

# Basic Principles of Textile Coloration

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(This book is collected by Kazi Md. Yakub,  
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# Preface

Around 1993–94 I became interested in writing a textbook on textile dyeing and related topics along the lines of E R Trotman's *Dyeing and chemical technology of textile fibres*, the sixth edition of which was published in 1984. This led to a sabbatical leave in the Department of Colour Chemistry at the University of Leeds during 1994–95 that allowed completion of the planning and some initial writing of this work. My original idea was to produce a book dealing with the basic principles of textile dyeing and related subjects. In teaching these subjects, I had found that the available multi-author books, published mainly by the Society of Dyers and Colourists, were often too advanced for students, and I thought that a single book serving as an introduction to these works might be useful.

I remember reading around that time that such an undertaking is partly ego driven. Over the past six years, any ideas of fame or fortune rapidly dissipated. The constant effort required of a single author to produce a 25 chapter book, in addition to full-time professional work, was only sustained because of my love for the subject and of my fascination with how dyeing takes place. The latter was reinforced on reading once again Tom Vickerstaff's classic book *Physical chemistry of dyeing*. I began to realise that, despite all the wonderful technology available for textile dyeing, we really understand so very little of the fundamentals. I firmly believe that the optimum choice, use, control and adaptation of modern dyeing technology can only be achieved through a sound understanding of basic principles. This book is the fruit of my efforts to provide that understanding. It is designed for readers who have completed studies in chemistry and mathematics up to pre-university level. Because of the wide range of topics included, some subjects only receive superficial coverage. Those that are presented in more detail obviously reflect my personal bias. I am solely responsible for any limitations of content or detail, as well as the invariable errors required by Murphy's law.

At the end of each chapter are a limited number of references. Some of these are cited in the chapter text, the latter ones are usually general reading references. The interested reader will find more detailed information and references in the books published by the Society of Dyers and Colourists and in technical periodicals. In addition, several of the colorant structures shown in the book are identified by their Colour Index Generic Name. It is worth noting that in the *Colour Index* itself many of these structures appear as sodium salts and not in the free acid forms shown in these pages.

My thanks to Prof. David Lewis and the staff of the Department of Colour Chemistry at Leeds for their kind hospitality during my 1994–95 leave. The photographs of fibre cross-sections were kindly provided by Tom Micka of DuPont Fibers (Figure 4.2) and by Doug Tierce of Acordis Fibers (Figure 6.2). The American Association of Textile Chemists and Colorists (AATCC) kindly allowed reproduction of Figure 4.6. I would also like to acknowledge Greentex Inc. (Montréal), Regent Ltd. (Montréal), C A Kennedy Inc. (Montréal), Then GmbH (Germany), Macart Textiles Ltd. (UK) and MCS SpA (Italy) for dyeing machine illustrations.

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