SKILLS future SG

TSC Category	Laboratory Management					
TSC	Laboratory Data Reporting and Analysis Management					
TSC Description	Manage laboratory data for reporting and analysis purposes, ranging from collation, record, access and retrieval from the laboratory information management systems (LIMS)					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
	ECM-LAB-1001-1.1	ECM-LAB-2001-1.1	ECM-LAB-3001-1.1	ECM-LAB-4001-1.1	ECM-LAB-5001-1.1	ECM-LAB-6001-1.1
	Identify data recording and reporting procedures to assist in data reporting activities	Apply data analysis and reporting techniques and procedures to process and interpret data	Interpret laboratory data management systems and procedures on record, access and retrieval of data to analyse data and reports	Develop laboratory data management systems and analysis methodologies to supervise and monitor the quality of test results and data	Evaluate laboratory data management and analysis methodologies to ensure high quality of data analysis and reporting	Drive direction and strategies on laboratory data management and analysis to achieve the organisation's quality objectives
Knowledge	• Units of measurement • Scientific and technical terminologies • Procedures for coding, entering, storing, retrieving and communicating data • Procedures for verifying data and rectifying errors • Units of conversion • Calculations involving fractions, decimals, proportions and percentages • Procedures for maintaining and filing records, securing of data	• Scientific and technical terminologies • Procedures for data management • Record management practices • Statistical methods • Scientific calculations	• Quality Assurance and Statistics (QAS) • Procedures for data traceability • Procedures for verifying data and rectifying mistakes • Records management • Scientific calculations	• Organisational policies, systems and procedures for data analysis and reporting • Purpose of Quality Management Systems (QMSs) • Purpose of laboratory management systems • Data analysis tools and techniques • Data collection methods • Technical data presentations • Laboratory information management systems (LIMSs)	• Data analysis planning and implementation methods and techniques • Advanced statistical data analysis applications • Advanced data analysis tools and techniques • Methods of building and managing data analysis structures and platforms	• Technical terminologies to communicate effectively with internal and external stakeholders • Information and data management system integration strategies • Data analytics and science tools and strategies • Organisational quality objectives

Abilities						
	• Identify data recording and reporting procedures to support reporting • Perform calculations • Prepare and interpret tables, graphs and charts • Code and record data • Prepare data in required formats • Recognise obvious trends in data • Maintain confidentiality of data in accordance with organisational requirements	• Perform calculations of scientific quantities • Use scientific notations • Check accuracy of data • Present statistical results in required formats • Interpret data trends • Prepare and interpret control charts • Ensure confidentiality of data in accordance with organisational requirements	• Perform laboratory computations • Analyse statistics and graphical results • Identify trends or problems • Document data in accordance with organisational requirements • Maintain security and confidentiality of data in accordance with organisational requirements	• Supervise the accuracy and completeness of data, results and technical records • Recognise significant trends in data and/or aberrant results • Use statistical tests to estimate uncertainties and determine data acceptability • Identify and analyse potential causes of unacceptable data or results • Apply effective problem solving strategies • Recommend appropriate corrective or preventive actions to control potential or actual non-conformances • Document and report information in accordance with organisational procedures	• Manage the development and implementation of policies, procedures and systems for data analysis and reporting • Review the implementation of data analysis and report to internal and external stakeholders • Specify design requirements of the analytical architecture specifications of the laboratory information management system (LIMS) • Define reporting formats required to meet business needs • Identify correlation and regression models of data variables	• Drive direction and strategies for integration of laboratory workstations into networked laboratory computer systems • Transform laboratory data management systems from non-automated processes to integrated processes • Drive collaboration with data analytics and management technology partners to optimise data management processes to meet the organisation's quality objectives • Influence staff to achieve the organisation's quality objectives