



Australian Government

Department of Education, Employment and Workplace Relations

HLTDT514D Construct orthodontic appliances

Release: 1

HLTDT514D Construct orthodontic appliances

Modification History

| HLT07 Version 4 | HLT07 Version 5 | Comments |
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| HLTDT514C Construct orthodontic appliances | HLTDT514D - Construct orthodontic appliances | Unit updated in V5. ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. No change to competency outcome. |

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to construct removable orthodontic appliances

All procedures are carried out in accordance with work health and safety (WHS) 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:

- HLTDT301D Construct models
- HLTDT302D Construct custom impression trays
- HLTDT303D Construct registration rims
- HLTDT304D Articulate models and transfer records
- HLTDT507C Construct immediate dentures
- HLTDT508C Construct removable acrylic partial dentures
- HLTDT509D Cast metal alloy removable partial denture framework
- HLTDT510C Construct metal, crown and bridge structures
- HLTDT511C Join alloy structures
- HLTDT519C Construct simple complete removable acrylic dentures and appliances
- HLTIN301C Comply with infection control policies and procedures
- HLTWHS300A Contribute to WHS 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. Select or construct and assemble components and materials
 - 1.1 Select materials for *removable orthodontic appliances* according to design and function specified by prescription
 - 1.2 Select pre-formed components which are required and confirm they are fit for the purpose
 - 1.3 Construct individual custom-made components according to prescription

2. Construct orthodontic appliance
 - 2.1 Secure *components* to model by appropriate means
 - 2.2 Apply appropriate *materials* to the cast to form a baseplate according to the manufacturer's instructions and the prescription
 - 2.3 Process the appliance using equipment and techniques which are appropriate to the manufacturer's instructions and the prescription

3. Finish orthodontic appliances
 - 3.1 Select techniques, materials and equipment for trimming, finishing and polishing that are appropriate to the type and materials of the appliance
 - 3.2 Trim and finish the baseplate to the thickness and coverage required
 - 3.3 Finish and polish metal components to leave surfaces that are free of sharp edges and irregularities
 - 3.4 *Evaluate* the finished appliance
 - 3.5 Decontaminate the appliance according to infection control guidelines
 - 3.6 Place the appliance in a sealed container for dispatch

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
- Aims and objectives of orthodontic treatment using removable appliances
- Infection control guidelines for the decontamination of completed laboratory work
- Work health and safety (WHS) policies and procedures
- Selection and fabrication of components for removable orthodontic appliances
 - dental metallurgy
 - wrought wire fabrication techniques

Essential skills:

It is critical that the candidate demonstrate the ability to

- Consistently design and manufacture a range of removable orthodontic appliances in accordance with prescription
- Consistently trim, polish, finish and evaluate removable orthodontic 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 work health and safety (WHS) policies and procedures as they relate to the dental technician's specific job role

REQUIRED SKILLS AND KNOWLEDGE

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

This includes the ability to:

- Consistently follow sequenced written instructions and manufacturer specifications for the preparation of materials
- Select materials and techniques to manufacture removable orthodontic appliances
- Use appropriate practices to ensure 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:
 - work health and safety (WHS) 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.

Removable orthodontic appliances may include:

- Active appliances
- Passive appliances

Components may include but are not limited to:

- Screws
- Piston-screws
- Springs and sheaths made in a variety of metals and polymers

Materials may include:

- Polymers
- Composites
- Wax

Evaluation of the finished appliance may include but is not limited to:

- Confirming that the appliance is:
 - free from defects
 - fits the cast
 - effective for the purpose
 - meets the requirements of the planned design
 - complies with the prescription

Unit Sector(s)

Not Applicable