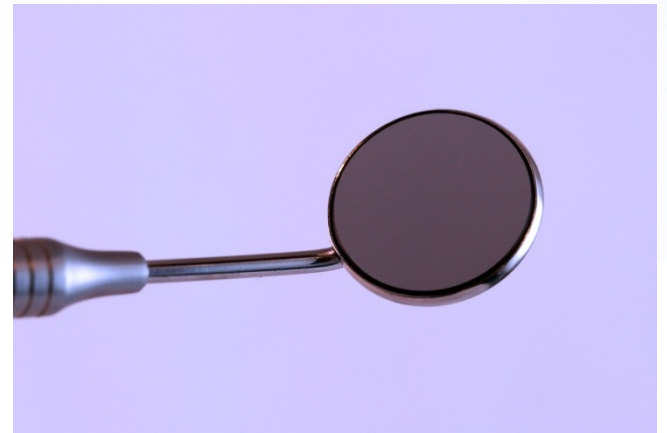


III. Selected instruments in restorative dentistry

Instruments for investigation



Mirror



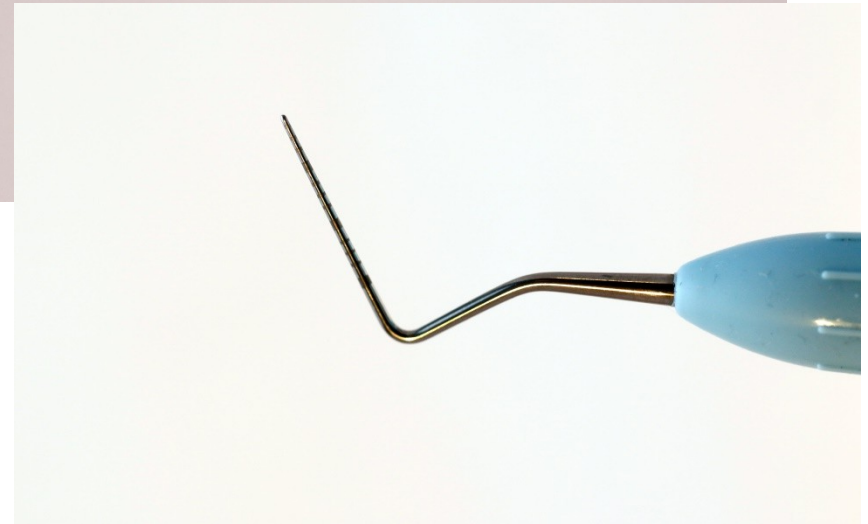
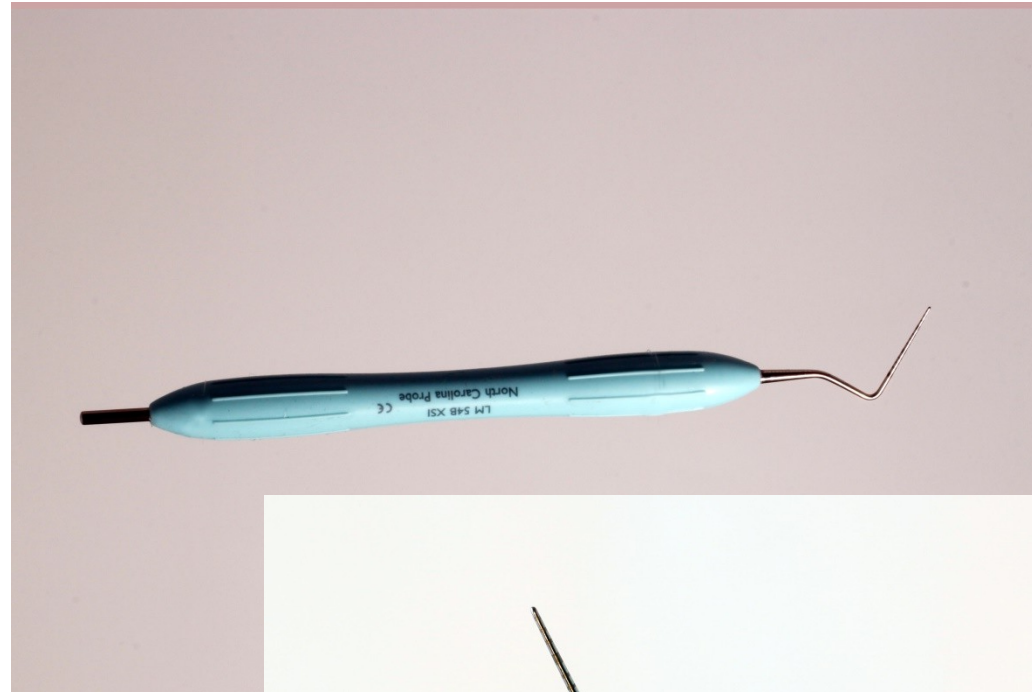
Instruments for investigation



