Record base & occlusion rim

*Record base (or base plate)*

Is a temporary form, representing the base of the denture. It is used to recording maxillomadibular relation & in the arrangement of teeth.

*Requirements of the record base:*

1. The record base should be rigid.
2. The record base should be accurate & stable.
3. The borders should be developed in the same manner as the borders of the finished denture.
4. All the surface which are in contact with the lips, cheeks & tongue should be smooth, round & polished to prevent any trauma to the oral structures.
5. The crest of the labial &/ or buccal slopes should be thin to provide space for the tooth arrangement.

The material used in construction of the record base

1. Shellac record base
2. Self-cure acrylic.
3. Hot cure acrylic.
Occlusion rims (bite rims)

Occlusion rims are occluding surfaces constricting on the record bases or permanent denture bases to be used in recording jaws relations & for arranging teeth.

The position of the lips & cheeks are important in recording the maxillomandibular relation. The contouring of the occlusion rims for the lips & cheek support allows the facial expression to act in the normal manner.

**Materials used in construction of the occlusion rims**

1. base plate wax, bite block wax.
2. modeling compound.

The wax is most common used material because it is easier to handle in jaws registration & in teeth arrangement.

**Uses of occlusion rims (function)**

1. Determination of jaw relation which include:
   i) Determination of vertical dimension
   ii) Determination of centric & eccentric jaw relation (horizontal jaw relation).

2. in selection of teeth
   i) The position of midline could be determine.
   ii) Canine line (cuspид line) are drawn at the corner of the bite rims which represents the corner of the mouth from each sides.
   iii) the width of the 6 anterior teeth is equal to the distance between the 2 canine line.
   iv) the width of the posterior teeth is equal to the distance between the canine line & end of the occlusion rims posteriorly.
v) High length of the anterior teeth is determined by drowning high lip line when patient smile, the whole incisor should be seen.

vi) The low lip line is a line drawn on the wax rim when the lip in relax, in this situation 2mm of anterior teeth could be seen.

3rd Teeth setting up.

4th Determine the shape of the arch.

5th Support of the facial muscle.

Measurement of the maxillary occlusion rims

1. The maxillary rim should have a slide labial inclination & the labial surface should be 7mm anterior to the line bisecting the incisive papillae.

2. The final wax rim should be 4mm wide anteriorly & gradually become wide posteriorly.

3. The rims should be directly over the crest of the residual ridge.

4. The occlusal height of the maxillary rim should be 22mm from the labial flange lateral to the labial frenum and 18mm from the buccal flange to the tuberosity.

Measurement of the mandibular occlusion rims

1. It should occupy the space over the crest of the residual ridge.

2. Occlusal height should be 18mm from the labial flange lateral to the labial frenum & should be leveled with acrylic record base posteriorly.

3. The labiolingual width should be approximately 4mm & increase posteriorly up to 7mm in molar area.
Anatomical guides for support of facial musculature (lip contour)

The best anatomical guides to aid in determining the proper contouring of the anterior section of both occlusion rims are:

1. Nasolabial sulcus
2. Mentolabial sulcus
3. Philtrum
4. The commissure of the lips.

**Occlusal plane:**

The average plane established by incisal and occlusal surface of the teeth. Generally, it is not a plane but represent the planar mean of the curvature of these surfaces.

The height of the occlusal plane (the vertical length of the maxillary occlusal rim) in the anterior region extends up to 2 mm below the relaxed lip & this could be differ from patient to other. Generally, there are 1-2 mm showing from the incisors in the average dentulous patient.

Each edentulous case should be consider separately in relation to the height of the occlusal plane for the best appearance.

**Fox bite (fox plane guide)**

Is an appliance used to check the anterior part of wax occlusion rims which should be parallel to the **inter-pupillary line** (it is an imaginary line running from the center of the pupil of one eye to the center of the other when the patient is looking straight forward) which should be parallel with **camper's line** (which is the line extended from the inferior boarder of the ala of the nose to the superior border of the tragus of the ear).