Title	Demonstrate knowledge of animal biochemistry			
Level	6	Credits	6	

Purpose	People credited with this unit standard are able to: describe the ultrastructure, function, and biochemistry of muscle fibres; discuss the central role of the liver in regulating body.
	metabolism; and discuss mammalian digestion and absorption.

Classification	Science > Biochemistry	
Available grade	Achieved	10.
		0

Guidance Information

Recommended for entry: Unit 26487, *Explain the characteristics of enzymes;* and Unit 26491, *Discuss the cellular metabolism of glucose, amino acids, and fatty acids.*

Outcomes and performance criteria

Outcome 1

Describe the ultrastructure, function, and biochemistry of muscle fibres.

Performance criteria

1.1 The morphology of striated muscle fibres are outlined in terms of the components of thick and thin filaments.

Range myosin, actin, troponin, tropomyosin.

1.2 The description identifies the source of adenosine triphosphate (ATP) for muscle contraction during metabolic states in terms of creatine phosphate levels.

Range aerobic, anaerobic, fasting, long-term exertion.

1.3 The description explains the role of calcium and ATP in relation to the contraction process and rigor mortis.

Outcome 2

Discuss the central role of the liver in regulating body metabolism.

Performance criteria

2.1 The discussion outlines how the liver regulates fuel molecules during fasting and non-fasting metabolic states.

Range amino acids, carbohydrates, lipids.

- 2.2 The discussion outlines the role of the liver in terms of the excretion of metabolic wastes.
- 2.3 The discussion explains the role of the liver in terms of detoxification processes.

Range alcohol, alkaloid, drugs.

Outcome 3

Discuss mammalian digestion and absorption.

Performance criteria

- 3.1 The discussion outlines the processes of digestion, absorption, and transport of a dietary component in terms of monogastric and ruminant animals.
- 3.2 The discussion outlines the role of digestive enzymes in terms of their production, activation, and function.
 - Range trypsin, amylase, lipase.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Process	Version	Date	Last Date for Assessment
Registration	1	22 December 1996	31 December 2014
Review	2	23 November 1999	31 December 2014
Review	3	17 September 2010	31 December 2025
Rollover	4	27 January 2015	31 December 2025
Review	5	27 September 2018	31 December 2025
Review	6	30 November 2023	31 December 2025

Status information and last date for assessment for superseded versions

Consent and Moderation Requirements (CMR) reference0113This CMR can be accessed at http://www.nzga.govt.nz/framework/search/index.do.