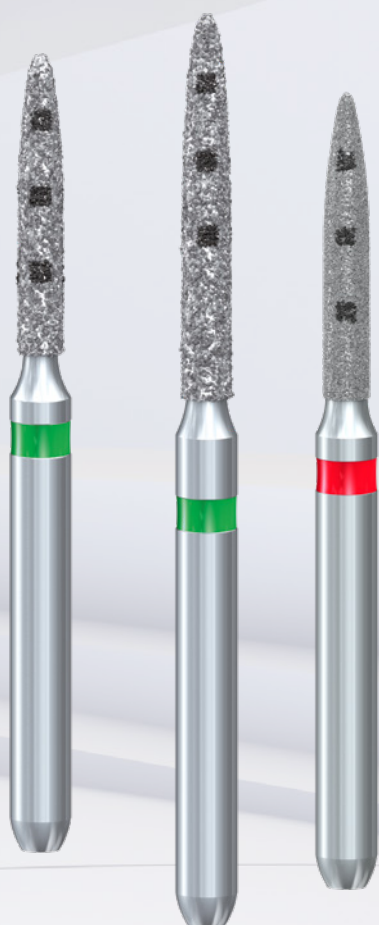




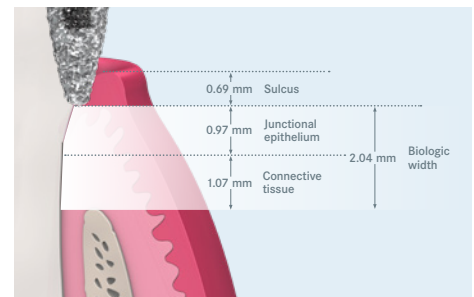
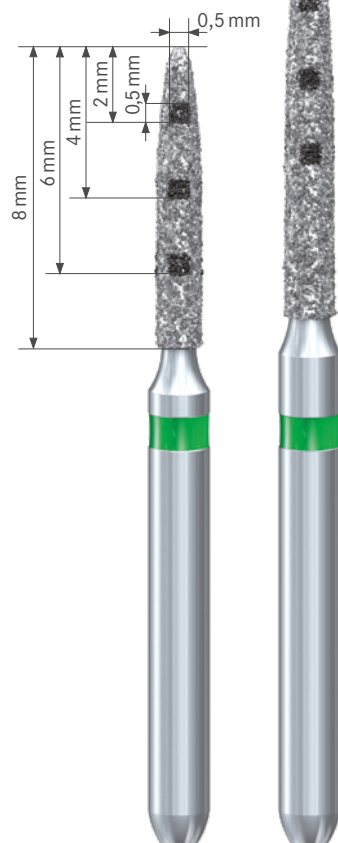
Instruments for the vertical preparation technique.

Simplified Prosthetic Protocol (SPP) - by Dr. Fabio Scutellá



Instruments for the vertical preparation technique.

The geometry of the preparation limit during the prosthetic preparation of teeth – both horizontal (shoulder or chamfer) and vertical (finished preparation/feather edge) – remains a controversial subject to this day. For many years, horizontal geometries were thought to have many advantages and were considered the better option for esthetic, high-quality dentistry – which, consequently, relegated vertical preparations to a world where dental reconstructions entailed the loss of periodontal support. However, it was shown in recent years that the same results can be achieved if the clinical protocol followed involves the use of vertical preparations even on teeth with a healthy periodontium.¹



The average dimension of the biological width of a healthy periodontium is about 3 mm [Gargiulo et al. J Periodontol 32, 261 (1961); Günay et al. Dtsch Zahnärztl Z 56, 583 (2001)]

The correct position of the apical-coronal preparation limit in relation to the exposed gingival margin should always be inside the sulcus whose natural depth can range between 0.5 mm and 4 mm.²

Provided that the biological width^{3 4} is strictly adhered to, this position constitutes the main borderline that separates a successful prosthetic restoration from a failed one. If the dentist decides in favor of positioning the preparation limit below the gingival margin, the use of appropriate burs, such as periodontal probes with depth marks, greatly facilitates the work and allows better control at any point during the preparation of the tooth.

¹ Scutella F et al: A retrospective periodontal assessment of 137 teeth after feather edge preparation and gingivitis. Int J Perio Restorat Dent 2017; 37: 6, 3-12.

² Kois JC: The restorative-periodontal interface: biological parameters. Periodontology 2000, Vol.11, 1996; 29-38).

³ Gargiulo AW, Wentz FM, Orban B.: Dimensions and relations of the dentogingival junction in humans. J. Periodontol 1961;32:261-267)

⁴ Jepsen S et al: Periodontal manifestations of systemic diseases and developmental and acquired conditions: Consensus report of workgroup 3 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. J Periodontol. 2018 Jun; 89 Suppl1 : S237-S248.



Example of application:

1. Elimination of the interproximal contact (862.314.010).

2. Creation of orientation grooves to define the preparation depth (S6881.314.012 or 014).

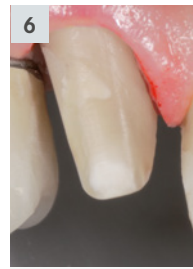
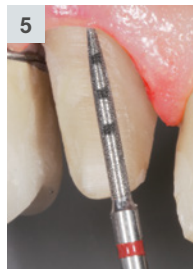
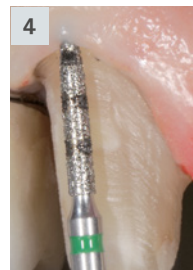
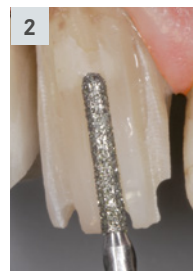
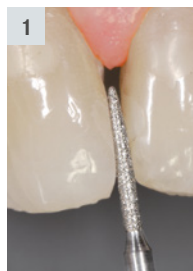
3. Condition after primary preparation with the previous instrument (S6881.314.012 or 014).

4. Removal of the shoulder in order to create the definite preparation and at the same time, a moderate subgingival curettage that does not go further than 1 mm below the sulcus. (6862D.314.012 ,016 or 6863D.314.012)

5. Finishing with a finisher of identical shape. (8862D.314.012 ,016 or 8863D.314.012)

This is of particular importance in the intrasulcular region to promote the formation of new attachments.

6. Condition after finishing.



Recommended use:

- Primary preparation: \varnothing_{opt} 160.000 rpm
The instruments are preferably used in a red contra-angle, although the use in a dental turbine is also authorized.
- Finishing: \varnothing_{opt} 20.000 rpm
- Provide sufficient cooling, at least 50 ml/min.

Preparation



Finishing



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