disinfecting value of various essential oils, and classes them in the following order, the temperature during the experiments being constant ($15^{\circ}\text{C}.$), and the duration forty-eight hours:

	Percentage of bacteria destroyed.
Essential oil of almonds (bitter)....	99
" " thyme.....	99
" " cumin.....	95
" " peppermint.....	93
" " giraffe.....	92
" " neroli.....	90
" " lemon.....	88
" " lavender.....	81
" " canella.....	75
" " aspic.....	74
" " eucalyptus.....	74
" " rosemary.....	73
" " terebenthine.....	66
Camphor.....	66

The essences are agreeable disinfectants, not affecting either materials or colors, but of limited value on account of the incompleteness of their action.—*Ann. de Micrographie*, 1894; *Manufacturing Chemist*.

Three Creosote Preparations.

By H. L. GRIMES.

Urged by the growing importance of creosote as a therapeutic agent, and by the frequent inquiries by physicians for a palatable form of administering the same, I made a series of experiments to attain that end.

Owing to the peculiar and persistently pungent taste of creosote, there is nothing, in my opinion, short of the gelatin

capsule, that will completely mask it. However, as this form of administration is not always eligible, I confined my efforts to combining the drug with other agents calculated to modify the pungency of the drug to a greater or smaller extent, and make the medicament more acceptable to the palate and to the stomach.

In all pharmaceutical preparations of creosote, intended for internal use, none but the purest beech-wood creosote should be used. That of Merck & Co.'s importation takes preference with me.

The three appended formulas have been deduced from my experiments, and the products have received the approval of many very prominent physicians:

WINE OF CREOSOTE.

Creosote (Beech-wood).....	96 min.
Alcohol.....	1 fl. oz.
Oil Cinnamon.....	24 drops
Oil Cloves.....	12 drops
Oil Anise.....	12 drops
Syrup Orange-Peel.....	4 fl. oz.
Sherry Wine.....	8 fl. oz.
Simple Elixir, enough to make.....	16 fl. oz.

Dissolve the creosote and oils in the alcohol, add the wine, syrup, and elixir, and filter through purified talcum. Each tablespoonful represents 3 minims of creosote. The dose is a tea- to a tablespoonful three or four times a day, after meals.

EMULSION OF CREOSOTE.

Creosote (Beech-wood).....	768 min.
Powdered Acacia.....	1080 grs.
Water, enough to make.....	32 fl. oz.

Triturate the creosote with the acacia in a dry mortar, and add, all at once, 27 fluid drams of water; stir briskly with the pestle until the nucleus of the emulsion is formed, and add enough water to make 2 pints; finally, strain through a cloth. This is a convenient preparation for admixture with other medicaments. Each tablespoonful contains 3 minims of creosote.

Perhaps the most admirable combination is a creosoted emulsion of cod-liver oil with hypophosphites, of which the following is the formula:

CREOSOTED EMULSION OF COD-LIVER OIL WITH HYPOPHOSPHITES.

Cod-Liver Oil.....	32 fl. oz.
Creosote (Beech-wood).....	6½ fl. drs.
Powdered Acacia.....	8 oz.
Glycerin.....	4 fl. oz.
Syrup Orange-Peel.....	2 fl. oz.
Calcium Hypophosphite.....	555 grs.
Sodium Hypophosphite.....	555 grs.
Oil Wintergreen.....	2 fl. dr.
Oil Sassafras.....	2 fl. dr.
Oil Cinnamon.....	2 fl. dr.
Distilled Water, enough to make.....	4 pints.

Mix the cod-liver oil, creosote, and essential oils with the acacia, in a dry mortar; dissolve the hypophosphites in 12 fluid ounces of warm water, pour the solution, all at once, into the mixture of oils, creosote, and acacia, and stir briskly in one direction with the pestle until emulsification takes place; then add the glycerin, syrup, and enough water to make 4 pints, and strain through a cloth. Recently-distilled water should preferably be used in these emulsions; but, if none

is at hand, water that has been freshly boiled and filtered will serve the purpose. In cold weather the water should be slightly warmed, else the emulsion will be very slow in forming. The creosote in the latter emulsion temporarily obtunds the sense of taste to a considerable degree while the preparation is being swallowed, and helps to conceal, in a measure, the unpleasant taste of the cod-liver oil.—*Merck's Market Report*.

The Origin of Pharmacy.

The historian of the St. Louis *Globe-Democrat* has been occupying himself with the origin and development of pharmacy, and as a result we have an interesting study of the subject.

3300 YEARS B.C.

The identity of the druggist and the medicine man, he remarks, are, in the early ages, after as well as before Christ, necessarily almost inseparable. As early as 3300 years B.C., in the reign of Seneferu, we find directions as to the preparation of prescriptions. The giving of these was accompanied by incantations, so that the faith-cure advocates of to-day may almost claim this great antiquity. That the school of pharmacy was known among the Assyrians is abundantly attested. In the Ebers papyri, 1600 B.C., we have prescriptions of famous physicians. There were blisters and powders and ointments and the general use of drugs, both mineral and vegetable. The Hebrews early absorbed a curiosity as to the pharmaceutical art, so great that they had a medical school of their own at Sora, as late as 200 A.D. There was also development in pharmacy in China at a very early day, Ching Nong, a contemporary of Menca I., being learned in the art. Hippocrates, 460-370 B.C., is authority for many facts going to show that in the temples of Æsculapius the art of medicine became somewhat systematized. The pharmacists dwelt within the walls, whilst the physician went out among the people. With Hippocrates, however, the physician and the pharmacist became one. His relations are of his predecessors. He carried his drugs with him. In consequence of an epidemic, about 187 B.C., temples were erected to Æsculapius and Hygeia, introducing pharmacy and therapeutics into Rome. About ninety years later, or about 100 B.C., the people of Rome purchased a "shop of surgery" for Æragathus, who had left Greece for Rome. There he practised both medicine and pharmacy. He had a fancy for operations, and was therefore driven out.

IN THE YEAR 1.

After this the extensive use of drugs showed the tendency towards pharmacy. Monecrates, 1 A.D., was one of the earliest of these disciples. He invented diachylon plaster, which is much the same as that used to-day. So also was Archigenes. He employed opium in dysentery. Another pioneer in pharmacy was