



**BIOVOXEL
TECHNOLOGIES**

ENDOTOOTH

replicas of real teeth for training in endodontics
utilization of high-end 3D printing technologies and microCT imaging
transparent material with dentin hardness
great variety available
custom made models on demand





ENDOTOOTH 16

- more challenging upper molar (16 ISO notation) with 4 root canals
- intact/accessed
- difficulty: 4/5

Pulp chamber and root canal system are without significant calcifications and obliterations, except the narrow canal entrances to mesio-buccal canals.

MB2 root canal presents a challenge - after 4 mm long common course with MB1 it separates and continues as a narrow, slightly S curved canal. 2 mm prior to terminus there is a communication through isthmus between the two mesio-buccal canals. Apical diameter of MB1 and MB2 is 0,10 mm.

Distal root canal forms a bifurcation in apical third and reaches apical diameter of 0,18 mm.

Palatal canal curves slightly buccally in its course, is quite wide and narrows to 0,10 mm at the apical diameter.





ENDOTOOTH 37

- lower molar (37 ISO notation)
with 3 root canals
- intact /accessed
- difficulty: 3,5/5

Pulp chamber is slightly contracted. Mesial canals have one common canal entrance. In the first third of mesial root they form one ribbon shaped canal before it divides into typical mesiobuccal and mesiolingual canal. Both of them are curved in the apical third. MB canal curvature is severe. Apical diameter of MB canal is 0,16 and 0,12 mm of ML canal.

Distal canal is wide and ribbon shaped. It is formed by distobuccal and distolingual canal connected with isthmus what can be seen on the cross-section. Between the middle and the apical third the isthmus narrows down until it disappears for 3 mm distance. The only portal of exit is placed slightly laterally and the apical diameter of the distal canal is 0,15mm.





ENDOTOOTH 43

- lower canine (43 ISO notation)
with one root canal
- intact/accessed
- difficulty: 2,5/5

Lower canine with typical pulp chamber and one mesiodistally flattened root canal.

The course of the canal is relatively uncomplicated until its apical furcation, where it divides into two equivalent ramifications placed in vestibular and lingual direction. Both of them have apical diameter 0,13 mm.





ENDOTOOTH 14

- challenging upper premolar (14 ISO notation) with 3 root canals
- intact (non-accessed)
- difficulty level: 4/5

Pulp chamber is slightly contracted with 2 canal entrances on the floor.

Buccal canal bifurcates after 5 mm into two canals, each with their own portal of exit. This bifurcation copies the outer buccal root configuration. Because of the bifurcation and significant curvature in the apical third, shaping of the buccal root canals presents a challenge. Buccal root canals have apical diameters 0,13 mm and 0,12 mm.

Palatal root canal has a slight curve buccally and is 0,11 mm wide at the apex.





ENDOTOOTH 84

- lower deciduous molar (84 ISO notation) with 2 mesial and 3 distal root canals
- intact (non-accessed)

Apical diameters are 3x 0,11 mm, 0,19 mm and 0,14 mm. Model is designed to practice pulpotomy, pulpectomy and endodontic treatment on deciduous teeth





ENDOTOOTH 11 INCOMPLETE ROOT FORMATION

- upper incisor (11 ISO notation) with incomplete root formation
- accessed
- available with/without pulpal tissue

Upper incisor with extra wide apical opening due to incomplete root formation with diameter of 1,3 mm. It makes the model perfect for practice of a bioceramic apical plug placement.





ENDOTOOTH 21 INTERNAL RESORPTION

- upper incisor (21 ISO notation)
with internal resorption
- accessed
- difficulty: 4,5/5

Upper incisor with one root canal and specific pathology – excessive internal resorption. In the middle third of the canal there is a middle-sized resorption cavity that does not perforate the outer surface of the tooth. In the apical third there is a more extensive resorption cavity that perforates the root and communicates with periodontium. The root canal itself is relatively wide and oval on the cross-section. The apical diameter is 0,4 mm.





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O ABOUT US

BIOVOXEL TECHNOLOGIES utilizes technologies of the fourth industrial revolution in medicine.

Our main field is 3D printing, 3D planning and education in dentistry.

Our goal is to change and innovate clinical education and to provide technological support for clinicians.