



Australian Government

FBPLAB2002 Prepare laboratory solutions and stains

Release: 1

FBPLAB2002 Prepare laboratory solutions and stains

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to prepare a variety of solutions and stains for routine tests carried out in a standard laboratory setting.

This unit applies to individuals who are responsible for preparing test solutions and stains required for standard analytical tests, determined by the scope and classification of the laboratory.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Laboratory (LAB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials and equipment	1.1 Identify and confirm job requirements 1.2 Identify and select standard methods for solution preparation in accordance with workplace procedures 1.3 Confirm availability of required materials, reagents and equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm environmental guidelines and identify potential workplace health and safety hazards and controls according to workplace procedures 1.5 Select and fit appropriate personal protective equipment as per manufacturers' specifications 1.6 Select and assemble appropriate volumetric glassware and measuring equipment, materials and reagents as per requirements 1.7 Check shelf life of reagents and solutions and replace out-of-date or reject materials
2. Prepare solutions and stains	2.1 Follow standard workplace method to prepare solution or stain 2.2 Measure appropriate quantities of reagents for solution preparation as per requirements 2.3 Prepare solutions to achieve homogeneous mix of the specified concentration 2.4 Transfer solutions to appropriate containers in accordance with workplace procedures 2.5 Label containers with solution details and log details in laboratory register in line with workplace practices 2.6 Monitor shelf life of working solutions and dispose of those unfit for use, according to workplace procedures
3. Complete laboratory procedure	3.1 Clean and store glassware and equipment after use, and store reagents 3.2 Clean and sanitise equipment and work surfaces after use according to workplace requirements 3.3 Use aseptic techniques to ensure health and hygiene of self and others 3.4 Collect, treat and dispose of or recycle waste generated by the process in accordance with workplace waste management policies 3.5 Complete records according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	Use measuring equipment accurately, calculating specified concentrations and dilutions, in line with method
Get the work done	Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPLAB2002 Prepare laboratory solutions and stains	FDFLAB2004A Prepare laboratory solutions and stains	Updated to meet Standards for Training Packages Prerequisite removed Minor changes to Performance Criteria to clarify outcomes Foundation skills added	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPLAB2002 Prepare laboratory solutions and stains

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared laboratory solutions and stains, including:

- safely preparing at least three examples of working solutions and/or stains
- accurately labelling each solution or stain
- calculating the quantities involved on each occasion and any dilutions required
- storing solutions and stains appropriately according to light, temperature, contamination and shelf-life
- disposing of waste in line with environmental guidelines on each occasion
- ensuring work takes place in a sanitised environment
- accurately recording workplace information.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and features of basic laboratory equipment
- purpose and features of a range of basic laboratory solutions and stains
- effect of inappropriate storage on solution and stain quality and performance
- effect of process stages on results and outcomes
- calculations required to prepare specified amounts of solutions of specified concentration
- common causes and consequential effects of inaccuracies or contamination, and preventive or corrective action required
- workplace procedures for preparing solutions
- health and safety hazards and controls
- procedures and responsibility for reporting problems
- environmental issues and controls

- cleaning of equipment and work area
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a standard laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - a laboratory space equipped with basic test equipment, sterilisation equipment, common measuring instruments, reagents, containers and storage facilities.
- specifications:
 - standard methods, workplace procedures, SDS and equipment manuals.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>