

MODULE DESCRIPTOR

Module Title

Food Analysis

Reference	AS1014	Version	2
Created	August 2021	SCQF Level	SCQF 7
Approved	June 2018	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

Aims of Module

To provide students with an understanding of the basic principles of analytical and separation techniques used for the analysis of food.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Demonstrate knowledge of the main chemical methods used for the preparation of a simple food label.
- 2 Demonstrate knowledge of the principles of the main chemical instrumental methods used in food analysis.
- 3 Demonstrate knowledge of the principles of indirect methods used for assessing the organoleptic properties of food.
- 4 Recognise the importance of sampling, sample preparation and quality control in food analysis.

Indicative Module Content

Sampling and sample preparation. Calibration, accuracy, precision, limits of detection and sensitivity. Chemical analysis of fat, protein, moisture, ash, carbohydrate and fibre. Physical and chemical contaminants. Calorimetry. Analysis of colour, texture and flavour. High Performance Liquid Chromatography. Gas Chromatography. Spectroscopy. Electrochemistry.

Module Delivery

Theoretical material is delivered by lectures and supported by tutorials, online resources and laboratory practicals.

Indicative Student Workload

Full Time Part Time

Contact Hours

40

N/A

Non-Contact Hours

110

N/A

Placement/Work-Based Learning Experience [Notional] Hours

N/A

N/A

TOTAL

150

N/A

*Actual Placement hours for professional, statutory or regulatory body***ASSESSMENT PLAN***If a major/minor model is used and box is ticked, % weightings below are indicative only.***Component 1**

Type: Examination Weighting: 100% Outcomes Assessed: 1, 2, 3, 4

Description: Unseen, closed book examination, apart from one seen essay on practical application of analytical methods.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 (EX1) comprises 100% of the module grade. A minimum of a Grade D is required to pass the module.

Module Grade

Minimum Requirements to achieve Module Grade:

A

A: a score of 70% or above is required

B

B: a score of between 60-69% is required

C

C: a score of between 50-59% is required

D

D: a score of between 40-49% is required

E

E: a score of between 35-39% is required

F

F: a score of less than 35% is required

NS

Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module

None, in addition to course entry requirements.

Corequisites for module

None.

Precluded Modules

None.

INDICATIVE BIBLIOGRAPHY

- 1 MONK, P.M., 2001. *Fundamentals of Electroanalytical Chemistry*. 1st ed. New York: Wiley.
- 2 NEILSON, S.S., 2017. *Food Analysis*. 5th ed. New York: Springer.
- 3 POMERANZ, Y. and MELOAN, C.E., 1994. *Food Analysis*. 3rd ed. New York: Chapman and Hall.
- 4 PRITCHARD, F.E. and BARWICK V., 2007. *Quality Assurance in Analytical Chemistry*. 1st ed. New York: Wiley.
- 5 CROUCH, S.R., SKOOG, D.A. and HOLLER, F.J., 2018. *Principles of Instrumental Analysis*. 7th ed. Brooks Cole.