Title	**Demonstrate knowledge of electrochemistry**		
Level	**5**	**Credits**	**4**

Purpose	People credited with this unit standard are able to: describe an electrochemical cell; describe the electrochemistry conventions for electrode potentials; and measure electrode potentials and calculate concentrations of electrolytes.

Classification	Science > Chemistry

Available grade	Achieved

Guidance Information

None.

Outcomes and performance criteria

Outcome 1

Describe an electrochemical cell.

Performance criteria

1.1 The components and operation of an electrochemical cell are described in terms of their role in generation of electrode potentials.

Outcome 2

Describe the electrochemistry conventions for electrode potentials.

Performance criteria

2.1 E^0 values, the standard hydrogen electrode, and the spontaneity of cell reactions are described in accordance with electrochemistry convention.

2.2 The relationship between E^0 and free energy (ΔG^0) is described in terms of spontaneity of cell reactions.

2.3 Cell potentials are calculated from electrode potentials in accordance with electrochemistry convention.

Outcome 3

Measure electrode potentials and calculate concentrations of electrolytes.

Performance criteria

3.1 Electrode potentials are measured and concentrations of electrolytes are calculated consistent with the Nernst equation.

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

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 December 1996	31 December 2014
Revision	2	19 February 1998	31 December 2014
Review	3	23 November 1999	31 December 2014
Review	4	18 June 2010	31 December 2022
Rollover	5	27 January 2015	31 December 2022
Rollover and Revision	6	15 June 2017	31 December 2022
Revision	7	26 October 2017	31 December 2022
Review	8	22 October 2020	31 December 2022

Consent and Moderation Requirements (CMR) reference	0113

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.