

Editorial

Manufactured beverages represent a substantial sector of the food industry. They include a wide range of natural fruit products, fermented beverages and those products which are formulated mainly from 'synthetic' ingredients, e.g. soft drinks such as diet colas. Whilst manufactured beverages are convenient and are often consumed for enjoyment, they can also be an important source of nutrients, e.g. vitamins, and some are regarded as having beneficial health-giving properties, e.g. the anti-oxidant behaviour of wine and tea. On the other hand, the chelating behaviour of food components could make useful minerals unavailable. There are also some unique features of beverages, which are not seen in other foods, e.g. carbon dioxide imparts an extraordinary sensory attribute to the product. To the food chemist, beverages are, in many ways, simpler media for chemical change than 'solid' foods and should offer much more attractive systems for study. Many beverages are relatively dilute systems to which principles of solution chemistry can be applied without too many assumptions. Nevertheless, experience shows that our understanding of the fundamental chemical and physico-chemical behaviour of beverages is still poorly appreciated in industry, and there is relatively little basic research in this area of food science. Thus, beverage formulation is still carried out empirically and the reasons for the stability or instability or the relatively dilute colloidal dispersions are not usually discussed in terms of the chemical composition of the medium and the molecular interactions of the emulsifiers, stabilisers, and other additives. The complex chemically interacting mixture of molecules is also capable of imparting the subtle differences we enjoy when wines of similar overall compositions, beers from different breweries, or blends

of different teas are tasted. Whilst fundamental to beverage quality, and of considerable economic significance, the underlying chemistry is still not well understood. The safety of many beverages depends on the use of food preservatives, particularly in situations where there is a risk of microbial contamination from the repeated opening of large volume containers. The fact that some individuals consume relatively large amounts of beverages containing food preservatives and other additives, e.g. food colours, means that the chemical behaviour of these substances should be examined carefully to ensure that such individuals are not exposed to significant levels of undesirable reaction products.

The collection of papers in this issue of *Food Chemistry* is the proceedings of most of the contributions (invited lectures and posters) at a one-day symposium on the subject of Interactions in Beverages, organised by the Food Chemistry Group of the Royal Society of Chemistry. The majority of contributors are eminent in the application of the principles of the basic sciences to problems associated with food and beverages, and the range of subjects chosen demonstrates the many opportunities that this subject offers to the food chemist. The organisers were also privileged that this occasion marked the presentation of the Royal Society of Chemistry, Food Chemistry Group Senior Medal to Professor Gordon Birch in recognition of his outstanding contribution to research into the basis of sweetness perception, and for his promotion of Food Chemistry as a scientific discipline through his many publications and edited works. Professor Birch's Medal Lecture is included in these proceedings.

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