

Title	Demonstrate knowledge of the structure and function of lipids		
Level	5	Credits	4

Purpose	People credited with this unit standard are able to describe: the classification and function of lipids; the structure and properties of fatty acids; and the structure, properties, and functions of complex lipids.
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Classification	Science > Biochemistry
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Available grade	Achieved
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Guidance Information

International Union of Chemistry (IUC) was set up to create a system of rules for naming chemical compounds (Geneva Rules). The Geneva Rules established the foundation, the framework, and the initial rules for a consistent, international naming convention for all chemical compounds, including the complex organic compounds. This convention has been used to create the International Union of Pure and Applied Chemistry (IUPAC) nomenclature for naming compounds.

Outcomes and performance criteria

Outcome 1

Describe the classification and function of lipids.

Performance criteria

- 1.1 Lipids are classified into chemical groups.
- 1.2 The different biological functions of the classes of lipids are described.
- 1.3 The description names the lipids in accordance with the International Union of Chemistry (IUC) convention.

Outcome 2

Describe the structure and properties of fatty acids.

Performance criteria

- 2.1 The description contains a structural diagram.
- Range saturated fatty acid, unsaturated fatty acid, polyunsaturated fatty acid, trans fatty acid, cis fatty acid.
- 2.2 The description explains the relationship between the degree of unsaturation and the melting point.
- 2.3 The description outlines simple chemical reactions of fatty acids.
- Range oxidation, saponification, halogenation.

Outcome 3

Describe the structure, properties, and functions of complex lipids.

Performance criteria

- 3.1 The description identifies properties and structural components of waxes, cholesterol, and phospholipids.
- 3.2 The description outlines the precursor role of cholesterol in the formation of other steroids.
- Range other steroids includes one of – sex hormones, adrenal cortex hormones, bile acids, vitamin D.
- 3.3 The description outlines the role of phospholipids in the structure and function of cell membranes.
- 3.4 The description outlines the role of waxes in animals and plants.

Replacement information	This unit standard replaced unit standard 8054.
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Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 September 2010	N/A
Rollover	2	27 January 2015	N/A
Review	3	27 September 2018	N/A

Consent and Moderation Requirements (CMR) reference	0113
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact NZQA National Qualifications Services nqs@nzqa.govt.nz if you wish to suggest changes to the content of this unit standard.