Straight probe



Instruments for investigation



Periodontal probe -calibrated

Tweezer



Preparation - techniques

- Power driven – mostly rotary
- Hand
- Less common – laser, ultrasound etc.

Turbine handpiece

400.000 rpm

Low torque control, vigorous preparation



Electromotor and Air Motor

Electromotor – maximum 40.000 rpm

Air motor – maximum 20.000 rpm

The rpm is possible to modify using hanpieces with various gear.

High speed

Low speed

Gear 1:1

Oscillation

(rotation is blocked)



High speed handpiece

Red coded. Better control in comparison with the turbine handpiece



Gear 1:1

Blue coded. Preparation in dentin recommended



Low speed handpiece

Suitable for slow work e.g. excavation of carious dentin



Special handpieces

- Handpiece for compaction of amalgam
- EWA system (instrument does not rotate, if oscillate only)
- Handpieces for endodontology and implantology

Hand instruments

Chisels

For finishing of gingival wall in class II



Excavator



Rotary instruments

- Burs and diamonds.
- ISO norm 6360
- 5 figures A – E

A- material (Stainless steel, tungsten - carbide, diamond)

B,C size and kind of the handpiece (straight handpiece, contraangle, turbine)

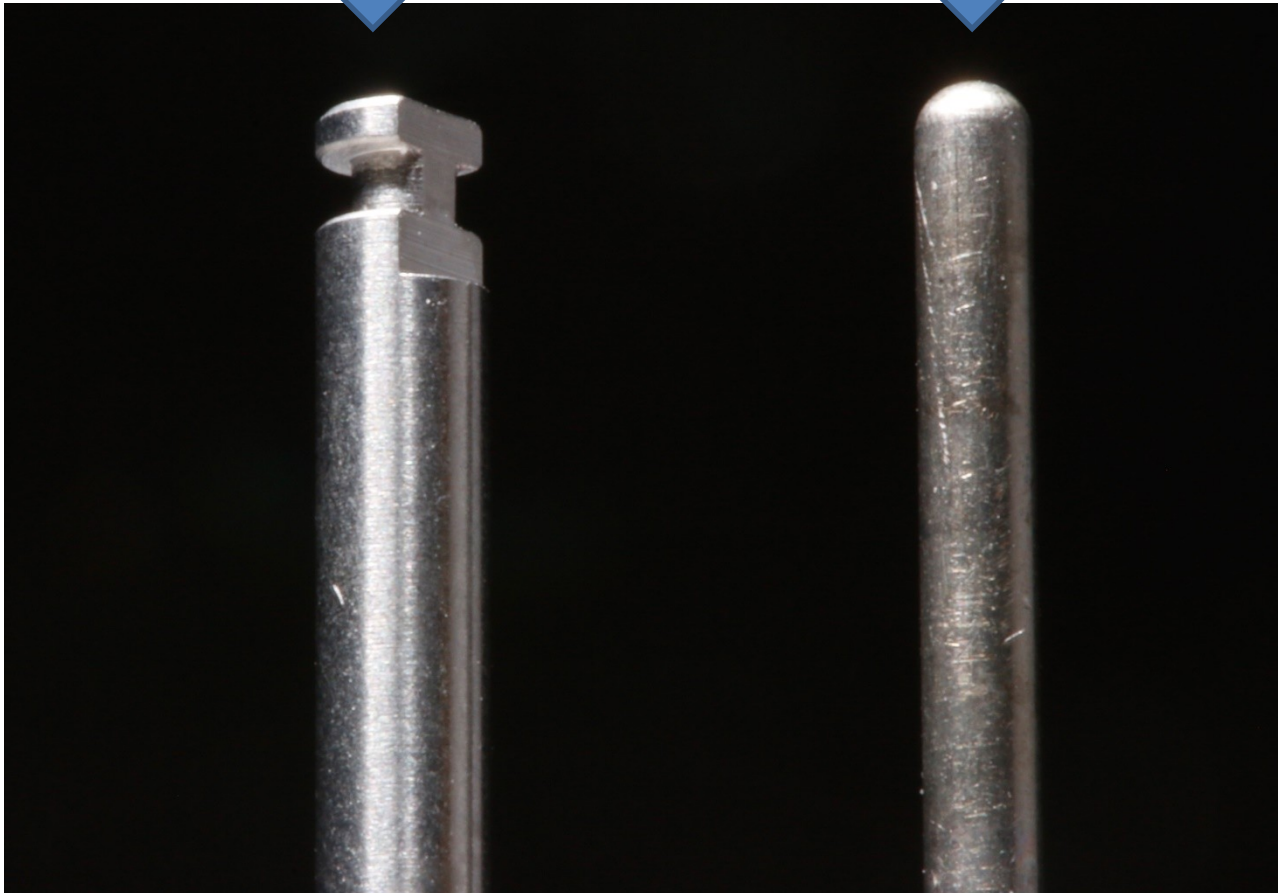
D shape of the working part (ball, pear, fissure)

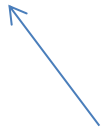
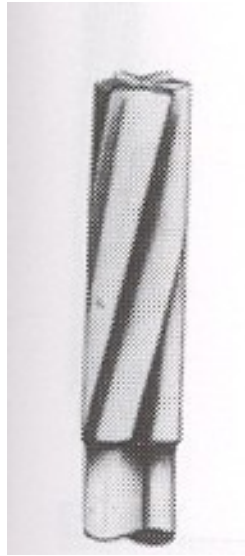
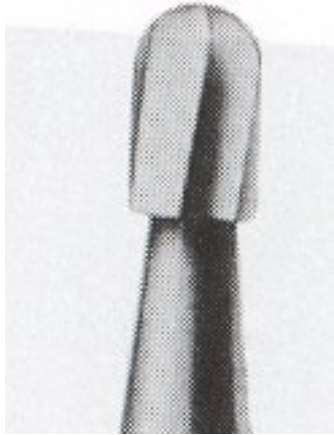
E further characterization (blades or grit)

Shape of the shank

Contra angle handpiece

Turbine handpiece





Inverted cone, pear formed bur, fissure bur, round (ball) bur

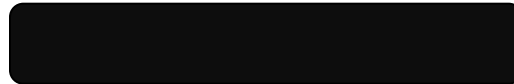
Diamonds

- Blue - standard (90 – 120 μm) ISO 524
Universal use



Diamonds

- Black extra coarse (150 – 180 μm) ISO 544 –
No for cavities, e.g. for cutting old crowns



Diamonds

- Green - coarse (125 – 150 μm) ISO 534,
- For special purposism no for cavities



Diamonds

- Red- fine (20 – 40 μm) ISO 514 – finishing of preparation – smoothen of beveling



