



1

AIMS AND OBJECTIVES

- To confidently take alginate impressions
- List advantages and disadvantages of alginate impressions
- Be able to identify faults during impression taking and understand how to solve any issues that may arise.

2

ALGINATE

An elastic impression material derived from seaweed

Available in different setting times: normal - fast set and colour changing formulas.

Used to aid construction of orthodontic appliances and cast study models.

Properties include:

- good surface detail
- reaction is faster in higher temperatures
- not dimensionally stable as can dry out,
- setting/working time can depend on technique
- elastic enough to draw over undercuts but can tear in the presence of deep undercuts

3

COMPONENTS OF ALGINATE

- 60 % Diatomaceous earth
- 16% Calcium sulphate
- 15% Sodium sulphate
- 4% Zinc oxide
- 2% Sodium Phosphate
- Colourings & flavourings

4

ADVANTAGES AND DISADVANTAGES OF USING ALGINATE

Advantages	Disadvantages
Non toxic and non irritant	
Ease of use/mixing	Setting times can depend of handler
Good surface detail	Poor stability
Cheap and good shelf life	Incompatible with some dental stones
Setting times can be controlled by water temperature	Can be messy to work with

5

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

TRAY VISIBLE ?

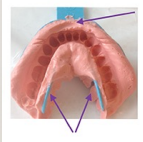
TRY?

- Ensuring tray adequately filled with enough impression material to ensure all detail accurately copied: palate, gingival margins and tooth detail all present.
- Not pressing hard enough for teeth to come through material onto tray

6

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

IMPRESSION TRAY NOT SEATED CORRECTLY?



TRY ?

- Seat tray further forward so that teeth are more central in tray
- Encourage patient to lift tongue forward to allow material to flow into lingual sulcus
- Even pressure applied to both posterior regions when seating

7

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

IMPRESSION MOVED ?



TRY?

- Ensure tray seated in correct central position and stay in seated position until material has fully set

8

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

AIR BUBBLES?



TRY?

- Adequate mixing, alginate should be smooth in consistency
- Remember to release lip over tray and ask patient to lift tongue to allow material to flow around labial and lingual sulcus.

9

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

LACK OF DETAIL?



TRY?

- Placing tray in a more central position using the tray handle down the midline as a guide
- Ensuring arch fully in line with trough of tray in a not too anterior/posterior prior to seating will allow full detail of gingiva to be copied accurately

10

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

INADEQUATE LABIAL DETAIL ?



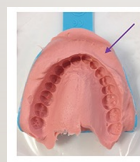
TRY?

- Ensure labial clearance over tray to allow material to flow into buccal sulcus
- Tray may have been underfilled

11

COMMON IMPRESSION FAULTS AND HOW TO RESOLVE

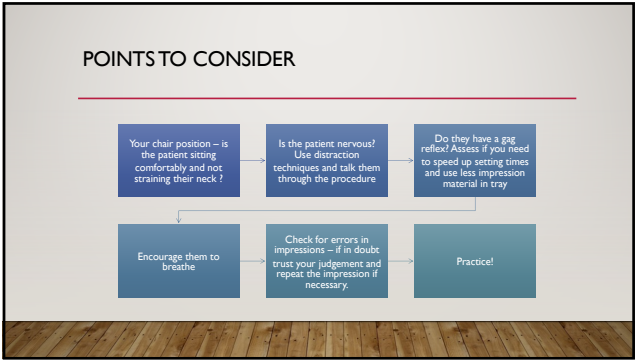
INCORRECT TRAY SIZE?



TRY?

- Test the size of tray in mouth prior to filling with material, to ensure fits well

12



13



14