

## Quantulus

**N020-9648**

**5 Days**

**Tuition \$2000**

This course provides the participant with the knowledge to run the system and evaluate the results. Training is hands-on, but includes some theory and introduction to the future development of various applications. All training is done by appropriate product managers, specialists, application support, and laboratory personnel.

### Prerequisites

This course should be attended soon after installation of the Quantulus spectrometer. When requesting installation, the user should register to ensure that a space is available. Any user who wishes to learn more about the functions of the instrument is also welcome to attend. Customers should discuss their training needs with a PKI LAS specialist before attending this course. The attendee should have a working knowledge of the instrument and its applications.

### Lectures and Labs

- Basic liquid scintillation theory
- Solvents, flours, cocktails, sample preparation
- Ultra-low level counting, sources of background, background reduction methods
- Counting room requirements
- Data acquisition software
- Multi-channel analysis, energy scale, Quantulus MCA control
- Spectrum analysis software
- Quench, chemical and color
- Quench indices, correction
- Quench curve setup
- Counting statistics, stability verification
- Counting modes
- H-3 counting in water, limit of detection, enrichment
- Coincidence monitoring
- C-14 dating in benzene and in carbon dioxide
- Ionization quenching
- Pulse shape analysis, alpha/beta separation
- Quality control
- Energy resolution, counting efficiency
- Remote control of instrument
- Radon, radium and uranium in drinking water
- Information in WWW
- Troubleshooting, maintenance
- Data transfer by email
- Cerenkov counting, Sr-90/Y-90
- BetaScout, portable LSC and luminometer

### DATES

TURKU

MAR. 15,  
AUG. 16,

MAY 10,  
OCT. 18

JUN. 7

## Wizard

**N020-9649**

**5 Days**

**Tuition \$2000**

This course provides the participant with the knowledge to run the system and evaluate the results. Training is hands-on, but includes some theory and introduction to the future development of various applications. All training is done by appropriate product managers, specialists, application support, and laboratory personnel.

### Prerequisite

This course should be attended soon after installation of the Wizard instrument. When requesting installation, the user should register to ensure that a space is available. Any user who wishes to learn more about the functions of the instrument is also welcome to attend. Customers should discuss their training needs with a PKI LAS specialist before attending this course. The attendee should have a working knowledge of the instrument and its applications.

### Lectures and Labs

- Basic gamma counting theory
- Wizard gamma counter technology
- Sources of background, background reduction methods
- Multi-channel analysis
- CPM Assay
- Normalization
- Protocol definition
- Operation with internal RIACalc WIZ software
- Radioimmunoassay (RIA)
- Ratio assay
- Operation with external MultiCalc software
- Counting statistics, stability verification
- Customer applications and sample counting
- Dual label counting, multi-label counting
- Quality control
- Manual operation
- Troubleshooting, maintenance Update options
- BetaScout, portable LSC and luminometer
- Information in WWW
- Massive data transfer by email

### DATES

**TURKU**

MAR. 15,  
AUG. 16,

MAY 10,  
OCT. 18

JUN. 7