Title	**Perform viral detection techniques**		
Level	**6**	**Credits**	**4**

Purpose	People credited with this unit standard are able to: describe viral detection techniques; grow indicator cells for virus detection; and infect indicator cells with a virus and demonstrate a cytopathic effect.

Classification	Science > Microbiology

Available grade	Achieved

Guidance Information

1 All work must be carried out in accordance with the quality management system, documented protocol system or Standard Operating Procedures (SOP) acceptable in a commercial or research laboratory.

2 Health and Safety practices must conform to Australian/New Zealand Standard AS/NZS 2243 – *Safety in Laboratories* Parts 1, 2, 3, 7 and 10 available at http://www.standards.co.nz and http://infostore.saiglobal.com/store.

3 Legislation applicable to this unit standard includes:
Health and Safety at Work Act 2015;
Hazardous Substances and New Organisms Act 1996.

4 Glossary
Laboratory procedures refers to documented systems or processes of operation which may be found in a SOP manual, quality management system, or in protocol system documentation. These procedures are external and/or internal laboratory requirements governing laboratory work.

5 Recommended for entry: Unit 8040, *Perform aseptic laboratory techniques*; Unit 12366, *Describe viral impact on host cells*; and Unit 26117, *Work safely in a science laboratory*.

Outcomes and performance criteria

Outcome 1

Describe viral detection techniques.

Range immunoassay, direct counting;
plaque counts – bacteria, plant, animal.

Performance criteria

1.1 Viral detection techniques are described in accordance with laboratory procedures.

Outcome 2

Grow indicator cells for virus detection.

Performance criteria

2.1 Indicator cells are grown without contamination in accordance with laboratory procedures.

Range may include – animal tissues, plant tissues, bacteria; evidence of one type of indicator cell is required.

Outcome 3

Infect indicator cells with a virus and demonstrate a cytopathic effect.

Performance criteria

3.1 Dilution series is designed appropriate to the sample.

3.2 Sample material is prepared in accordance with laboratory procedures.

3.3 Indicator cells are infected with diluted sample in accordance with laboratory procedures.

3.4 Cells are incubated and cytopathic effect visualised in accordance with laboratory procedures.

3.5 The number of viral particles in the sample is calculated in accordance with laboratory procedures.

Planned review date	31 December 2023

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	21 May 2010	N/A
Rollover	5	27 January 2015	N/A
Review	6	27 September 2018	N/A

Consent and Moderation Requirements (CMR) reference	0113

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.