

**Victorian Purchasing Guide**  
**for**  
**MSL09 Laboratory Operations Training Package**  
**Version No 1.2**

**December 2011**





© State of Victoria (Department of Education and Early Childhood Development) 2011.

Copyright of this material is reserved to the Crown in the right of the State of Victoria. This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Australia licence (<http://creativecommons.org/licenses/by-nd/3.0/au/>). You are free to use, copy and distribute to anyone in its original form as long as you attribute Higher Education and Skills Group, Department of Education and Early Childhood Development as the author, and you license any derivative work you make available under the same licence.

### **Disclaimer**

In compiling the information contained in and accessed through this resource, the Department of Education and Early Childhood Development (DEECD) has used its best endeavours to ensure that the information is correct and current at the time of publication but takes no responsibility for any error, omission or defect therein.

To the extent permitted by law DEECD, its employees, agents and consultants exclude all liability for any loss or damage (including indirect, special or consequential loss or damage) arising from the use of, or reliance on the information contained herein, whether caused or not by any negligent act or omission. If any law prohibits the exclusion of such liability, DEECD limits its liability to the extent permitted by law, for the resupply of the information.

### **Third party sites**

This resource may contain links to third party websites and resources. DEECD is not responsible for the condition or content of these sites or resources as they are not under its control.

Third party material linked from this resource is subject to the copyright conditions of the third party. Users will need to consult the copyright notice of the third party sites for conditions of usage.



## Victorian Purchasing Guide — Version History

Training Package Version	Date VPG Approved	Comments
1.1 / 1.2	15/12/2011	<p>This Victorian Purchasing Guide reflects the following changes made to MSL09 Laboratory Operations Training Package Versions 1.1 &amp; 1.2.</p> <ul style="list-style-type: none"><li>• ISC updates to comply with flexibility requirements: MSL20109, 30109, 40109, 50109 and 60109. Errors corrected in MSL70109.</li><li>• Imported units updated: MSAENV272B, MSAENV472B and MSAENV672B,</li><li>• Prerequisites corrected in MSL975007A and MSL975016A (Qualifications affected – MSL40109, 50109 and 60109)</li></ul> <p>For more information, refer to the modification history and summary mapping in the training package.</p>
1	09/03/2010	<p>Revised version of Laboratory Operations Training Package VPG. Replaces PML04.</p>

# MSL09 Laboratory Operations Training Package Victorian Purchasing Guide

## CONTENTS

---

<b>INTRODUCTION</b>	<b>5</b>
What is a Victorian Purchasing Guide?	5
Registration	5
<b>QUALIFICATIONS</b>	<b>6</b>
<b>UNITS OF COMPETENCY AND NOMINAL HOURS</b>	<b>7</b>
<b>SAMPLE TRAINING PROGRAMS</b>	<b>11</b>
<b>CONTACTS AND LINKS</b>	<b>17</b>
<b>GLOSSARY</b>	<b>19</b>

## INTRODUCTION

### ***What is a Victorian Purchasing Guide?***

The Victorian Purchasing Guide provides information for use by Registered Training Organisations (RTOs) in the provision of Victorian government subsidised training.

Specifically the Victorian Purchasing Guide provides the following information related to the delivery of nationally endorsed Training Packages in Victoria:

- The nominal hour range (minimum-maximum) available for each qualification.
- Nominal hours for each unit of competency within the Training Package.
- Sample Training Programs

### ***Registration***

RTOs must be registered by either the Victorian Registration and Qualifications Authority (VRQA) or the Australian Skills Qualification Authority (ASQA) regulatory body to be eligible to issue qualifications and statements of attainment under the Australian Quality Framework (AQF).

The VRQA is the regulatory authority for Victoria that registers VET training organisations who provide courses to domestic students only and who only offer training in Victoria.

To register to provide training to international students and in other Australian states and territories you will need to apply with ASQA.

