



UNDERSTANDING ISO 17025 CLAUSE 6.2 - PERSONNEL

Why Personnel Matter – Competence, Authorisation and the Human Foundation of Technical Reliability

Clause 6.2 is one of the most critical clauses in ISO/IEC 17025 because it deals with the resource that influences every single result produced by the laboratory: **people**. Equipment can be calibrated, facilities can be upgraded, systems can be improved — but none of this matter if personnel are not competent, authorised and supported. Clause 6.2 ensures that the human foundation of the laboratory is strong, structured and defensible.

Personnel are not simply “staff”. In ISO/IEC 17025, personnel are:

- **Technical decision-makers**
- **Method implementers**
- **Equipment custodians**
- **Sample handlers**
- **Data reviewers**
- **Risk identifiers**
- **Protectors of impartiality and confidentiality**
- **Operational guardians of the management system**

Clause 6.2 requires laboratories to define competence requirements for every role, ensure personnel meet those requirements, and maintain evidence that competence is sustained. Competence is not assumed — it must be demonstrated.

What Clause 6.2 Requires at a High Level

The laboratory must:

- Define competence requirements for each role
- Ensure personnel are competent for assigned tasks
- Provide training when needed
- Authorise personnel formally
- Maintain records of competence, training and authorisation
- Monitor ongoing competence
- Protect personnel from undue influence
- Ensure personnel understand impartiality and confidentiality obligations

Clause 6.2 is not about job titles — it is about capability.

Competence Is a Technical Requirement, Not a Human Resource (HR) Function

Competence must be aligned with:

- The laboratory's scope
- The complexity of methods
- The accuracy required by equipment
- The risks associated with activities



- The expectations of clients and regulators
- The accreditation body's assessment criteria

Personnel must be competent not only to perform tasks, but to defend them.

Authorisation Is the Bridge Between Competence and Responsibility

Clause 6.2 requires laboratories to authorise personnel for specific tasks. Authorisation ensures that:

- Only competent individuals perform critical activities
- Technical decisions are made by qualified personnel
- Responsibilities are clear and defensible
- Impartiality is protected
- Workflows remain stable
- Risks are controlled

Authorisation is competence made official.

Why Personnel Matters

Personnel influence:

- Measurement accuracy
- Equipment reliability
- Sample integrity
- Data validity
- Impartiality
- Confidentiality
- Risk management
- System stability



Clause 6.2 ensures that the laboratory's human resource foundation is strong, structured and aligned with technical reality.

Competence is the human engine of reliability — and Clause 6.2 ensures that engine is built, maintained and protected.

Defining Competence – Role Requirements, Technical Expectations and System Alignment

Clause 6.2 moves us from the broad principle of “personnel matter” into the structured requirement that **competence must be defined, documented and aligned with the laboratory's activities**. Competence is not generic. It is role-specific, method-specific and risk-specific. Today's focus is on how laboratories define competence requirements and ensure they match the technical reality of the work performed.



Competence Begins with Role Definition

Clause 6.2 requires laboratories to define competence requirements for every role involved in testing, calibration or sampling. These roles may include:

- Technicians
- Analysts
- Sample reception personnel
- Equipment custodians
- Data reviewers
- Technical managers
- Quality managers
- Safety officers
- Administrative support involved in technical workflows

Each role must have clearly defined competence expectations. Without role clarity, competence becomes vague — and vague competence cannot be defended.

Competence Requirements Must Match Technical Reality

Competence must be aligned with:

- The complexity of methods
- The accuracy required by equipment
- The risks associated with activities
- The environmental conditions required
- The sample types handled
- The decisions personnel must make
- The data they must interpret
- The equipment they must operate

Clause 6.2 ensures that competence is not based on job titles, but on technical demands.

Competence Requirements Must Be Documented

Clause 6.2 requires laboratories to document competence requirements in a structured way. This may include:

- Minimum qualifications
- Required experience
- Required training
- Required assessments
- Required authorisations
- Required ongoing evaluations

Documented competence requirements ensure consistency, transparency and defensibility.



