

Certificate of Attendance

This is to certify that

Dr. Abdulkader Kadauw

successfully participated in the online-training course

Machine and process capability analysis with qs-STAT

at **Technische Universität Bergakademie Freiberg** on 15 November 2021 and 18 til 19 November 2021

Course content:

- » Introduction to qs-STAT
 - Quick Overview
 - File Ribbon
 - Graphical User Interface
 - Working Area
 - Usage Hints
- » File and dataset creation
 - Module Selection
 - Flowchart for data input
 - Types of characteristics
 - Data structure
 - Parts Mask/Characteristics Mask/Values Mask
- » Evaluations with qs-STAT
 - Why do we do statistics?
 - Confidence interval
 - Statistical numbers
 - Origin of graphics
 - Visualization of additional data
 - Capabilities in qs-STAT
- » Database basics
 - Save data to a database
 - Layout "Read from Database"
 - Additional fields in part selection
 - Usage hints
 - Simple Filter / Quick Filter / Advanced Filter
 - Automatic Selection
- » Reports with qs-STAT
 - Report preview
 - Printer settings
 - Print reports from preview
 - Print graphics and form sheets directly
- » User profile settings
 - How to find out own user rights
 - Configure the user profile
 - Reset user profile
 - Setting the software paths

Weinheim, 19 November 2021



Dick-Georg Martin Werner

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Design of Experiments DoE

for **Technische Universität Bergakademie Freiberg** from 13-14 and 16-17 December 2021.

Course contents:

Part 1:

- Basic Knowledge of Statistics using destra/vidara
 - Types of Characteristics and Scales
 - Distribution Models for Discrete Random Variables (Discrete Distributions)
 - Distribution Models for Continuous Random Variables (Continuous Distributions)
 - Descriptive statistics
 - Quantiles of the test distributions
- Test procedures
 - Basics of making statistical decisions
 - Target/Actual and Actual/Actual Comparisons
 - Comparison the Variances of Two Populations, F-Test
 - Comparison the Expectations of Two Populations, t-Test
 - Planning a test, statistical Power of a test
 - Parameter Tests for Normally Distributed Characteristics and Outlier tests
- Overview on Design of Experiments DoE: practical examples
- 1st Order Designs
 - Full Factorial Designs (Full FD 2n)
 - Fractional Factorial Designs (FFD2n-p)
- Replications
- Significance test and Adequacy test
- Options to Evaluate Models in destra/vidara