

HOW TO USE THIS BOOK

As the dental profession evolves, there is an increasing demand for supplementary material that can keep up with advancing trends. ‘Hands on’ practical experience is essential for anyone in the dental profession, and this needs to be supplemented with written information to reinforce our practical experiences.

This illustrated manual has been prepared for students working and studying in the dental profession. It may be used as a study aid or kept in the dental surgery as a reference guide. This manual is intended to complement other methods of learning, i.e. textbooks, lecture notes etc., and is not meant to be a comprehensive resource. The 100 items used in the National Examining Board for Dental Nurses in the United Kingdom are included in this book, and the current (at time of publishing) ‘spotter’ items list is included in the Appendix.

Because many dental instruments look similar, and can be confusing to a student, the ‘false friends’ sub-sections identify instruments that may resemble the particular instrument. This manual is not intended to be a complete representation of all dental instruments, but it does include examples from each dental discipline. As many dental instruments are multi-functional and are referred to by more than one name, where possible, these are given beside the name of the instrument. Complete set-ups have been included at the end of most sections for various procedures. The dental professional may have to modify these lists, depending on operator preference.

Each section is dedicated to a specific discipline or division of dentistry. Some instruments feature in many sections, and these have been included in the set-up sub-sections of the relevant sections. Infection control is a fundamental requirement in the dental surgery, and as such the first section is dedicated to this area. This section aims to introduce the principles of health and safety, which must always be at the forefront of a dental professional’s mind. Contact the legislative bodies for appropriate regulations and legislation relevant to your workplace.

The instruments in this guide are not to scale, and during photography some colours may have been altered.

SECTION 3

BASIC INSTRUMENTS

There are a few basic instruments that are universal to almost every procedure in dentistry.



BASIC INSTRUMENTS

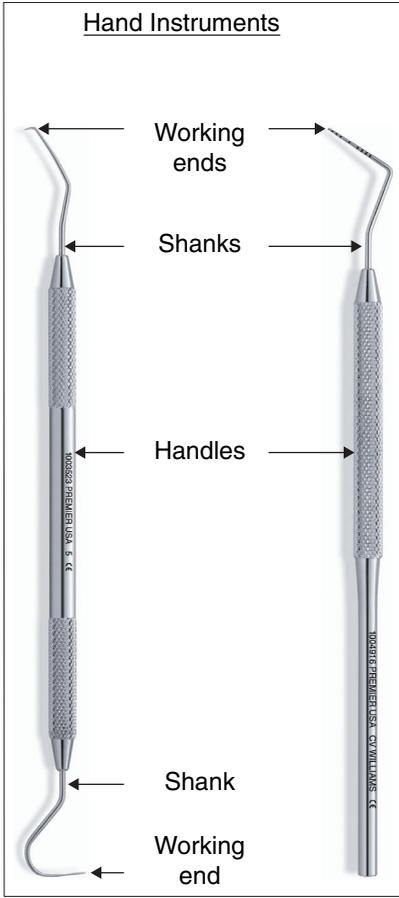


Figure 3.1



Figure 3.2

GENERAL FEATURES OF DENTAL INSTRUMENTS

FIGURE 3.1

Working end(s) of instruments

- Are the functional parts of the instrument
- Can have a variety of functions including: cutting, packing, carving, placing and condensing
- Are adapted to the function of the particular instrument
- May be bevelled (i.e. the working end is cut at an angle)
- An instrument can be single-ended (one working end) or double-ended (two working ends)

Shank of an instrument

- The part between the working end and the handle
- Can be straight or angled
- The function of the instrument determines the angle and flexibility of the shank

Handle of an instrument

- Is the part of the instrument that the operator grasps
- Provides stability and leverage
- Design is related to the function of the instrument
- Examples:
 - The handle of an upper extraction forceps may be curved to facilitate a palm grasp for the operator
 - The handle of a rubber dam clamp forceps is rounded to fit in the palm of the operator's hand
 - A serrated handle allows a better grip
 - A large handle allows a palm grasp

THE BASIC DENTAL INSTRUMENTS

FIGURE 3.2

Name

Mouth mirror and handle

Functions

- To provide indirect vision
- To reflect light
- For retraction and protection of oral tissues
- For magnification (the number of the mirror represents size of mirror head)

Varieties

- Single-sided or double-sided
- Can be disposable
- Plain or magnifying

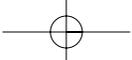


Figure 3.3



Figure 3.4

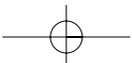
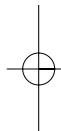
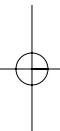


FIGURE 3.3 a, b**Name**

(a) Sickle/contra-angled probe (b) Nabers probe

Functions

- Detection of:
 - defective pits and fissures
 - calculus
 - deficient margins of restorations, crowns and bridges
 - caries
- Examination (pointed tip allows good tactile sensitivity)

Varieties

- Can be single-ended or double-ended
- Many different styles available
- Working ends may vary (straight, curved)

False friends

Periodontal probe, endodontic probe (DG16 probe), lateral condenser

FIGURE 3.4**Name**

Periodontal probe

Function and features

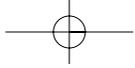
- Measure the depth of periodontal pockets
- Tip is calibrated in millimetres
- Blunt end reduces the possibility of tissue trauma

Varieties

- Single-ended or double-ended
- Can be straight, curved or at right angles
- Plastic types available

False friends

Sickle/contra-angled probe/sickle probe, endodontic probe/DG16 probe and endodontic spreader



BASIC INSTRUMENTS



Figure 3.5



Figure 3.6

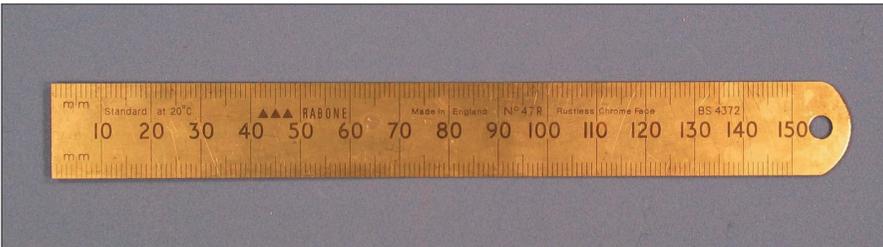
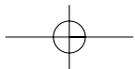
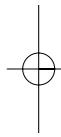
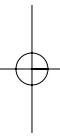
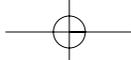


Figure 3.7



**FIGURE 3.5****Name**

Briault probe

Function and feature

- Detection of caries on mesial and distal surfaces
- The angled working ends facilitate adaptation to interproximal surfaces

False friend

Furcation probe

FIGURE 3.6 a, b**Name**

(a) College tweezers (b) Locking college tweezers

Functions

- Placing small objects in the mouth and retrieving small objects from the mouth
- Locking type 'lock' to prevent dropping materials

Varieties

- Locking and non-locking types
- Working ends can be straight, curved, serrated or smooth

False friends

Tissue dissecting forceps, toothed dissecting forceps

FIGURE 3.7**Name**

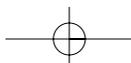
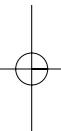
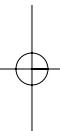
Metal ruler

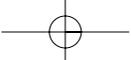
Function

Measurement of length, e.g. endodontic K files

Varieties

- Can be calibrated in different units of measure
- Plastic type available





Set-up

Examination

- Mouth mirror and handle
- Sickle/contra-angled probe
- College tweezers

Optional: Briault probe, metal ruler and periodontal probe

