MERCURY

Qualitative and Health Risk Assessment Training Course

23 – 27 May 2027
Muscat (Oman)



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Qualitative and Health Risk Assessment Training Course

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Qualitative and Health Risk Assessment Training Course is a 1-week course for people who rate occupational hazards to workers before any sampling data exist. It walks through the qualitative HRA steps, from hazard identification and exposure evaluation to risk rating and the choice of safeguards, and you leave with a completed Task Hazard Rating Register for one of your own units. Mercury Training Center delivers this qualitative HRA course.

About This Course

Many sites must decide which jobs harm workers long before any air sampling or medical results exist. This one-week course answers that gap. You should already take part in site inspections or hazard reviews. You practice on task descriptions, data sheets and walk-through notes, rating each case in small groups and defending the rating.

Who It Is For

- HSE advisers who prepare hazard reviews for operating units and contractors.
- Occupational health nurses and physicians who decide who enters medical surveillance.
- Industrial hygiene technicians who plan where measurement effort goes first.
- Supervisors and engineers who sign off task changes, new chemicals or new equipment.

This course is not for readers who already run measurement campaigns and statistical analysis of sampling results; an advanced industrial hygiene measurement course suits them better. It also does not suit staff who only need hazard awareness; a short awareness session fits them better.

Competencies You Will Build

- Hazard Inventory Building: you list chemical, physical, biological, ergonomic and psychosocial agents task by task.
- Exposure Group Definition: you sort workers into similar exposure groups by task, duration and frequency.
- Severity and Likelihood Rating: you apply an agreed rating matrix and explain each score to a peer.
- Safeguard Selection: you choose measures by the hierarchy of controls.
- Surveillance Triggering: you mark which groups need medical checks or sampling next.
- Findings Briefing: you present ratings and actions to line managers on one page they act on.

What You Will Be Able to Do

By the end of the course you will be able to:

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- Given task descriptions for one unit, list every agent and route of entry.
- Using safety data sheets and GHS hazard statements, assign a severity band to each chemical agent.
- From walk-through notes and shift rosters, estimate frequency and duration of contact and record a likelihood band.
- Using a five-by-five matrix, rank the groups and flag those needing follow-up.
- Given a high-rated task, choose safeguards and set an owner and a review date for each action.
- From a completed rating set, write a one-page summary that line managers can approve.

Course Content

Day 1: HRA Foundations and Hazard Inventory

- Qualitative, Semi-Quantitative and Quantitative HRA Compared for Site Decisions
- ISO 45001 Hazard Identification Applied to Routine and Non-Routine Tasks
- Agent Classification: Chemical, Physical, Biological, Ergonomic and Psychosocial
- Routes of Entry Mapping for Inhalation, Skin Contact and Ingestion
- Roles and Responsibilities Chart for the HRA Review Team

Day 2: Exposure Evaluation Without Sampling

- Similar Exposure Group Definition from Task Lists and Shift Rosters
- Walk-Through Survey Checklist for Process Areas and Maintenance Bays
- Structured Worker Interviews to Capture Task Duration and Frequency
- Safety Data Sheet and GHS Hazard Statement Review for Chemical Agents
- Occupational Exposure Limits as Reference Points in Qualitative Judgment

Day 3: Rating and Ranking Exposure Groups

- Severity Bands Built from Hazard Statements and Known Clinical Effects
- Likelihood Bands from Frequency, Duration and Existing Safeguards
- Five-by-Five Rating Matrix Calibration Across a Review Team
- Control Banding Method for Chemical Tasks with Limited Data
- Priority Ranking of Groups for Sampling and Medical Surveillance

Day 4: Safeguards and Surveillance Planning

- Hierarchy of Controls Applied to High-Rated Tasks
- Engineering and Administrative Options for Solvent and Noise Tasks
- PPE Selection Criteria and Their Limits as a Last Line of Defense
- Medical Surveillance Triggers Linked to Rating Results
- ISO 31000 Treatment Planning with Action Owners, Review Dates and Records

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Day 5: Rating Practice on Your Own Site

- Exercise: Re-Rating a Day 2 Exposure Group After New Walk-Through Findings
- Exercise: Calibrating Team Scores on a Day 3 Matrix Case
- Exercise: Selecting Safeguards for a Day 4 High-Rated Task
- Findings Summary and Briefing Format for Line Managers and Inspectors
- Completing the Task Hazard Rating Register for Your Own Site

Case Studies and Exercises

The items below are suggested activities.

- Case study: a maintenance crew in a petrochemical plant cleans storage tanks with solvents; you define and rate the exposure groups.
- Case study: a hospital sterile services unit handles ethylene oxide and heavy instrument trays; you choose who enters medical surveillance.
- Exercise: a food processing line adds a new cleaning chemical; you assign a severity band from its data sheet.
- Exercise: a construction crew cuts concrete indoors; you select safeguards and draft the site briefing.

What You Take Back

The Task Hazard Rating Register is a worked layout for one of your own units, filled in during the course. In your first month back you complete it with the unit supervisor, use it to decide where sampling and medical checks start, and brief managers from its summary page.

- Agent and exposure group inventory.
- Severity and likelihood bands.
- Safeguard action list with owners.
- One-page summary for line managers.

Quick Answers FAQ

What should you know before a qualitative health risk assessment course?

You should already take part in site inspections or hazard reviews and be able to read a safety data sheet. No statistics or sampling experience is needed.

How does qualitative health risk assessment training differ from an industrial hygiene measurement course?

A measurement course teaches you to sample airborne agents and analyze results. This course rates hazards from task knowledge, data sheets and observation, so you can decide where measurement is worth doing before any instruments are booked.

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When is a qualitative health risk assessment enough without sampling?

It is enough when the rating clearly falls in a low band, or when obvious safeguards are needed whatever a measurement would show. Where the band is uncertain or close to an exposure limit, the qualitative result points to the groups that need sampling next.

What do you take back from qualitative health risk assessment training?

You take back a Task Hazard Rating Register for one of your own units, with exposure groups, rating bands, safeguard actions and a manager summary.

For Your Manager

After the course, the team member can list the agents on a unit, group workers by shared exposure, rate each group and propose safeguards in order of the hierarchy of controls. They return with a Task Hazard Rating Register for their own unit, first used to decide where sampling and medical surveillance start and to brief supervisors on actions.