

CY-417 Quality Assurance for Chemists

Quality Basics

Concepts of quality, quality control and quality assurance, need for quality, quality systems, quality standards, Introduction to laboratory accreditation with reference to Good Laboratories Practices (GLP) and ISO 17025 i.e. General requirements for the competence of testing and calibration laboratories

Quality for Process Industries & Laboratories

The management of quality for chemical, pharmaceutical and related industries. Regulations for suitability of equipment and SOPs, sampling, statistical principles, validation of processes, reference materials & their traceability, laboratory controls, documentation and records, control of nonconforming product, internal and external QC Laboratory Auditing.

Quality Control Tools

Applications of quality control tools in laboratories, Tools for non-numerical information: flow chart, cause and effect diagrams. Graphical Tools: Histograms, scatterplots, run charts, control charts, Pareto diagrams.

Process Capability

Calculation of process capabilities. Specification limits and process capability, Process capability indices

Responsibilities of Laboratory Staff

Responsibilities of management, laboratory managers and individual staff members towards achieving quality goals.