Competence Requirements Must Be Communicated

Personnel must understand:

- What they are authorised to do
- What they are not authorised to do
- What competence they must maintain
- What training they must complete
- What responsibilities they carry
- What risks they must manage

Communication prevents unauthorised work, protects impartiality and strengthens reliability.

Competence Requirements Must Be Reviewed Regularly

Competence is dynamic. Clause 6.2 requires laboratories to review competence requirements when:

- Methods change
- Equipment is upgraded
- New risks are identified
- Workload increases
- Personnel roles evolve
- Accreditation scope expands
- Regulatory expectations shift



Competence must evolve with the laboratory.

Why Defining Competence Matters

Defining competence is the foundation of:

- Reliable results
- Safe workflows
- Impartial decisions
- Accurate data
- Effective risk management
- Strong technical leadership
- Defensible accreditation

Clause 6.2 ensures that competence is intentional, structured and aligned with the laboratory's technical reality.

Demonstrating Competence – Training, Assessment and Evidence of Capability

Now, Clause 6.2 shifts from defining competence to **demonstrating** it. ISO/IEC 17025 requires laboratories to show clear, defensible evidence that personnel are competent for the tasks they perform. Competence is not a claim — it is a documented, assessed



and traceable reality. Today's focus is on how laboratories build, verify and maintain that evidence.

Competence Must Be Built Through Structured Training

Clause 6.2 requires laboratories to ensure personnel receive training that aligns with:

- The methods they perform
- The equipment they operate
- The decisions they make
- The risks they manage
- The data they interpret
- The safety requirements of their role
- The impartiality and confidentiality obligations they carry

Training may include:

- Formal qualifications
- On-the-job instruction
- Method-specific training
- Equipment-specific training
- Safety training
- Quality system training
- Refresher training
- External courses



Training must be planned, documented and aligned with competence requirements.

Competence Must Be Verified Through Assessment

Clause 6.2 requires laboratories to assess personnel competence before authorising them. Assessments may include:

- Practical demonstrations
- Written tests
- Oral evaluations/interviews
- Observation of work
- Review of completed results
- Equipment handling assessments
- Method-specific proficiency checks
- Simulated scenarios for critical tasks

Assessment ensures that competence is real — not assumed.

Competence Must Be Recorded and Traceable

Clause 6.2 requires laboratories to maintain records that demonstrate competence.

These records may include:

- CVs and qualifications
- Training records
- Assessment results



- Authorisation forms
- Competence matrices
- Performance reviews
- Records of ongoing monitoring
- Evidence of corrective training

Records transform competence from an internal belief into external proof.

Competence Must Be Maintained Through Ongoing Monitoring

Competence is not permanent. Clause 6.2 requires laboratories to monitor personnel performance through:

- Routine observation
- Review of results
- Error trends
- Non-conformities
- Feedback from supervisors
- Changes in methods or equipment
- New risks or safety requirements

Monitoring ensures competence remains current and aligned with evolving laboratory demands.

Competence Must Be Protected from Undue Influence

Clause 6.2 links directly to impartiality. Personnel must be protected from:

- Commercial pressure
- Political pressure
- Internal pressure
- Client pressure
- Conflicts of interest

A competent person under pressure becomes a risk. Clause 6.2 ensures competence is protected, not compromised.

Why Demonstrating Competence Matters

Demonstrated competence is the foundation of:

- Reliable results
- Accurate measurements
- Safe workflows
- Defensible decisions
- Strong accreditation performance
- Trust from clients and regulators

Clause 6.2 ensures that competence is not a hope — it is a documented, assessed and monitored reality.



Authorisation – The Formal Assignment of Responsibility, Authority and Technical Decision-Making Power

Clause 6.2 now brings us to one of the most powerful mechanisms in ISO/IEC 17025: **authorisation**. Competence is the foundation — but authorisation is the formal act that connects competence to responsibility. It is the point where the laboratory says: *“This person is competent, evaluated, trusted and officially permitted to perform these tasks.”* Authorisation is competence made operational.

