

Step by step for ProTaper Gold with irrigation recommendation



A. RADIOGRAPHIC EVALUATION

Review different horizontally angulated radiographs (or a CBCT) to diagnostically determine the width, length, and curvature of any given root and canal.

B. ACCESS PREPARATION

Create visual access to the canal orifice(s) with emphasis on flaring, flattening, and finishing the internal axial walls.

C. PREPARATION OF THE NEEDLE

1. Open the packaging by pulling along pre-cut notch provided for this purpose.
2. Prefill your syringe with one of the compatible irrigant: stabilized sodium hypochlorite up to 6%, EDTA 17%, or Chlorhexidine digluconate 2%.
Make sure your irrigant has been properly stored to avoid the formation of any crystal which could block the vent of the needle.
3. Insert the “secure lock” part of the needle into the male nose of the previously filled Luer lock syringe and lock the needle by rotating it clockwise.
4. Make sure the needle is firmly locked on the syringe and identify the 4 depth marks on the needle (18mm, 19mm, 20mm and 22mm.) The use of a stopper is also possible to set the working length.
5. Before entering the canal, check the pressure needed on the syringe barrel to create two equals jets exiting the needle. This step also allows you to control the flowability of your irrigation solution.

D. PROTAPER GOLD® SHAPING TECHNIQUE

Shaping with ProTaper Gold implements the crown down concept

1. Create access cavity and find the canal orifice(s)
2. In the presence of a viscous chelator passively scout the coronal 2/3 with 10 and 15 hand files. Gently work these instruments until a smooth, reproducible glide path is confirmed. Alternatively, mechanized glide path may be used after a 10-hand file.
3. In the presence of NaOCl, “float” the S1 in the canal and passively “follow” the glide path. Before light resistance is encountered, laterally “brush” and cut dentin on the outstroke to improve straight-line access and apical progression. Always brush away from the furcation.
4. Continue shaping with S1 as described until the depth of the 15-hand file is reached.

5. Insert gently the irrigation needle at the canal orifice, start irrigating at the coronal entry. Bring the needle down into the canal while irrigating abundantly until the coronal 2/3 of the canal is reached. Irrigate in the canal with a continuous 2-3mm back and forth movement. Irrigate with 1 or 2 ml of solution after each pass of instruments (hand file and/or mechanized instrument)
6. Use the S2, exactly as described for the S1, until the depth of the 15-hand file is reached. Remove the file and irrigate as previously advocated.
7. In the presence of a viscous chelator or NaOCl, scout the apical 1/3 with 10 and 15 hand files and gently work them until they are loose at length.
8. Establish working length, confirm patency and verify the presence of a smooth reproducible glide path in the apical 1/3.
9. Validate previously defined working length via RX and electronic apex locator – identify one of the 4 marks on the irrigation needle (or place a silicone stop for the working length)
10. Use the S1, with a brushing action, until working length is reached. Irrigate as previously defined (step 5). Check patency and re-irrigate
11. Use the S2, with a brushing action, until working length is reached. Irrigate as previously defined (step 5). Check patency and re-irrigate
12. Reconfirm working length (irrigate, recapitulate, and re-irrigate, especially in more curved canals).
13. Use Finishing File F1, in a “non-brushing” action, with each insertion deeper than the previous insertion until working length is reached. Do not leave the file at working length for longer than one second. Irrigate as previously defined (step 5). Check patency and re-irrigate
14. Gauge the foramen with a 20-hand file. If the instrument is snug at length, the canal is shaped and ready to be obturated.
15. If the 20 hand file is loose at length, proceed to the F2 and, when necessary the F3, F4 and F5, with the same non-brushing motion to working length, gauging after each Finishing file with 25, 30, 40 or 50 hand files respectively. Irrigate after each files as previously advocated (step 5 and 9)
16. If necessary, use the SX with a brushing motion to move the coronal aspect of the canal away from furcal concavities and/or to create more coronal shape. SX can also be used to optimally shape canals in shorter roots.
17. After use, disconnect the needle and dispose it in accordance with local recycling regulations.
18. Obturate with one of the dedicated obturation solution (ProTaper Gold Conform Fit gutta-percha or Thermafil for ProTaper Gold)

The ProTaper Gold® sequence is the same regardless of the length, diameter or curvature of the canal.