

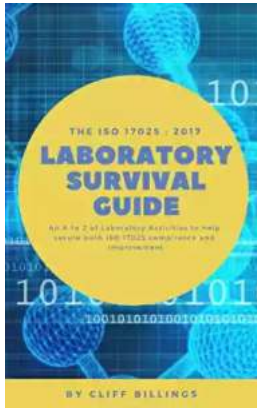
An Array of Laboratory Activities to Help Secure Both ISO 17025 Compliance and Success



ISO 17025, an internationally recognized standard, provides guidelines for testing and calibration laboratories to ensure their ability to produce accurate and reliable results. Achieving compliance with ISO 17025 is crucial for laboratories to demonstrate their competency and gain recognition in delivering high-quality services.

In this article, we will explore a range of laboratory activities that can help laboratories attain ISO 17025 compliance while ensuring ongoing success in their

operations.



The ISO 17025:2017 Laboratory Survival Guide: An A to Z of Laboratory Activities to help secure both ISO 17025 compliance and improvement

by Terrence J. Toy(Kindle Edition)

★★★★☆ 4 out of 5

Language : English
File size : 364343 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
X-Ray : Enabled
Word Wise : Enabled
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1. Standard Operating Procedures (SOPs)

Developing clear and comprehensive SOPs is imperative to ensure consistency and reliability in laboratory activities. SOPs should cover all aspects of laboratory operations, including sample handling, equipment calibration, record keeping, and data analysis. Implementing SOPs and regularly reviewing them is vital to maintain compliance with ISO 17025 requirements.

2. Training and Competency Management

A well-trained and competent workforce is a key to achieving ISO 17025 compliance. Laboratories should conduct regular training programs to enhance the knowledge and skills of their staff. Additionally, implementing a competency management system can help track and assess the performance of personnel.

Adequate training and competency management contribute to accurate testing procedures and reliable results.

3. Measurement Uncertainty

Measurement uncertainty refers to the doubt associated with the test results obtained from laboratory equipment and processes. Laboratories must identify and calculate measurement uncertainties to ensure the reliability and traceability of their results. This includes estimating uncertainties from various sources, such as equipment limitations and environmental conditions. Understanding and managing measurement uncertainty is essential for ISO 17025 compliance.

4. Proficiency Testing (PT)

Participating in proficiency testing programs is a valuable practice for laboratories seeking ISO 17025 compliance. PT involves testing samples provided by external organizations to evaluate the laboratory's performance against specified criteria. Regular participation in PT programs helps laboratories identify areas for improvement and validates their competence in delivering accurate and reliable results.

5. Equipment Calibration and Maintenance

Calibrating and maintaining laboratory equipment is crucial to ensure the accuracy and reliability of test results. Laboratories must establish a comprehensive calibration schedule and follow it diligently. Regular equipment maintenance helps detect and rectify any deviations or inaccuracies that may impact the quality of results. Adhering to strict calibration and maintenance procedures is vital for ISO 17025 compliance.

6. Quality Control (QC) Procedures

Implementing robust QC procedures is essential for monitoring and controlling the quality of laboratory tests. Well-designed QC procedures include sample analysis, control charts, statistical analysis, and corrective actions. Regularly reviewing QC data and taking corrective actions when necessary helps improve the accuracy and precision of test results, ensuring compliance with ISO 17025 requirements.

7. Document Control

Efficient document control is fundamental for ISO 17025 compliance. Laboratories should establish a document control system to maintain accurate records of procedures, test methods, and personnel qualifications. Document control ensures that the latest versions of documents are accessible, controlled, and easily retrievable. Regularly reviewing and updating documents guarantees compliance with ISO 17025 guidelines.

8. Internal Audits

Conducting regular internal audits is a proactive approach to identify non-conformities and improvement opportunities within laboratory operations. Audits should cover all aspects of ISO 17025 compliance, including adherence to SOPs, training records, equipment calibration, and quality control procedures. Internal audits help maintain ongoing compliance and allow laboratories to address any gaps before external assessments or inspections.

9. Management Review

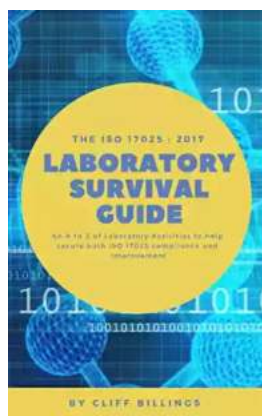
Regular management reviews enable laboratories to assess the effectiveness and efficiency of their quality management systems. The management team should review various operational aspects, including resource allocation, personnel competence, customer feedback, and continuous improvement

initiatives. Management reviews contribute to the continual improvement of laboratory operations, ensuring sustained compliance with ISO 17025.

