



Australian Government

DEFTST006 Analyse test data

Release: 2

DEFTST006 Analyse test data

Modification History

Release 2. This is the second release of this unit of competency in the DEF Defence Training Package.

Release 1. This unit was released in DEF Defence Training Package Release 1.0 and meets the Standards for Training Packages.

Application

This unit describes the skills and knowledge required to analyse test data.

It includes performing scientific calculations, analysing trends and relationships in data and determining variation and/or uncertainty in data distributions. It also includes checking for aberrant results and maintaining results.

This unit was developed for Defence test and evaluation workers but is applicable to any individuals who work in this field.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently or as part of a team, under direct and indirect supervision, use discretion and judgement, and take responsibility for the quality of their output. They would perform complex tasks in a range of contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Test and Evaluation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Perform scientific calculations

2 Analyse trends and relationships in data

3 Determine variation and/or uncertainty in data distributions

4 Check for aberrant results

5 Maintain results

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Ensure consistency of raw data with expectations and reasonable ranges

1.2 Calculate scientific quantities

1.3 Determine calculated quantities and estimations

1.4 Present results using the appropriate units, uncertainties and number of significant figures

2.1 Determine relationships between sets of data

2.2 Prepare and analyse data to determine if a process is in control

2.3 Identify possible causes for out of control condition

3.1 Organise raw data into appropriate frequency distributions

3.2 Calculate statistical properties for ungrouped and grouped data

3.3 Interpret statistical properties to determine characteristics of sample or population

3.4 Calculate standard deviations and confidence limits for means and replicates

3.5 Determine uncertainty in measurements using statistical analysis

3.6 Determine data acceptability using statistical tests and organisational procedures

4.1 Identify results that cannot be reconciled with documentation, testing procedures and/or expected outcomes

4.2 Determine appropriate actions in consultation with relevant personnel, as required

5.1 Store, retrieve and manipulate data following document

traceability procedures

- 5.2 Present results in an appropriate format
- 5.3 Verify entry of data and results
- 5.4 Maintain security and confidentiality of data in accordance with organisational policies and procedures
- 5.5 Prepare reports in a format and style consistent with their intended use and organisational guidelines

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the DEF Defence Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to DEFTE006A Analyse test data.

Links

Companion Volume Implementation Guides are found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFTST006 Analyse test data

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- completing mathematical calculations involving fractions, decimals, ratios, proportions and percentages
- evaluating mathematical formulae
- interpreting scientific properties
- preparing and interpreting graphs and data.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- characteristics of a valid measurement
- procedures for data traceability
- procedures for maintaining and filing records, and security of data
- procedures for verifying data and rectifying mistakes
- relevant scientific terminology
- sources of uncertainty in measurements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy

requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry.

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