Diamonds

- Yellow – extra fine (12 – 22 μ m) ISO 504,
- Finishing of composite fillings

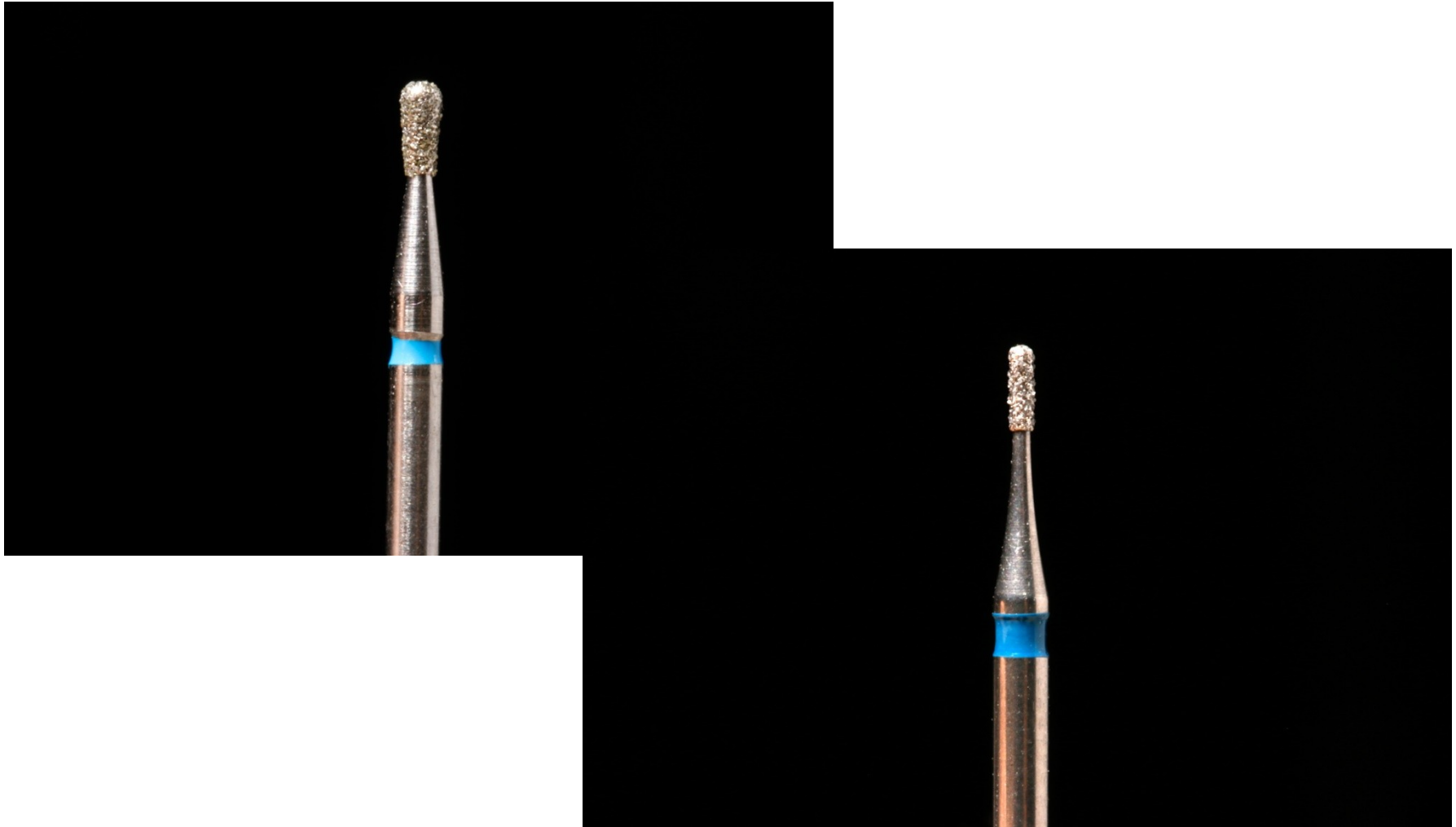


