
Overview

This standard describes the design and manufacture, using manual or digital techniques, of tooth-coloured restorations by designing and manufacturing non-metallic bridge sub-structures. Then apply tooth-coloured materials to the non-metallic substructure to meet the case requirements.

The term 'client' is used to mean the member of the oral health care team who has prescribed the restoration. Clients may be external to the organisation (such as other laboratories, dental practitioners, training schools) or internal (within a dental hospital). The individual is the one for whom the custom-made restoration is being made.

The design and manufacturing process may be carried out in a regulated dental laboratory within a variety of settings.

Users of this standard will need to ensure that practice reflects up to date information, policies and regulations.

Performance criteria

You must be able to:

1. communicate with relevant others at a pace, manner and level appropriate to their understanding, preferences and needs
2. collate and confirm accuracy of all specification information required for tooth coloured restorations based on non-metallic sub-structures design and manufacture with relevant others
3. select the necessary components, materials and equipment and confirm that they are fit for purpose
4. set up and operate the manufacturing equipment in accordance with the specification
5. manufacture the tooth coloured restorations based on non-metallic sub-structures using appropriate methods and techniques
6. monitor the manufacturing process and adjust as required
7. deinvest or retrieve the manufactured product using an appropriate method which releases the item without causing damage
8. ensure that the manufactured product matches the specification and make any necessary adjustments
9. clean and finish the restoration, prepare and package it safely for dispatch together with instructions for the individual and client
10. dispose of waste in accordance with all relevant legislation, guidelines, and workplace procedures
11. complete and store all documentation in accordance with relevant legislation, guidelines, and workplace procedures

Knowledge and understanding

You need to know and understand:

1. how to communicate with relevant others at a pace, manner and level appropriate to their understanding, preferences and needs
2. the importance of applying standard infection control precautions and the potential consequences of poor practice
3. the principles, uses, methods, techniques and equipment involved in both manual and digital design and manufacturing.
4. the skeletal anatomy, tooth morphology, orofacial musculature including the tongue and temporomandibular joint function and movement
5. the classification, aetiology, including oral cavity disorders and diseases and the physiological effects of malocclusions.
6. the physiological and pathological changes associated with the ageing process and trauma related to the oral environment
7. the importance of retention of the periodontal ligament and the changes in proprioception due to loss of periodontal ligament
8. manufacturing considerations to bioform including the effect of masticatory forces on materials used in dental restorations, the properties required of a material and restoration design and manufacture
9. how to place the non-metallic sub-structure on the cast and confirm that:
 - it fits the cast
 - it complies with the prescription
 - it will not damage surrounding tissues in the individual's mouth
10. the mechanical, physical, thermal, chemical and biological properties of materials used in the manufacture of restorations
11. the purpose of different aesthetic restorative materials
12. the relationship between chemical bonds and the properties of solid materials
13. the purpose of different impression and duplicating materials
14. legal and physical implications of modifying manufacturer products and ensuring quality assurance .
15. how to clean and finish the restoration, prepare and package it safely for dispatch together with instructions for the individual and client
16. different methods of waste disposal and how to apply these
17. the importance of updating documentation and storing individuals records safely and securely

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Design and manufacture tooth coloured bridge restorations based on non-metallic sub-structures



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