Factor Analysis In Chemistry
Factor analysis is a mathematical tool for examining a wide range of data sets, with applications especially important to the design of experiments (DOE), spectroscopy, chromatography, and chemometrics. Whereas the first two editions concentrated on standardizing the fundamentals of this emerging discipline, the Third Edition of Factor Analysis in Chemistry, the "bible" of factor analysis, proves a comprehensive handbook at a level that is consistent with the research and design of experiments today. With the exception of updates, the introductory chapters remain unchanged. Chapter 6 has been edited to focus on evolutionary methods, including window factor analysis, transmutation, and DECRA. Selections on partial least squares and multimode analysis have been expanded and consolidated into two new chapters, 7 and 8. Some of the latest advances in a wide variety of fields, such as chromatography, NMR, biomedicine, environmental science, food, and fuels, are described in the applications chapters (chapters 9 through 12). Other features of the book include: Provides history of the discipline as well as theory, philosophy, and applications Written for all readership levels: introductory, intermediate, and advanced Explains complicated concepts in simple language without sacrificing mathematical rigor Presents concepts and programs in a style that allows the user to develop programs in any computer language Demonstrates the utility of various factor analytical techniques for solving practical problems in chemistry and related sciences Showcases a unique presentation of partial least squares

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Customer Reviews

The author does a good job with a tough topic. This is a fairly narrow niche of statistics that
combines rigorous math and domain knowledge-based heuristics. It is of interest to a small audience with very diverse background. Pure statisticians will probably be dissatisfied with the lack of rigor. People looking for a recipe to follow will probably find the book too theoretical. Given this challenge, the author acquits himself quite well. Very early on, he simply and clearly states the point of factor analysis. We get a good overview of the basic steps, and the options for tackling each one. The general statistical treatment is easy to skip for people who don't need it, and seems fairly well done for people who do need it. We get some good examples and a detailed bibliography.

This is an excellent reference to the fascinating world of multivariate analysis.

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