

TABLE OF CONTENTS

SECTION ONE: GENERAL CONCERNS AND BASIC SANITATION

1. **History of Cosmetic Microbiology** 3
JANET C. CURRY
2. **Biology of Microbes** 17
DANIEL K. BRANNAN
3. **Microbial Environment of the Manufacturing Plant** 69
RICHARD MULHALL, EDWARD SCHMIDT, AND DANIEL K. BRANNAN

SECTION TWO: COSMETIC MICROBIOLOGY TESTING METHODS

4. **Preservative Efficacy, Microbial Content,
and Disinfectant Testing** 95
MARY ANNE MAGEE, SCOTT V. W. SUTTON, AND DANIEL K. BRANNAN
5. **Validation of Methods** 127
DANIEL K. BRANNAN

SECTION THREE: PRESERVATION OF COSMETICS

6. **Preservative Development** 143
PHILIP A. GEIS AND RICHARD T. HENNESSEY
7. **Mechanisms of Action of Cosmetic Preservatives** 163
THOMAS E. SOX

SECTION FOUR: REGULATORY AND TOXICOLOGY CONCERNS

8. **Consumer Safety Considerations Associated With
the Microbial Preservation of Cosmetics** 179
WILLIAM A. APEL
9. **Laws and Enforcement** 197
MARY K. BRUCK
- Appendix 1** 207
- Appendix 2** 227
- Index** 307