Diamonds

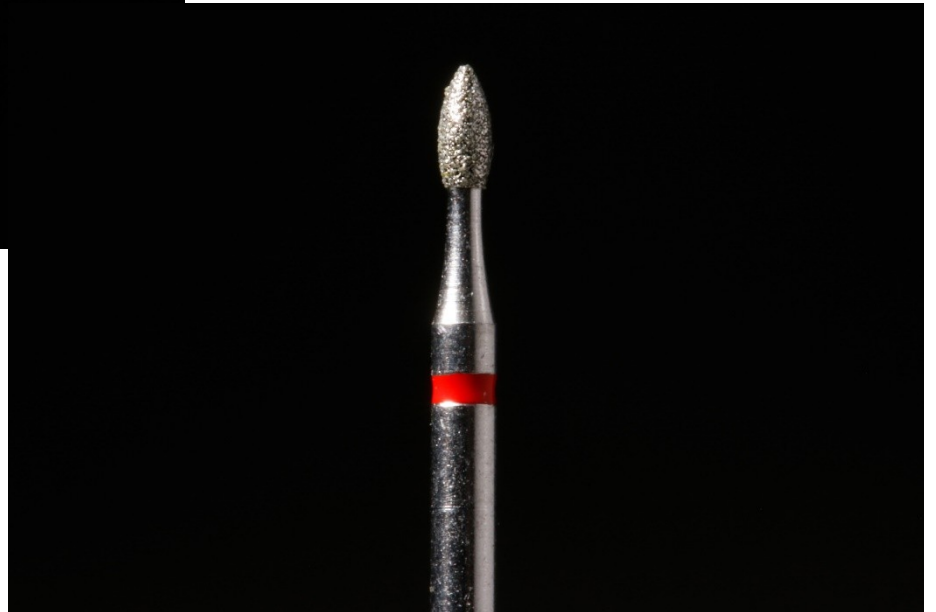
- White –ultra fine (6-12 μm) ISO 494 –
Polishing of composite fillings