## QUALIFICATIONS

Code	Title	Qualification Nominal Hour Range	
		Minimum	Maximum
MSL20109	Certificate II in Sampling and Measurement	270	330
MSL30109	Certificate III in Laboratory Skills	430	790
MSL40109	Certificate IV in Laboratory Techniques	700	1550
MSL50109	Diploma of Laboratory Technology	920	2030
MSL60109	Advanced Diploma of Laboratory Operations	550	990
MSL70109	Vocational Graduate Certificate in Instrumental Analysis	790	810

## UNITS OF COMPETENCY AND NOMINAL HOURS

RTOs are advised that there is a mapping inside the Training Package that describes the relationship between new units and superseded or replaced units from the previous version of MSL09 Laboratory Operations Training Package. Information regarding transition arrangements can be obtained from the state or national VET Regulating Authority (see Contacts and Links section).

You must be sure that all training and assessment leading to qualifications or Statements of Attainment from the Training Package is conducted against the Training Package units of competency and complies with the requirements in the assessment guidelines.

### Listing of the Units of Competency and Nominal Hours

Unit Code	Unit Title	Nominal Hours
MSL904001A	Perform standard calibrations	50
MSL905001A	Perform non-standard calibrations	60
MSL905002A	Create or modify calibration procedures	40
MSL905003A	Create or modify automated calibration procedures	40
MSL912001A	Work within a laboratory/field workplace (induction)	40
MSL913001A	Communicate with other people	40
MSL913002A	Plan and conduct laboratory/field work	40
MSL914001A	Prepare practical science classes and demonstrations	60
MSL915001A	Provide information to customers	30
MSL915002A	Schedule laboratory work for a small team	50
MSL916001A	Develop and maintain laboratory documentation	30
MSL916002A	Manage and develop teams	40
MSL916003A	Supervise laboratory operations in work/functional area	60
MSL916004A	Maintain registration and statutory or legal compliance in work/functional area	50
MSL916005A	Manage complex projects	50
MSL922001A	Record and present data	40
MSL924001A	Process and interpret data	70
MSL924002A	Use laboratory application software	60
MSL925001A	Analyse data and report results	80
MSL925002A	Analyse measurements and estimate uncertainties	60
MSL933001A	Maintain the laboratory/field workplace fit for purpose	30
MSL933002A	Contribute to the achievement of quality objectives	30
MSL933003A	Apply critical control point requirements	40
MSL933004A	Perform calibration checks on equipment and assist with its maintenance	40
MSL934001A	Contribute to the ongoing development of HACCP plans	60
MSL934002A	Apply quality system and continuous improvement processes	80
MSL934003A	Maintain and control stocks	50
MSL935001A	Monitor the quality of test results and data	40
MSL935002A	Assist in the maintenance of reference materials	30

Unit Code	Unit Title	Nominal Hours
MSL935003A	Authorise the issue of test results	60
MSL935004A	Maintain instruments and equipment	40
MSL936001A	Maintain quality system and continuous improvement processes within work/functional area	50
MSL936002A	Conduct an internal audit of the quality system	40
MSL943001A	Work safely with instruments that emit ionising radiation	60
MSL943002A	Participate in laboratory/field workplace safety	40
MSL944001A	Maintain laboratory/field workplace safety	50
MSL946001A	Implement and monitor OHS and environmental management systems	60
MSL952001A	Collect routine site samples	30
MSL952002A	Handle and transport samples or equipment	30
MSL953001A	Receive and prepare samples for testing	30
MSL953002A	Operate a robotic sample preparation system	60
MSL954001A	Obtain representative samples in accordance with sampling plan	40
MSL954002A	Prepare mineral samples for analysis	60
MSL955001A	Supervise a robotic sample preparation system	50
MSL963001A	Operate basic hand blowing equipment	60
MSL963002A	Repair glass apparatus using simple glassblowing equipment	40
MSL965001A	Design and manufacture glass apparatus and glass systems	120
MSL965002A	Perform glass coating, grinding and finishing operations	100
MSL965003A	Construct, modify and maintain high vacuum systems	120
MSL972001A	Conduct routine site measurements	30
MSL973001A	Perform basic tests	60
MSL973002A	Prepare working solutions	50
MSL973003A	Prepare culture media	30
MSL973004A	Perform aseptic techniques	40
MSL973005A	Assist with fieldwork	40
MSL973006A	Prepare trial batches for evaluation	40
MSL973007A	Perform microscopic examination	40
MSL973008A	Perform histological procedures	40
MSL973009A	Conduct field-based acceptance tests for construction materials	60
MSL973010A	Conduct laboratory-based acceptance tests for construction materials	50
MSL973011A	Perform fire pouring techniques	50
MSL973012A	Assist with geotechnical site investigations	40
MSL974001A	Prepare, standardise and use solutions	100
MSL974002A	Conduct geotechnical site investigations	60
MSL974003A	Perform chemical tests and procedures	100
MSL974004A	Perform food tests	100