Authorisation Is a Structural Control, Not an Administrative Signature

Clause 6.2 requires laboratories to formally authorise personnel for specific tasks. This includes:

- Performing tests
- Performing calibrations
- Conducting sampling
- Operating equipment
- Reviewing data
- Interpreting results
- Making technical decisions
- Approving reports
- Handling nonconforming work
- Implementing corrective actions
- Stopping work when necessary



Authorisation ensures that only competent individuals perform critical activities.

Authorisation Must Be Based on Evidence, Not Assumption

Personnel may only be authorised when they have demonstrated competence through:

- Qualifications
- Training
- Practical assessments
- Observation
- Method-specific proficiency
- Equipment-specific capability
- Understanding of risks
- Understanding of impartiality and confidentiality

Authorisation is the final step in the competence chain — and it must be earned.

Authorisation Must Be Documented and Traceable

Clause 6.2 requires laboratories to maintain clear records of authorisation. These may include:

- Authorisation forms
- Competence matrices
- Role-specific authorisation lists



- Digital authorisation records
- Supervisor sign-offs
- Evidence of assessment
- Evidence of training
- Evidence of ongoing monitoring

Documented authorisation protects the laboratory from unauthorised work and strengthens accreditation defensibility.

Authorisation Must Be Specific, Not Generic

Personnel must be authorised for:

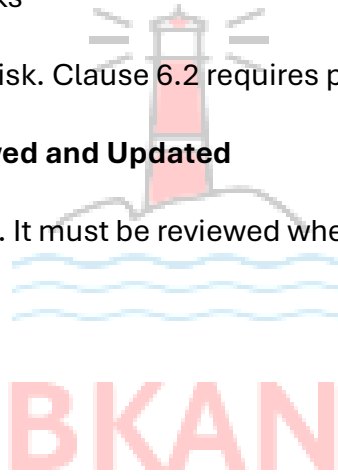
- Specific methods
- Specific equipment
- Specific decisions
- Specific sample types
- Specific reporting responsibilities
- Specific risk-related tasks

Generic authorisation creates risk. Clause 6.2 requires precision.

Authorisation Must Be Reviewed and Updated

Authorisation is not permanent. It must be reviewed when:

- Methods change
- Equipment is upgraded
- Personnel roles evolve
- Risks increase
- Competence declines
- New training is required
- Scope expands
- Non-conformities occur



Authorisation must evolve with the laboratory's technical reality.

Authorisation Protects Impartiality and Reliability

Clause 6.2 links authorisation directly to impartiality. Only authorised personnel may make decisions that influence results. This protects the laboratory from:

- Unqualified decisions
- Internal pressure
- External influence
- Conflicts of interest
- Operational inconsistency

Authorisation is a structural safeguard.



Why Authorisation Matters

Authorisation ensures that:

- Competence is applied correctly
- Responsibility is assigned clearly
- Decisions are defensible
- Workflows remain stable
- Risks are controlled
- Accreditation is protected

Authorisation is the operational expression of competence — and Clause 6.2 ensures it is formal, structured and defensible.

Maintaining Competence – Ongoing Monitoring, Performance Review and the Continuous Development Cycle

Clause 6.2 shifts from building and authorising competence to **maintaining** it. **Competence is not permanent.** It can strengthen, weaken, drift, or become misaligned with evolving laboratory demands. Clause 6.2 requires laboratories to implement structured, ongoing mechanisms to ensure personnel remain competent, impartial, reliable and aligned with the technical reality of the work they perform. Competence is not a once-off event — it is a continuous development cycle.

Ongoing Monitoring – The Daily Safeguard of Competence

Clause 6.2 requires laboratories to **monitor personnel performance continuously**. Monitoring may include:

- Routine observation of work
- Review of completed results
- Trending of errors or inconsistencies
- Feedback from supervisors
- Peer review of critical tasks
- Monitoring of equipment handling
- Monitoring of method adherence
- Monitoring of safety practices
- Monitoring of impartiality and confidentiality behaviour

Monitoring ensures competence remains active, not historical.

