

SELECTED MATTER.

A COURSE OF LECTURES ON ORGANIC CHEMISTRY

*Delivered in the Laboratory of the Royal Institution of Great Britain, by Dr
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INTRODUCTORY LECTURE.

Gentlemen:

In commencing this series of lectures on organic chemistry, which must of necessity give only a partial and incomplete view of that vast domain of science, I think it will be profitable if I first direct your attention to the subjects which I have to bring under your notice, and to the point of view from which I intend to present them.

Those of you who are practically acquainted with organic chemistry are conscious of the vast extent which this branch of science has reached within the last few years; even those who have but a general acquaintance with the subject can hardly have failed to notice the discoveries made in this department, and all must see how vain must be any attempt to give a full and connected view of organic chemistry in a few short lectures. I am not here to give a systematic course, but to set before you a brief sketch of the most important discoveries in this branch of knowledge, discoveries of older date, the influence of which may be clearly and perceptibly traced in the present aspect of science, and also those very recent researches which, elaborated as they have been under our own eyes, have as yet had scarcely time to be fully appreciated, but which no doubt will materially affect the future progress of chemistry.

I have said that my course must be limited; still I hope to be able so to select my subjects, and to connect them with one another, and to illustrate them in such a manner that if any of you desire hereafter a more particular acquaintance with any portion of the science, you will always be able to recognise the true position of the knowledge which you seek to obtain; and, whilst advancing through the intricacies which may impede your progress, you will never fail in retracing your steps to one or other of the striking points of the science which in this course we shall explore together.

The subject of these lectures, then, gentlemen, may be designated the most important chapters in organic chemistry. Now, let me begin with some remarks on the use of this term. What is meant by this expression? What is the difference between organic and inorganic chemistry? In fact, does any well-defined boundary exist at all? It is far easier, gentlemen, to ask questions than to answer them. I might assume that every one here present could well distinguish an organic from an inorganic substance, that all of you understand well what is generally intended by the terms organic and inorganic chemistry. But let us not thus avoid questions, the answers to which will at once set before you the point of view under which I wish you to regard the subject of these lectures.

Organic chemistry is generally described as treating of the substances which compose the structure of plants and animals in contradistinction to the chemistry of minerals. In order to see how far we may avail ourselves of this definition, let us for a moment examine the substances of which plants and animals are composed. The ultimate analysis of vegetable and animal bodies has proved that their mass is chiefly composed of four elements, namely, carbon, hydrogen, nitrogen, and oxygen. Together with these four elements there occur, in smaller or larger quantities, sulphur, phosphorus, silicon, chlorine, iodine, fluorine, and the metals potassium, sodium, calcium, magnesium, and iron. From this fact, it is obvious that plants and animals have no special elementary constituents of their own, for all the