Mixture DOE with Minitab 16

COURSE CONTENT

Learn the principles of designing experiments and analyzing the resulting data for processes that are comprised of the mixing and blending of ingredients such as those commonly found in the oil and gas, chemical, food, and beverage industries. By utilizing Minitab's easy to understand interface, create experiments designed to study and uncover important process information related to mixture processes with the minimal amount of experimental resources. Learn how to interpret graphical and statistical output to understand a mixture's blending properties and to choose the appropriate mixture of ingredients needed to optimize one or more critical process characteristics.

In a mixture experiment, the independent factors are proportions of different components of a blend. For example, optimizing the ratio of diluted caustic, the factors of interest might be the proportions of demin, and fresh caustic, in chemical based. The fact that the proportions of the different factors must sum to 100% complicates the design as well as the analysis of mixture experiments.

WHO SHOULD ATTEND

Anyone using MINITAB to analyse or to present data can benefit from training. Whether you are a quality professional, an engineer, a scientist, a manager, an analyst, a consultant, or an instructor, you will gain knowledge and skills that allow you to become more productive and efficient in your statistical and Six Sigma analyses.

PRE-REQUISITES

Fundamentals of Minitab & Inferential Statistics with Minitab R16
Each delegate is required to bring along data for analysis

COURSE MATERIALS

Each participant will receive :
- Course Manual
- 30-day Trial MINITAB software (with real-live data tabulation)
- The use of 1 PC throughout the training

COURSE GOALS

Having an expert trainer work with you provides a competitive advantage. Our Six Sigma/MINITAB trainers teach you step-by-step how to use MINITAB with real-world examples. At the same time, the basic theory behind each statistical procedure is reviewed to help you correctly choose a method for analysis.

COURSE OUTLINE

- Introduction to Mixture Design
- Creation of Simplex Lattice and Cetroid Designs
- Understand Upper and Lower Constraints
- Comprehend Extreme Vertices, Psuedocomponents
- Learn to interpret Response Trace Plots

COURSE DURATION

2 Days