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2.12. A Numerical Example Illustrating the Use of Check Points for Testing Lack of Fit; 2.13. The Simplex-Centroid Design and the Associated Polynomial Model; 2.14. An Application of a Four-Component Simplex-Centroid Design. Blending Chemical Pesticides for Control of Mites; 2.15. Axial Designs; 2.16. Comments on a Comparison Made Between an Augmented Simplex-Centroid Design and a Full Cubic Lattice for Three Components Where Each Design Contains Ten Points; 2.17. Reparameterizing Scheffe's Mixture Models to Contain a Constant (β_0) Term: A Numerical Example; 2.18. Questions to Consider at the Planning Stages of a Mixture Experiment; 2.19. Summary; References and Recommended Reading; Questions; Appendix 2A. Least-Squares Estimation Formulas for the Polynomial Coefficients and Their Variances: Matrix Notation; Appendix 2B. Cubic and Quartic Polynomials and Formulas for the Estimates of the Coefficients; Appendix 2C. The Partitioning of the Sources in the Analysis of Variance Table When Fitting the Scheffe Mixture Models; 3. The Use of Independent Variables; 3.1. Transforming from the q Mixture Components to $q-1$ Mathematically Independent Variables; 3.2. A Numerical Example: Sensory Flavor Rating of Fish Patties; 3.3. Defining a Region of Interest Inside the Simplex: An Ellipsoidal Region; 3.4. A Numerical Illustration of the Inverse Transformation from the Design Variables to the Mixture Components; 3.5. Enlarging the Unit Spherical Region of Interest; 3.6. Some Discussion on Design Strategy When Fitting Response Surfaces; 3.7. Rotatable Designs; 3.8. A Second-Order Rotatable Design for a Four-Component System; 3.9. Defining a Cuboidal Region of Interest in the Mixture System; 3.10. Summary; References and Recommended Reading; Questions; Appendix 3A. An Alternative Transformation from the Mixture Component System to the Independent Variable System

Sommario/riassunto

The most comprehensive, single-volume guide to conducting experiments with mixtures""If one is involved, or heavily interested, in experiments on mixtures of ingredients, one must obtain this book. It is, as was the first edition, the definitive work.""-Short Book Reviews (Publication of the International Statistical Institute)""The text contains many examples with worked solutions and with its extensive coverage of the subject matter will prove invaluable to those in the industrial and educational sectors whose work involves the design and analysis of mixture experiments."