Unit Code	Unit Title	Nominal Hours
MSL974005A	Perform physical tests	100
MSL974006A	Perform biological procedures	130
MSL974007A	Undertake environmental field-based monitoring	80
MSL974008A	Capture and manage scientific images	40
MSL974009A	Undertake field-based, remote-sensing monitoring	60
MSL974010A	Perform mechanical tests	80
MSL974011A	Prepare tissue and cell cultures	50
MSL974012A	Perform tests to determine the properties of construction materials	90
MSL974013A	Monitor performance of structures	90
MSL975001A	Perform microbiological tests	140
MSL975002A	Perform haematological tests	130
MSL975003A	Perform histological tests	150
MSL975004A	Perform chemical pathology tests	130
MSL975005A	Conduct sensory analysis	40
MSL975006A	Perform immunohaematological tests	80
MSL975007A	Supervise sampling, inspections and testing at construction sites	80
MSL975008A	Apply electrophoretic techniques	100
MSL975009A	Apply routine chromatographic techniques	120
MSL975010A	Perform fire assay techniques	60
MSL975011A	Design and supervise complex environmental field surveys	40
MSL975012A	Provide input to production trials	40
MSL975013A	Perform tissue and cell culture techniques	100
MSL975014A	Perform molecular biology tests and procedures	150
MSL975015A	Prepare animal and plant material for display	50
MSL975016A	Perform complex tests to measure engineering properties of materials	40
MSL975017A	Perform laboratory-based ecological techniques	60
MSL975018A	Perform complex tests to measure chemical properties of materials	50
MSL975019A	Apply complex instrumental techniques	50
MSL975020A	Apply routine spectrometric techniques	150
MSL975021A	Apply routine electrometric techniques	40
MSL975022A	Perform food analyses	60
MSL975023A	Supervise geotechnical site investigations	80
MSL976001A	Classify building sites	80
MSL976002A	Prepare plans and quality assurance procedures for environmental field activities	50
MSL976003A	Evaluate and select appropriate test methods and/or procedures	40
MSL977001A	Contribute to the development of products and applications	50
MSL977002A	Troubleshoot equipment and/or production processes	50
MSL977003A	Contribute to the validation of test methods	40

Unit Code	Unit Title	Nominal Hours
MSL977004A	Develop or adapt analyses and procedures	50
MSL977005A	Integrate data acquisition and interfacing systems	80
MSL977006A	Apply specialised knowledge of gas chromatography techniques to analysis	100
MSL977007A	Apply specialised knowledge of liquid chromatography techniques to analysis	100
MSL977008A	Apply specialised knowledge of inductively coupled plasma spectroscopy to analysis	100
MSL977009A	Apply advanced ultraviolet, visible and near infra red spectroscopic techniques to analysis	100
MSL977010A	Apply advanced infra red spectroscopic techniques to analysis	100
MSL977011A	Contribute to the selection, commissioning and maintenance of analytical instruments	80

## SAMPLE TRAINING PROGRAMS

A range of Sample Training Plans have been provided to demonstrate the flexibility of qualifications contained in the MSL09 Laboratory Operations Training Package, but are by no means mandatory.