Performance Review – Structured Evaluation of Capability

Clause 6.2 requires laboratories to evaluate personnel performance formally.

Performance reviews may include:

- Annual competence evaluations
- Method-specific performance checks
- Equipment-specific capability reviews
- Review of nonconformities linked to personnel



- Review of corrective actions
- Review of training needs
- Review of decision-making quality
- Review of communication and teamwork

Performance reviews ensure competence remains aligned with expectations.

Identifying Competence Drift – Early Detection of Risk

Competence can **drift** due to:

- Changes in methods
- Upgrades in equipment
- Increased workload
- Reduced exposure to certain tasks
- Complacency
- Stress or fatigue
- Lack of refresher training
- Changes in personnel roles
- New risks or safety requirements

Clause 6.2 requires laboratories to **detect drift** early — before it becomes a risk to results.

Corrective Training – Restoring Competence When Needed

When competence gaps appear, Clause 6.2 requires laboratories to act. Corrective actions may include:

- Refresher training
- Re-assessment
- Temporary removal of authorisation
- Additional supervision
- Method-specific retraining
- Equipment-specific retraining
- Coaching or mentoring
- Updating competence requirements

Corrective training protects reliability and impartiality.

Continuous Development – Strengthening Capability Over Time

Clause 6.2 encourages laboratories to invest in personnel development. Continuous development may include:

- Advanced training
- Cross-training
- External courses
- Professional development programmes
- Participation in proficiency testing



- Exposure to new methods
- Leadership development for senior personnel

Continuous development strengthens the laboratory's long-term capability.

Why Maintaining Competence Matters

Maintaining competence ensures:

- Reliable results
- Accurate measurements
- Stable workflows
- Strong technical leadership
- Effective risk management
- Defensible accreditation performance
- Trust from clients and regulators

Competence, Authorisation and the Human Engine of Technical Reliability

Clause 6.2 – Personnel show one truth becomes unmistakably clear: **the competence of people is the single greatest determinant of laboratory reliability**. Facilities, equipment and systems matter — but none of them function without competent, authorised and continuously developed personnel. Clause 6.2 ensures that the human engine of the laboratory is strong, structured and defensible.

Defining Competence – Building the Foundation

Competence must be defined clearly and precisely. Clause 6.2 requires laboratories to establish role-specific competence requirements aligned with method complexity, equipment accuracy, sample types, decision-making responsibilities and risk profiles. Competence is not generic — it is technical, contextual and measurable. This definition stage ensures that the laboratory knows exactly what capability each role must possess.

Demonstrating Competence – Evidence Over Assumption

Competence must be demonstrated through structured training, practical assessment, observation and documented evaluation. Clause 6.2 transforms competence from an internal belief into external proof. **Training builds capability. Assessment verifies capability. Records preserve capability.** Together, they create a defensible competence system that withstands accreditation scrutiny.

Authorisation – Formalising Responsibility and Decision-Making Power

Authorisation is the operational expression of competence. Clause 6.2 requires laboratories to formally authorise personnel for specific tasks, methods, equipment and decisions. Authorisation ensures that only competent individuals perform critical activities, protecting impartiality, reliability and workflow stability. Authorisation is not a signature — it is a structural safeguard.



Maintaining Competence – Monitoring, Review and Continuous Development

Competence must be maintained through ongoing monitoring, performance review, corrective training and continuous development. Competence can drift, weaken or become misaligned with evolving laboratory demands. Clause 6.2 requires laboratories to detect drift early and act decisively. Competence is not static — it is a living capability that must be nurtured.

The Human Engine of Reliability

Personnel are the most critical resource in the laboratory — and Clause 6.2 ensures their competence is built, demonstrated, authorised and maintained with discipline. Competent personnel protect impartiality, uphold accuracy, strengthen reliability and safeguard the credibility of every result produced.

Clause 6.2 is not a Human Resource (HR) requirement. **It is a technical requirement. It is a structural requirement. It is a leadership requirement.** It is the human foundation of ISO/IEC 17025.