10. Continual Improvement

Adopting a culture of continual improvement is essential for laboratories striving to achieve ISO 17025 compliance and long-term success. Laboratories should encourage feedback from customers, monitor Key Performance Indicators (KPIs), and regularly assess their processes to identify areas for enhancement. By embracing a mindset of continuous improvement, laboratories can create a culture of excellence and maintain compliance with ISO 17025 requirements.

, laboratories must implement various activities and practices to ensure compliance with ISO 17025 while striving for long-term success. Upholding SOPs, investing in training and competency management, addressing measurement uncertainty, participating in proficiency testing, maintaining equipment, following quality control procedures, establishing efficient document control, conducting internal audits, engaging in management reviews, and embracing continual improvement are all critical for both ISO 17025 compliance and achieving excellence in laboratory operations.



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TEQSUK has been working over the last three years to put together a Guide on how your laboratory can be both compliant to ISO 17025 and drive improvement to help secure competitive advantage. From the 2005 version of the standard, the Guide was revised as drafts of the new standard were released. The Guide, which is entitled 'The ISO 17025:2017 Laboratory Survival Guide' shows how to address all aspects of the new standard. In addition, it contains a large amount of relevant, additional information to aid practice and give underpinning knowledge on quality systems management.

The Guide is a distillation of knowledge and experiences of several highly skilled scientific and quality professionals, gained from working in and managing laboratories. It is in an A to Z format, each section gives a comprehensive explanation as to what can or should be done; the reader can then compare this against what they currently have in the workplace. The concept is to provide a relatively simple format with figures, tables and checklists alongside the text to help understanding and improve practice.

The Guide fills an evident need for practical help with the interpretation and implementation of the ISO 17025:2017 standard entitled: General requirements for the competence of testing and calibration laboratories.

We cannot trace comparable competition. The Guide addresses every clause or sub-clause in the standard and gives practical guidance, on many associated topics, to help improve understanding and give underpinning knowledge.

The Guide can be used by all types of laboratories: A wide range of testing and

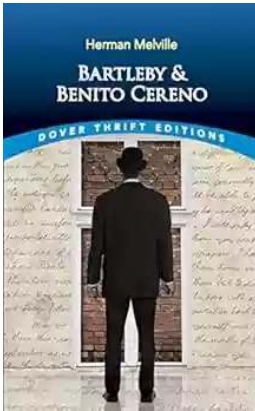
calibration laboratories, medical laboratories and those compliant with the Good Laboratory Practice requirements.

The Guide is aimed at a global market. Staff, at many levels, in chemical, microbiological, geotechnical, food, veterinary, nuclear, medical (ISO 15189:2012) as well as in a range of calibration and GLP laboratories should find much or all the text relevant for compliance with the standard and laboratory improvement. In addition, colleges and universities, including their laboratories, should find some sections helpful for teaching or practical use.

The Guide is written in an A to Z format, covering all parts of the standard along with additional, associated information, which is linked to each section. Examples are: Quality control, quality assessment and assurance, layout and verification / validation of methods, traceability, reports, personnel, equipment and auditing. In addition, there is a cross-referencing table linking sections in the previous ISO 17025 standard and the current version to the Guide. There are also tables, figures, check-lists and appendices along with a bibliography for each section of the Guide.

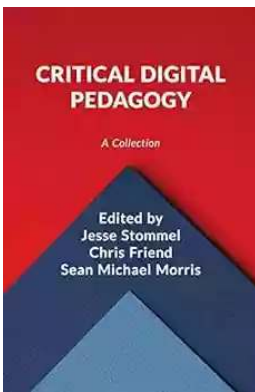
We would envisage it being used for several purposes. Key aspects would be: To help maintain laboratory compliance. To help ensure competence in laboratory training; as a reference manual to guide the production of documents within the Quality Management System; to guide responses to laboratory customer queries; to help enable 'continuing professional development', CPD and to drive laboratory improvement.

The text is written in plain language, with a glossary, abbreviations explained, useful appendices along with tables, figures and specific text for items such as: The layouts for reports and methods / procedures, auditing check-lists and ways to reduce errors. The Guide should help translate 'ISO language' to user friendly ways of working.



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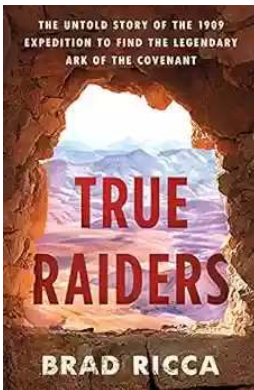
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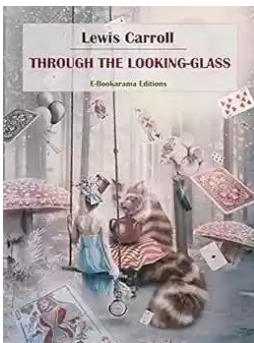
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