<b>Occupation / Work Function</b>	Field Officer (Environmental Monitoring)	
<b>Qualification Title</b>	MSL20109	
<b>Qualification Code</b>	Certificate II in Sampling and Measurement	
<b>Description</b>	Appropriate for a person responsible for taking samples and conducting simple tests in a field environment	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSAENV272B	Participate in environmentally sustainable work practices	30
MSL912001A	Work within a laboratory/field workplace (induction)	40
MSL922001A	Record and present data	40
MSL943002A	Participate in laboratory/field workplace safety	40
<b>Group A</b>		
MSL952001A	Collect routine site samples	30
MSL952002A	Handle and transport samples or equipment	30
<b>Group B</b>		
MSL943001A	Work safely with instruments that emit ionising radiation	60
MSL973001A	Perform basic tests	60
<b>Total Hours</b>		<b>330</b>

<b>Occupation / Work Function</b>	Laboratory Assistant (Food Testing)	
<b>Qualification Title</b>	MSL30109	
<b>Qualification Code</b>	Certificate III in Laboratory Skills	
<b>Description</b>	Appropriate for a person working in a food production enterprise performing sampling and testing of product.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSL913001A	Communicate with other people	40
MSL913002A	Plan and conduct laboratory/field work	40
MSL922001A	Record and present data	40
MSL933002A	Contribute to the achievement of quality objectives	30
MSL943002A	Participate in laboratory/field workplace safety	40
MSAENV272B	Participate in environmentally sustainable work practices	30
<b>Group A</b>		
MSL933001A	Maintain the laboratory/field workplace fit for purpose	30
MSL933003A	Apply critical control point requirements	40
MSL953001A	Receive and prepare samples for testing	30
MSL973001A	Perform basic tests	60
MSL973004A	Perform aseptic techniques	40
MSL973007A	Perform microscopic examination	40
<b>Group B</b>		
MSL974004A	Perform food tests	100
<b>Total Hours</b>		<b>560</b>

<b>Occupation / Work Function</b>	Technical Officer (Materials Testing)	
<b>Qualification Title</b>	MSL40109	
<b>Qualification Code</b>	Certificate IV in Laboratory Techniques	
<b>Description</b>	Appropriate for a person working in a large polymer processing enterprise performing sampling and testing of materials and products.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSL913001A	Communicate with other people	40
MSL913002A	Plan and conduct laboratory/field work	40
MSL924001A	Process and interpret data	70
MSAENV272B	Participate in environmentally sustainable work practices	30
MSL934002A	Apply quality systems and continuous improvement processes.	80
MSL943002A	Participate in laboratory/field workplace safety	40
<b>Group A</b>		
MSL904001A	Perform standard calibrations	50
MSL924002A	Use laboratory application software	60
MSL954001A	Obtain representative samples in accordance with sampling plan	40
MSL974001A	Prepare, standardise and use solutions	100
MSL974003A	Perform chemical tests and procedures	100
MSL974005A	Perform physical tests	100
MSL974010A	Perform mechanical tests	80
<b>Group B</b>		
MSL933001A	Maintain the laboratory/field workplace fit for purpose	30
MSL943001A	Work safely with instruments that emit ionising radiation	60
MSL973001A	Perform basic tests	60
<b>Group C</b>		
MSL935001A	Monitor the quality of test results and data	40
<b>Total Hours</b>		<b>1020</b>

