

This is relatively a simple case. As the number of carbon atoms in the molecule increases, the number of possible oxygen derivatives multiplies in a far more rapid progression than in the case of the simplest hydrocarbons, which has been stated above. Accordingly there can be no doubt that in addition to the many thousands now known, the existence of countless millions of compounds consisting of carbon, hydrogen, and oxygen alone is possible. In a large proportion of cases the only difficulties involved in their preparation are to obtain suitable starting materials, and the enormous labor of the process. There are, for instance, hundreds of thousands of possible hydroxyl derivatives alone of the paraffine hydrocarbons of the formula $C_{14}H_{30}$, but only one of these is now known.¹ Yet all, or at least a vast majority, would unquestionably be stable bodies if once formed.

Not less important than the number and variety of such substances is their diversity of physical and chemical characteristics. The following are, for example, individual chemical compounds of at least moderate purity, made up of the three elements alone: alcohol, formaldehyde, acetic acid, carbolic

¹Methal, a constituent of spermaceti.