



Australian Government

Department of Education, Employment and Workplace Relations

HLTDT315C Construct thermoformed bases and appliances

Release: 1

HLTDT315C Construct thermoformed bases and appliances

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to construct thermoformed bases and appliances such as mouthguards, bleaching trays and orthodontic retainers

All procedures are carried out in accordance with occupational health and safety policies and procedures, current infection control guidelines, Australian and New Zealand Standards, State/Territory legislative requirements and organisation policy

Application of the Unit

Application

This unit applies to work in dental technology

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Pre-requisite units

This unit must be assessed after successful achievement of pre-requisites:

- HLTDT301C Construct models
- HLTDT302C Construct custom impression trays
- HLTDT304C Articulate models and transfer records
- HLTIN301C Comply with infection control policies and procedures
- HLTOHS200B Participate in OHS processes

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare model

- 1.1 Interpret prescription
- 1.2 Mark outline and scribe finishing lines where applicable
- 1.3 Apply block-out material as required

ELEMENT**PERFORMANCE CRITERIA****2. Thermo-form appliance or base from blank**

- 2.1 Select thermo-forming material in accordance with the prescription and *appliance* to be constructed
- 2.2 Select *thermo-forming equipment* according to material
- 2.3 Apply heat to material to ensure that blank has been uniformly softened
- 2.4 Adapt softened material to cast ensuring adaptation is uniform with constant thickness as specified by manufacturer
- 2.5 Allow material to cool
- 2.6 Verify adaptation

3. Trim, shape and finish appliances or bases

- 3.1 Remove thermo-formed blank
- 3.2 Trim to outline and fit to model
- 3.3 Refine outline
- 3.4 Smooth and finish appliance or base

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Applied oral anatomy
 - articulation and occlusion
 - dentition - arrangement of the teeth, naming and coding of teeth
 - structures of the oral cavity - hard and soft palate, lateral and posterior borders of the oral cavity, tongue and floor of the mouth
 - teeth - form and function
- Infection control guidelines for the decontamination of completed laboratory work
- Occupational health and safety policies and procedures
- Polymer science
- Relevant material science for carrying out procedures
- Thermoforming technology

Essential skills:

It is critical that the candidate demonstrate the ability to

- Consistently trim, polish, finish and evaluate thermo-formed appliances for suitability for insertion in the mouth
- Consistently comply with current infection control guidelines, Australian Standards and legislative requirements as they relate to the dental technician's specific job role
- Consistently comply with occupational health and safety policies and procedures as they relate to the dental technician's specific job role

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

REQUIRED SKILLS AND KNOWLEDGE

This includes the ability to:

- Consistently follow occupational health and safety policies and procedures
- Consistently follow sequenced written instructions and manufacturer specifications for the preparation of materials
- Critically evaluate all work produced so as to consistently meet both the technical requirements of the laboratory and client requirements
- Select appropriate materials and techniques to manufacture thermo-formed appliances, taking into account efficient use of power and other resources
- Use safe work practices to minimise the risk of transmission of infection including:
 - consistently following the procedure for washing and drying hands
 - consistently putting into practice clean techniques
 - consistently using personal protective equipment
 - consistently limiting contamination
 - consistently maintaining clean receiving and work areas
- Use literacy skills to read and follow directions, policies and procedures including:
 - occupational health and safety policies and procedures
 - infection control policies and procedures
 - material safety data sheets
 - laboratory policies and procedures

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate this competency unit:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Consistency of performance should be demonstrated over the required range of workplace situations

EVIDENCE GUIDE

Context of and specific resources for assessment:

- Assessment should replicate workplace conditions as far as possible
- Where, for reasons of safety, access to equipment and resources and space, assessment takes place away from the workplace, simulations should be used to represent workplace conditions as closely as possible

Method of assessment

- Evidence of essential knowledge and understanding may be provided by:
 - traditional or online (computer-based) assessment
 - written assignments/projects
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice
- Questioning
- Staff and/or client feedback
- Supporting statement of supervisor
- Authenticated evidence of relevant work experience and/or formal/informal learning
- Role play/simulation

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Thermo-formed appliances may include:

- Mouthguards
- Bleach trays
- Occlusal splints
- Baseplates
- Temporary crown stents
- Retaining devices
- Custom impression trays
- Orthodontic retainers
- Implant surgical guides

Thermo-forming equipment may include:

- Vacuum
- Pressure

Unit Sector(s)

Not Applicable