<b>Occupation / Work Function</b>	Technical Officer (Biological Testing)	
<b>Qualification Title</b>	MSL50109	
<b>Qualification Code</b>	Diploma of Laboratory Technology	
<b>Description</b>	Appropriate for a person working as a technical officer in a biotechnology laboratory	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSL913001A	Communicate with other people	40
MSL913002A	Plan and conduct laboratory/field work	40
MSL915001A	Provide information to customers	30
MSL924001A	Process and interpret data	70
MSL924002A	Use laboratory application software	60
MSL925001A	Analyse data and report results	80
MSL934002A	Apply quality system and continuous improvement processes	80
MSL944001A	Maintain laboratory/field workplace safety	50
MSAENV472B	Implement and monitor environmentally sustainable work practices	40
<b>Group A</b>		
MSL975001A	Perform microbiological tests	140
MSL975008A	Apply electrophoretic techniques	100
MSL975009A	Apply routine chromatographic techniques	120
MSL975013A	Perform tissue and cell culture techniques	100
MSL975014A	Perform molecular biology tests and procedures	150
MSL975020A	Apply routine spectrometric techniques	150
<b>Group B</b>		
MSL973004A	Perform aseptic techniques	40
MSL973007A	Perform microscopic examination	40
<b>Group C</b>		
MSL974001A	Prepare, standardise and use solutions	100
MSL974003A	Perform chemical tests and procedures	100
MSL974006A	Perform biological procedures	130
MSL974011A	Prepare tissue and cell cultures	50
<b>Total Hours</b>		<b>1710</b>

<b>Occupation / Work Function</b>	Senior Technical Officer	
<b>Qualification Title</b>	MSL60109	
<b>Qualification Code</b>	Advanced Diploma of Laboratory Operations	
<b>Description</b>	Appropriate for a person working as a senior laboratory technician responsible for planning, coordinating, evaluating and reporting within a work area or for a project team.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSL916001A	Develop and maintain laboratory documentation	30
MSL916002A	Manage and develop teams	40
MSL916003A	Supervise laboratory operations in work/functional area	60
MSL916004A	Maintain registration and statutory or legal compliance in work/functional area	50
MSL936001A	Maintain quality system and continuous improvement processes within work/functional area	50
MSL946001A	Implement and monitor OHS and environmental management systems	60
MSAENV472B	Implement and monitor environmentally sustainable work practices	40
<b>Group A</b>		
MSL916005A	Manage complex projects	50
MSL936002A	Conduct an internal audit of the quality system	40
MSL976003A	Evaluate and select appropriate test methods and/or procedures	40
MSL977001A	Contribute to the development of products and applications	50
MSL977002A	Troubleshoot equipment and/or production processes	50
MSL977005A	Integrate data acquisition and interfacing systems	80
<b>Total Hours</b>		<b>640</b>

<b>Occupation / Work Function</b>	Forensic Science Technician	
<b>Qualification Title</b>	MSL70109	
<b>Qualification Code</b>	Vocational Graduate Certificate in Instrumental Analysis	
<b>Description</b>	Appropriate for a person working in a forensic science laboratory analysing samples collected at crime scenes using advanced chromatography and micro-spectrophotometric techniques	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
MSL944001A	Maintain laboratory/field safety	50
MSL974001A	Prepare, standardise and use solutions	100
MSL924001A	Process and interpret data	70
MSL925002A	Analyse measurements and estimate uncertainties	60
MSL976003A	Evaluate and select appropriate test methods and/or procedures	40
MSL977003A	Contribute to the validation of test methods	40
MSL977004A	Develop or adapt analyses and procedures	50
<b>Group A</b>		
MSL977006A	Apply specialised knowledge of gas chromatography techniques to analysis	100
MSL977007A	Apply specialised knowledge of liquid chromatography techniques to analysis	100
<b>Group B</b>		
MSL977009A	Apply advanced ultraviolet, visible and near infrared spectroscopic techniques to analysis	100
MSL977010A	Apply advanced infrared spectroscopic techniques to analysis	100
<b>Total Hours</b>		<b>810</b>