Preparation instruments for cavosurface margin



Preparation instruments for finishing of borders

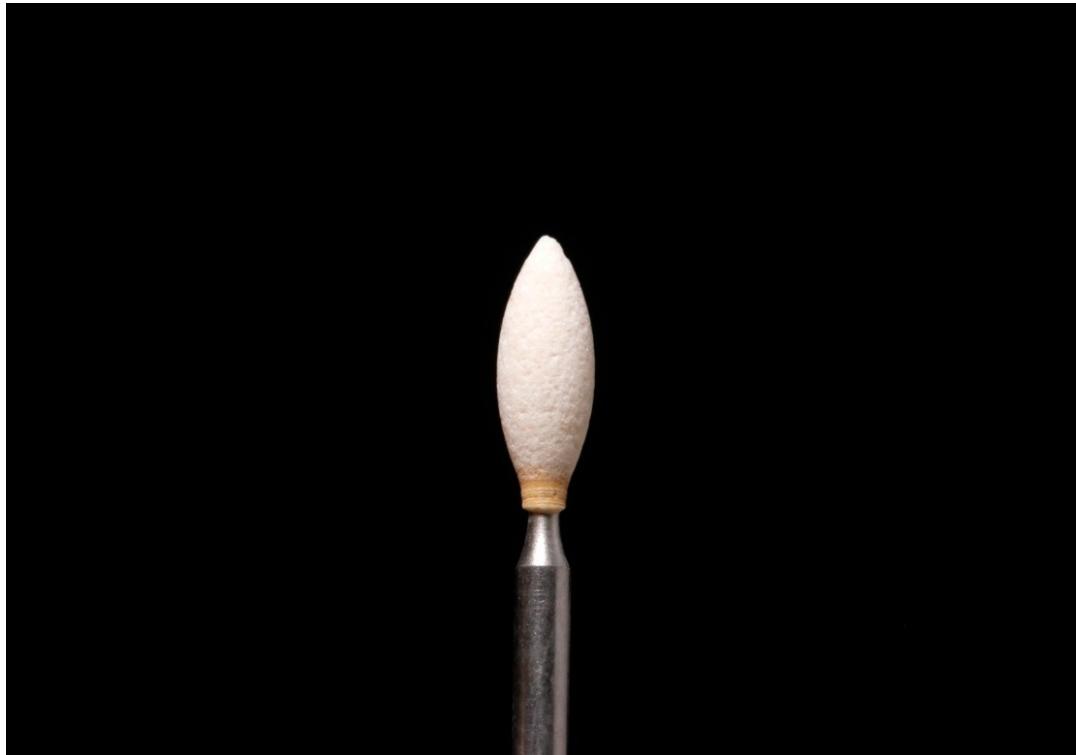


Preparation instruments

Bur for excavation of carious dentin



Rotary instruments for polishing of fillings – Arkansas stone



Rotary instruments for finishing extra fine diamonds



Rubber rotary instruments – for polishing



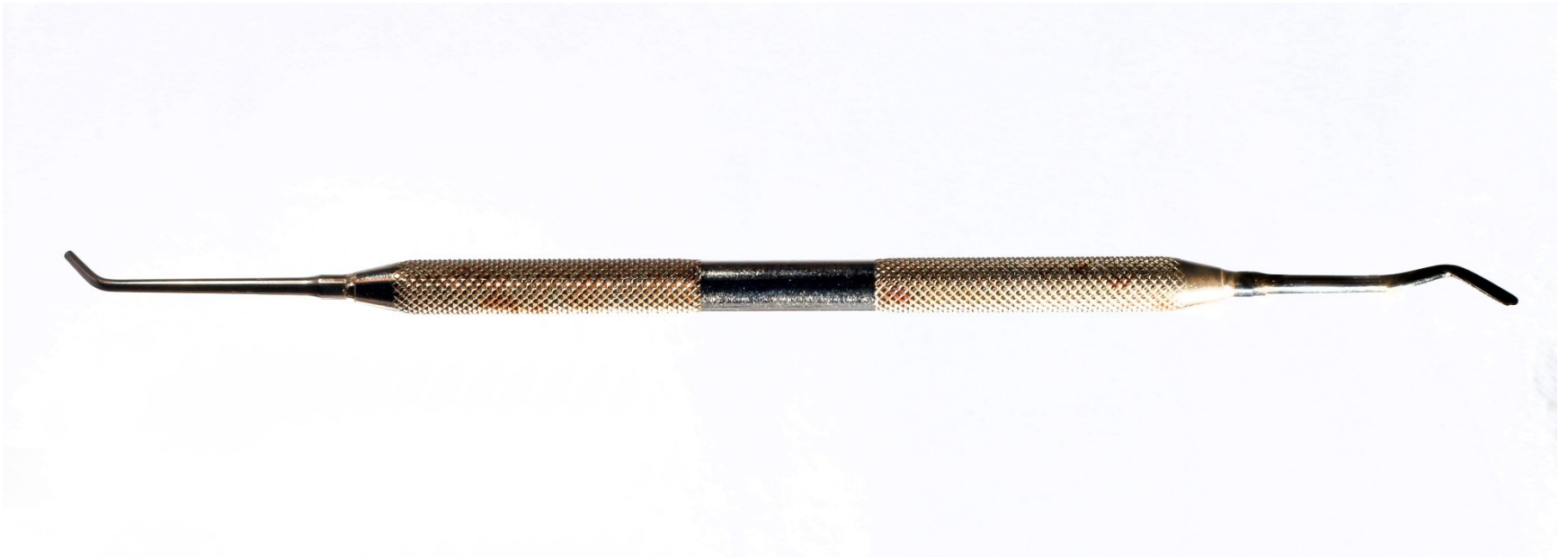
