COGSQO-02

Analyse and Interpret Data in Science or Technology Related Industries

Overview

This standard covers the competences you need to analyse and interpret data in science or technology related industries.

You will be required to demonstrate that you can perform accurate preparation and analysis of samples, identify appropriate analysis techniques, analyse data, analyse non-conformance and write technical reports to communicate data information within the organisation.

The activity is likely to be undertaken by someone whose work role carries out science quality related work activities. This could include individuals working in scientific laboratories, chemical, energetic materials and biochemical manufacturing process industries.

Performance criteria

You must be able to:

P1 ensure that your work is carried out in accordance with good documentation practices (GDocP), regulatory, legislative, licenses and organisations procedures and policies.
P2 use appropriate Manufacturing Information Management Systems (MIMS) database to access data and information required to perform the analysis.
P3 maintain security and integrity requirements when accessing computer systems in data searches and analysis.
P4 use correct search procedures and methodology to review data and information required in the data retrieval process.
P5 perform quality checks on the data in accordance with organisational protocols, policies and procedures.
P6 compile the results of the analysis and check for any variances in the data.

P7 resolve variation issues within your range of responsibility, escalating the issue if not resolved to the appropriate person.
P8 report any variances issues to the appropriate people and deal with them in accordance with organisational policies and procedures.
P9 carry out the report writing within the agreed timeline and in accordance to the GDocP and the organisations reporting procedures.
P10 use statistical techniques to analyse data.
P11 employ statistical process control techniques to monitor quality of manufactured products.
P12 input data into Manufacturing Information Management Systems.
P13 communicate the analysis report in accordance to the department and organisational procedures.

Knowledge and understanding

You need to know and understand:

K1 the health and safety requirements of the area in which you are carrying out your science work related activity and your personal responsibilities with regards to safety.
K2 the requirements of regulatory, legislative, licenses and organisations procedures and policies and why it is important to follow them.
K3 the principles of good manufacturing practices (GMP) and good document control practices (GDocP) used in the science workplace.
K4 the latest technological developments relevant to the science industry and how to keep up-to date with them.
K5 the strategic direction of the industrial sciences agenda across the UK and globally and how this will influence the organisation.
K6 the organisational structure including roles and responsibilities and line of communication in your department and the wider business environment.
K7 how to review analysis information and interpret data in science related work activities.
K8 the different methodologies used to analyse data.
K9 types of variation that can occur with data and the causes.
K10 what to do when variations in data occur.
K11 how to write a report in accordance to organisation procedures and GDocP practices.
K12 the different types of reports and who to issue the reports to.
K13 when, why and how to make amendments to analysis, documents and reports within the area of responsibility.
K14 how to communicate effectively, and how to identify key information when recording and reporting information.
K15 the test codes, coded comments, requester, location codes and product comment codes required for accurate data input.
K16 the use of statistical techniques to analyse data.
K17 the principles of statistical process control techniques.

Developed by	Cogent
Version Number	1
Date Approved	September 2018
Indicative Review Date	September 2020
Validity	Current
Status	Original
Originating Organisation	Cogent
Original URN	COGSQO-02
Relevant Occupations	Associate professionals and technical oc; Science and mathematics Science; Science; Process Operatives; Process, Plant and Machine Operatives; Science Professionals; Technical Quality
Suite	Scientific Quality Operations
Keywords	analyse; interpret; data; results; sciences; technology