

globules spread out. When dry, they are filled in glass bottles, corked and labelled with the name of the contents and Arabian number of the potency.

We see immediately that this moistening business is wrong; the physician is absolutely unable to control the dose. I proposed thirty years ago to change this method and introduce into the Pharmacopœia homœopathica the following change according to the scale of globules.

Moisten 1,000 globules equal to one gramme with 20 drops of a potency prepared with absolute alcohol in a bottle several times during the day, make slight motion with the bottle, lay the bottle over night and keep it corked, the next morning remove the cork, close the mouth with chemically pure cotton and allow the alcohol to escape, turning the bottle around its long axis. In this way we can exactly count up the quantity of medical substance in each globule.

This counting can be conducted *ad infinitum* with every potency, and such operation saves the homœopathic physicians from the stigma of humbug, which they cannot evade in following Hahnemann's method of operation, because they are absolutely unable to give an estimation of the dose they are prescribing.

HOMŒOPATHIC NOMENCLATURE.

In all cases where only one species of the genus of a plant is officinal, the remedy bears the name of the species; instead of Aconitum Napellus only Aconitum; of Atropa Belladonna only Belladonna. If another plant of the same species should enter in the homœopathic pharmacopœia, it would receive the significant addition.

The elementary substances have on the label in addition to the name the following numbers: Minerals, Chemicals o. Mother-tinctures, Essences o.

Liquid potencies are distinguished by Dil.; triturations by Tr.; in addition it is denoted C, or D, or L, II with d. For instance Calcarea (Tr. II), (Tr. C 3), (Dil. NH d). Aconit. Dil. C 5, DV, V.

Generally in medical prescription the height of a potency is expressed for C-scale by the Arabian numbers; for D-scale by the Latin numbers.

Hahnemann's prescriptions when numbered by Latin numbers express the following height of potency:

Strength of the drug	
I a millionth part.....	3 potency
II a billionth ".....	6 "
III a trillionth ".....	9 "
IV a quadrillionth ".....	12 "
V a quintillionth ".....	15 "
VI a sextillionth ".....	18 "
VII a septillionth ".....	21 "
VIII a octillionth ".....	24 "
IX a nonillionth ".....	27 "
X a decillionth ".....	30 "

Animal Oils and Their Uses.

By A. M. GILMAN.

Animal oils are obtained from a large variety of land and sea animals, and from

several kinds of fish. They find many important uses, and their place cannot be filled entirely by vegetable or mineral oils. It will be useful to give briefly the more important points of the principal varieties.

Neat's Foot Oil.—Neatherd is nowadays looked upon as an archaic word, and in everyday use the name of this oil is the solitary survival of the old Saxon name for the ox. The tripe shops keep its method of preparation constantly in the public mind. It is obtained, in fact, in the ordinary boiling of "cow heels" and tripe for public consumption, and separated from the water merely by rest and decantation. 100,000 pairs of ox feet give from 25 to 28 tons of oil. When pure it is an odorless, very limpid, straw-colored liquid which solidifies with difficulty. It will also keep a long time without turning rancid, and can be heated more frequently and to a higher degree without alteration than any other oil. Hence it is the best lubricating oil for delicate mechanism, such as the locks of firearms and the machinery of fieldpieces, and it is used by the clockmakers to a certain extent, perhaps not so much as before the Americans perfected their fish oils for this special purpose. It has also certain preservative employments; for instance, the prudent cricketer lays up his implements through the winter safeguarded against damp by a liberal coating of neat's-foot oil. It is rarely found pure in commerce. At the tripe shop it usually contains "sheep's trotter" oil, which has not such good qualities; this has an odor and congeals at a higher temperature than neat's-foot oil. In the wholesale market neat's-foot oil will also often contain a real adulteration in the shape of some or other vegetable oil, and in some places the hoofs of horses will have added their contribution. The oil from these is reddish yellow; it contains a large proportion of solid matter, and congeals at a relatively high temperature. It is, therefore, an undesirable addition.

Still another use of neat's-foot oil is in the preparation of leather, and in this employment it finds a competitor in an oil extracted from pigs' feet and refined. The oil obtained from pigs' feet by boiling in water contains a large proportion of stearine and is turbid at the ordinary temperature. At freezing point it solidifies altogether, and on being pressed yields a white limpid oil which is specially valuable in leather dressing. This contains 75 parts of oleine, 19 of margarine, and 6 of stearine, and is therefore very like lard oil, except that this latter contains no stearine and more oleine. The oil extracted from lard is white with a slightly yellow tinge, and is also used in leather dressing. It is sometimes sold for illuminating purposes.

Egg Yolk Oil.—The yolk of a hen's egg contains about 21 per cent. of oil, and in round numbers it takes 5,000 eggs to obtain a hundredweight of oil. Egg oil is thick and almost opaque, with a color between yellow and orange; in fact, it seems

to be the coloring principle of the yolk. It is prepared by drying the yolk at boiling point until it is reduced to about half its size, and then pressing out the oil. It finds restricted uses in pharmacy and in the making of perfumery.

Cod Liver Oil.—If we said that this familiar delight of childhood was never found pure in commerce certain gigantic advertisers might talk of law and damages. We prefer, therefore, to insist that if there be a pure preparation on the market, the manufacturer is a remarkably conscientious man whose employees have a wonderful knowledge of the marine kingdom. At any rate, the ling and a whole tribe of other fish of the genus *gadus*, which have not even English names, contribute their quota of liver to the boiling pots. It would be difficult to reject them, and if it could be done it is very questionable whether any useful purpose would be served. Cod-liver oil is made principally in Newfoundland; but there are factories in Scandinavia and in Ireland. The livers of the fish are put into a kettle made with a double envelope, and on steam being introduced into the inner compartment the oil runs out without pressure. This is white, with a very slight odor. When no more oil runs the livers are stirred up, and this slight pressure brings out abundance of yellow oil. By more heat and more stirring, and the addition of water to the contents of the kettle, a final flow of brown or nearly black oil is obtained. Outside its well-known use as a medicinal food, it is largely used in tanning. The liver of the skate gives a golden yellow oil, which possesses almost the same properties as cod-liver oil. Lipaline, or artificial cod-liver oil, has nothing fishy about it. It is made by adding 6 per cent. of oleic acid to olive oil.

Whale and Sperm Oil.—The whales have been almost ruined by modern illuminating methods, and the whalers are perforce almost forgotten, except in out-of-date books for the boys. It is little use to detail the methods of capture, the difference between the descriptions of whale, and the rough and ready extraction of the oil. There are three kinds of whale oil—white, yellow, and black—and their mixture gives the medium quality which is found in commerce. Ordinary whale oil is reddish yellow and transparent, liquid in summer and of a honey-like consistence in winter. Sperm oil is an orange yellow transparent liquid with a strong fishy smell. The sperm whale is worth chasing still, for a single "fish" will give from 75 to 100 tons of oil, two to three tons of spermaceti, and a pound or two of ambergris. It is used principally now in skin and leather dressing, especially in preparing chamois leather.

Dolphin or Porpoise Oil.—Two members of the dolphin family furnish forth these oils, which are usually considered as one and the same thing. The round-headed porpoise gives a lemon yellow oil with a strong smell of the briny ocean.