Nástroje k úpravě výplní

Rotační kartáčky



Filling instruments

Spatula + condensor



Detail of a condensor



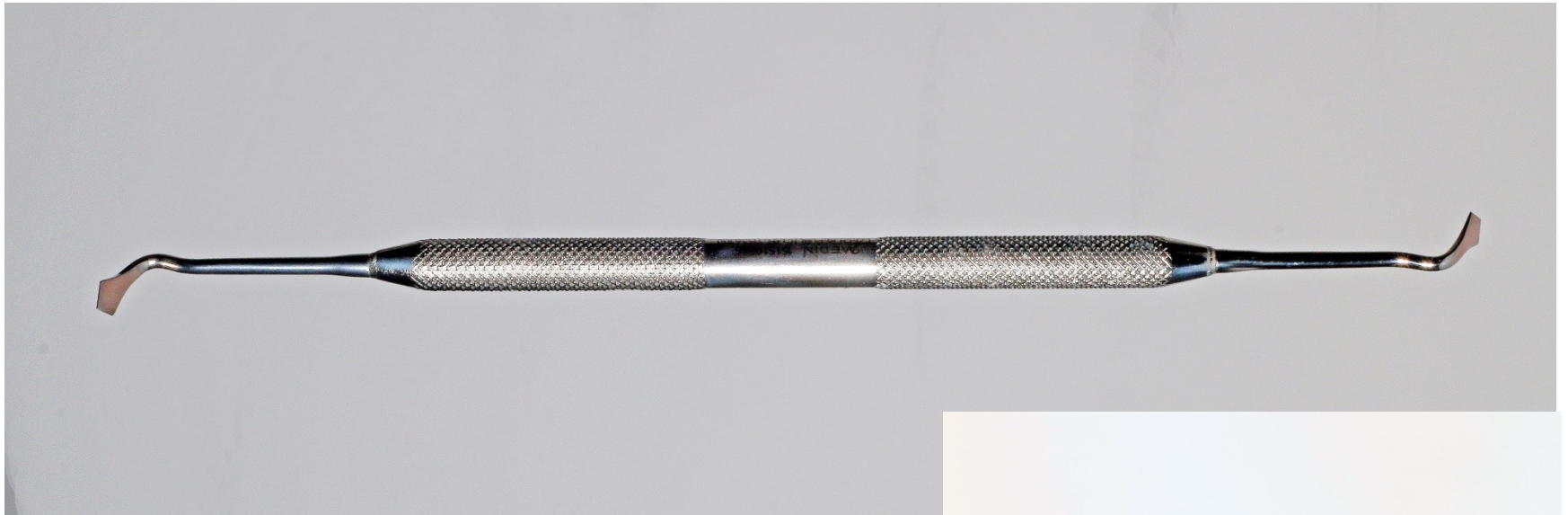
Spatula (3 angled)



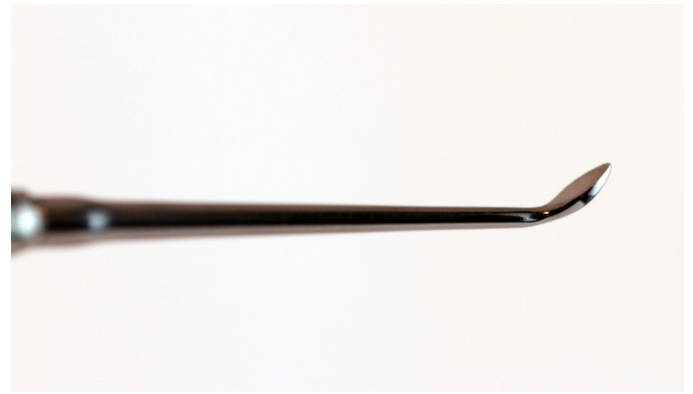
Spatula in detailb(3 angled)



Frahm



Discoid-cleoid



Wiland - carver



Burnishers



Instrument for composite fillings



Instrument for composite fillings



Condensor

