

# Preface

The intention of this book is to provide the formulation chemist with a basic understanding of the chemistry, structural attributes and functional properties of the major types of surfactants discussed. In addition, we will propose salient analytical tests for each class of compounds. Once armed with this information, the formulator should be able to make better decisions in dealing with selecting the proper surfactant and in ensuring batch-to-batch conformity to specifications and supplier-to-supplier uniformity. Because the level of exposure to surfactant technology varies so much in industry, I will start with the basics. For those who already have a background in these matters, I am reminded of the words of the Nobel laureate and physicist Enrico Fermi, who once stated that we should never underestimate the pleasure we feel from reading something we already know. I hope that this truism applies in the case of this book.

The surfactants chosen for review in this book are the kinds of personal care products that formulators most commonly encounter. By no means is the data provided intended to be exhaustive of the subject matter. Many volumes have been written to cover the organic and physical chemistry of the various surfactants discussed here. Fortunately for the formulating chemist, a full understanding of all the nuances of the chemistry is not necessary for efficient formulation of surfactant-containing systems.

Contrary to popular perception, the surfactants discussed in this book and the technologies used to manufacture them have been known for quite some time. Many classes date back to the 1930s and before. The section on patents concentrates on those patents that are considered to be the pioneering patents. Many recent commercially significant improvements have been made, but it is important for the chemist to realize that the basic chemistries have been with us for some time. Each inventor builds upon the invention of the previous inventor, and the science as a whole advances.