## CONTACTS AND LINKS

<b>Industry Skills Council (ISC)</b>		
Manufacturing Skills Australia	This ISC is responsible for developing the <b>MSL09 Laboratory Operations Training Package</b> and can be contacted for further information. You can also source copies of the Training Package and support material.	Address: PO Box 289, North Sydney, NSW, 2089. Phone/fax: 02 9955 5500/ 02 9955 8044. Email: <a href="mailto:info@mskills.com.au">info@mskills.com.au</a> Web: <a href="http://www.mskills.com.au/">http://www.mskills.com.au/</a>
<b>National Register for VET in Australia</b>		
Training.gov.au (TGA)	TGA is the Australian governments' official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs.	<a href="http://www.training.gov.au">www.training.gov.au</a>
<b>Australian Government</b>		
The Department of Education, Employment and Workplace Relations (DEEWR)	DEEWR provides a range of services and resources to assist in delivery of Training Packages. Search the DEEWR website for links to a range of relevant resources and publications.	<a href="http://www.deewr.gov.au">http://www.deewr.gov.au</a>
<b>State Government</b>		
Department of Education and Early Childhood Development Higher Education and Skills Group	Higher Education and Skills Group is responsible for funding and the implementation of Vocational Education and Training (VET) in Victoria, including Apprenticeships and Traineeships.	General information: <a href="http://www.skills.vic.gov.au">www.skills.vic.gov.au</a> Approved Training Schemes: <a href="http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides">http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides</a>
<b>Curriculum Maintenance Manager (CMM)</b>		
General Manufacturing	The CMM service is provided by Executive Officers located within Victorian TAFE institutes on behalf of Higher Education and Skills Group.	Trevor Lange Address: Chisholm Institute, PO Box 684, Dandenong, Vic. 3175. Phone/fax: 03 9238 8448 /03 9238 8504 Email: <a href="mailto:t.lange@chisholm.edu.au">t.lange@chisholm.edu.au</a> Web: <a href="http://trainingsupport.skills.vic.gov.au/">http://trainingsupport.skills.vic.gov.au/</a>

<b>State VET Regulatory Authority</b>		
Victorian Registration and Qualifications Authority (VRQA)	The VRQA is a statutory authority responsible for the registration of education and training providers in Victoria to ensure the delivery of quality education and training.	<a href="http://www.vrqa.vic.gov.au">www.vrqa.vic.gov.au</a> Phone: 03 9637 2806
<b>National VET Regulatory Authority</b>		
Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector vocational education and training sector.  ASQA regulates courses and training providers to ensure nationally approved quality standards are met.	<a href="http://www.asqa.gov.au">www.asqa.gov.au</a> Info line: 1300 701 801
<b>Industry Regulatory Body</b>		
Victorian Work Cover Authority	The industry Regulatory body can provide advice on licensing, legislative or regulatory requirements which may impact on the delivery of training or the issuance of qualifications in this Training Package.	Address: Level 24, 222 Exhibition Street, Melbourne, 3000. Phone: 03 9641 1555 Email: <a href="mailto:info@workcover.vic.gov.au">info@workcover.vic.gov.au</a> Web: <a href="http://www.workcover.vic.gov.au">http://www.workcover.vic.gov.au</a>
<b>WorkSafe</b>		
WorkSafe Victoria	WorkSafe needs to provide written verification before High Risk Work Units can be added to an RTO's scope of registration.	<a href="http://www.worksafe.vic.gov.au">www.worksafe.vic.gov.au</a> Info line: 1800 136 089

## GLOSSARY

<b>Code</b>	Nationally endorsed Training Package qualification code.
<b>Title</b>	Nationally endorsed Training Package qualification title.
<b>Unit Code</b>	Nationally endorsed Training Package unit code.
<b>Unit Title</b>	Nationally endorsed Training Package unit title.
<b>Nominal Hours</b>	The anticipated hours of supervised learning or training deemed necessary to conduct training and assessment activities associated with the program of study. These hours are determined by the Victorian State Training Authority. Nominal hours may vary for a qualification depending on the units of competency selected.
<b>Scope of Registration</b>	Scope of registration specifies the AQF qualifications and/or units of competency the training organisation is registered to issue and the industry training and/or assessment services it is registered to provide.