SUGARS IN THE SERVICE OF CHEMISTRY

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Sugars are the most popular topic of chemical literature to-day. There must be a reason for it, and the question arises—What is it? The importance of carbohydrates in our daily life, the numerous uses made of them in our foodstuffs, in textiles, in building materials, in the many substitutes for the more costly natural products may sound like a logical answer to the question. Indeed, it may be claimed that the progress of civilization can be measured by the extent of the uses made of carbohydrates for constructive and destructive purposes. Yet the answer would be only partially correct. It would be hard to believe that men of the type of Scheele, Baeyer, Fischer and van’t Hoff devoted themselves to the problems of sugar chemistry for reasons purely practical.

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Admitting even for the sake of argument that to many workers the incentive was the applied phase of sugar chemistry, the great activity in this special field of work could not pass without leaving a deep impression on chemical philosophy. Indeed, it should be an easy matter to defend the thesis that every important industrial research extended over a long period of time must furnish a contribution to chemical philosophy which by generations to come will be adjudged to be of greater moment than the practical end which by its very nature can be of temporary value only. The history of chemistry furnishes many instances supporting this thesis, but it suffices to mention the trivial practical task which suggested to Dumas the theory of substitution.

With this thought in mind it may be proper to review briefly the contributions made by sugar chemistry to chemical theory.