

HOW TO ASSESS THE COMPETENCE OF STAFF

Background

Most of the requirements of ISO 17025 [1] upon competence are detailed in its § 5 and 6, expressing requirements on:

- personnel qualification and competence and documentation of it including requirements for education, qualification, training, technical knowledge, skills and experience;
- responsibility, authority and interrelationship of all personnel who manage, perform or verify work affecting the results of laboratory activities;
- appointed personnel responsible for handling of the management system;
- additional personnel;
- job descriptions;
- procedures and records for determining competence requirements, selection of personnel, training of personnel, supervision of personnel, authorisation of personnel and monitoring of competence of personnel.

Like any conformity assessment, the assessment of competence has to be done according to a specification.

Specification

The laboratory management has to ensure the competence of and authorise all who operate specific equipment, perform tests and/or calibrations, develop methods, evaluate and analysis results, state conformity, gives opinions and interpretations and sign test reports and calibration certificates.

First the laboratory has to express the needs, for example, in team or individual job descriptions giving information on expertise and experience required; diploma required qualifications and training programmes required; access to knowledge database at networks; and other matters (human behaviour, spoken languages...).

Examples

- It is helpful to define in the training program what is relevant for a first training and for a further training.
- For repetitive but not frequent activities: very detailed testing or calibration procedures can be used to reduce the training program to the checking of the good understanding of the procedure before application by the staff.
- A required educational level can be associated to a procedure to ensure of its good understanding
- interval for requalification where applicable

Evaluation and qualification

Then the laboratory has to evaluate the accordance between the job descriptions and staff knowledge by checking the appropriateness of the education, training, experience and/or demonstrated skills.

If evidence is available to demonstrate that a person meets all the criteria, he/she can be qualified.

If not, training actions have to be undertaken and the training program has to include evaluation of the new competence (realization of a test with a supervisor, use of questionnaires, documented interview, internal comparisons with reference materials,) and the evidence of the evaluation have to be recorded. Those evidences can consist, where applicable, of:

- technical degree, certificate, diploma;
- involvement in publications;
- records of the involvement in calibration or testing operations and assessment of the participation;
- record of involvement in internal or external comparisons;
- record of involvement in research networks;
- record of involvement in standardization;
- records of specific evaluation;
- for non-frequent activities (>12 month), Records of the realisation of a "reference" test;
- others.

The use of a database can improve the capability of the laboratory to identify quickly the right person for a given job.

Review and improvements

Both specifications and qualifications have to be reviewed regularly taking into account current needs of the laboratory and of its customers and also of future needs, so re-evaluation of competence can be needed. Training and qualification programs can be outputs of research and technical development activities of a laboratory.

Review of the assessment of competence process:

Internal audits are conducted to verify that operations continue to comply with the requirements of the management system and ISO 17025.

Conclusions

The assessment of the competence of staff has to be fit for purpose that is to say staff is able to generate technically valid results. The better the competence specifications are defined, the easier will it be to demonstrate the fulfilment of these competence requirements. It is the responsibility of the laboratory to find the good equilibrium between competence assessment of staff and other quality matters. The assessment and the competence of staff have to be continuously improved for the benefits of laboratories and their clients.

References

[1] ISO/IEC 17025:2017, “General requirements for the competence of testing and calibration laboratories”