

Module Title: Managing Installations, Equipment and Consumables
Module Code: QM0203
Maximum Number of Students: 60
Total ECTS Credits 2
Notional Learning Hours (a) Contact Time - 10h (b) Private Study - 40h Format of Teaching: Lectures 10 h Laboratories or Practicals 0 h Other 0 h Teaching Strategy: Formal lectures in 60/90 min timetable.
Convener: I. Cavaco
University: University of Algarve
Language of Tuition: English
Module Description - The Purpose or Aims: <ol style="list-style-type: none"> 1. To locate the importance of the management of equipment, consumables and of installations within a Quality System. 2. To introduce the concepts of management of equipment: calibration, maintenance, documentation, identification, criteria for acquisition and disposability. 3. To introduce the concepts of management of consumables: criteria for acquisition, storage, and disposability. 4. To introduce the concepts of management of installations: possible contaminations/interferences in measurement, regulations, restricted access.
Learning Outcomes: At the end of the module the learner is expected to be able to: <ol style="list-style-type: none"> 1. Identify all equipment within a given analytical laboratory subject to a maintenance and/or calibration plan; 2. Prepare all documentation associated with equipment, consumables and installations in a given laboratory 3. Define criteria for the usage of equipment, consumables and installations in a given laboratory.
Summary of Course Content: The importance of equipment and installations in a Quality System: how the equipment working conditions and the organization of installations affects the quality of results. Managing equipment: maintenance, calibration and verification. Criteria for usage of equipment. Annual maintenance plan and calibration plan. Equipment documentation file. Identification of equipment. Disposability of equipment. Managing consumables: reagent acquisition, storage, usage and disposability. Managing installations: definition, restricted access. Space organization: minimizing contaminations/interferences.
Transferable Skills Taught: Students work in teams, and learn to develop teamwork synergies to get the best results.

Assessment Methods:

1. LO1 – LO3 - Work Assignment (100%)

Assessment Criteria:Threshold

LO1 – identify most of the measuring equipment in a given analytical laboratory subject to a calibration plan;
LO2 – correctly identify most of the documentation necessary for the management of equipment, consumables and installations, and prepare some acceptable documents
LO3 – correctly define criteria for the usage of most of the relevant equipment, consumables and installations in a given laboratory.

Good

LO1 – identify all of the measuring equipment in a given analytical laboratory subject to a calibration plan;
LO2 – correctly identify all of the documentation necessary for the management of equipment, consumables and installations, and prepare acceptable documents
LO3 – correctly define criteria for the usage of most of the relevant equipment, consumables and installations in a given laboratory.

Excellent

LO1 – identify all of the measuring equipment in a given analytical laboratory subject to a calibration, maintenance and verification plan;
LO2 – correctly identify all of the documentation necessary for the management of equipment, consumables and installations, and prepare clearly written, complete documents
LO3 – correctly define criteria for the usage of most of the relevant equipment, consumables and installations in a given laboratory.

Resource Implications of Proposal and Proposed Solutions:

Lecture notes will be available for students.

- E. Prichard, "Quality in the Analytical Chemistry Laboratory", John Wiley & Sons, 1997.
- L. J. Diberardinis, G. T. Gatwood, J. S. Baum, A. K. Seth, M. W. First, "Guidelines for Laboratory Design - Health and Safety Considerations", John Wiley & Sons, 2001.
- F. M. Garfield, E. Klesta, J. Hirsch, "Quality Assurance Principles for Analytical Laboratories, 3rd ed.", AOAC International, 2000.