

**About the Author**



My name is Giuseppe Chiodera, I was born in 1979 in Brescia. I graduated in 2004 at University Of Studies Brescia, the town where I live placed in between mountains and lakes. My activity is focused on diagnosis, detect and manage caries lesions in the very early stages. Thanks to the university of Bern and Ginevra i had the opportunity to follow that street meeting great researchers. Today my passion is Aesthetic and Conservative Dentistry, especially find new tips and tricks. My professional hobbies are Diode Laser and Ozone. I have the pleasure and the opportunity to do lectures in different university masters and course, a great chance to share ideas and learn.

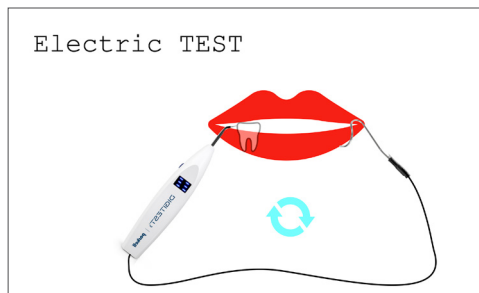
Product reviewed by



# Digitest<sup>®</sup> 3: a pulp vitality tester with a fast learning curve

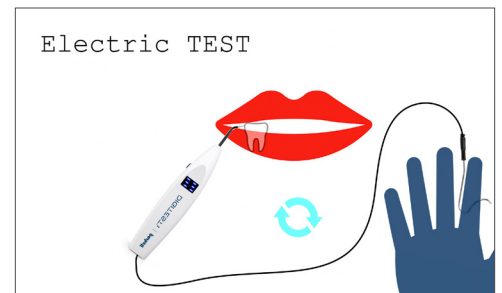
By Giuseppe Chiodera | 29 June 2021 | *Style Italiano*

Digitest 3 (*Parkell*) is an easy to use instrument that allows clinicians to check the vitality of a tooth in the diagnostic phase and control the tooth over time.



**Fig. 1 – What is it?**

Digitest 3 is an electrical tester that uses electrical impedance. To make it works, we should hook a "hook" to the lip (very close to apex detectors) and then touch the tooth with the Digitest 3 tip.



**Fig. 2**

Alternatively, the manufacturer suggest that the patient holds the "hook". The electrical circuit should be closed.

Electric TEST

Smart TIPS

- Crown
- Bridges
- Big resto



**Fig. 3 – What's in the box**

- 1 Digitest 3 Pulp Tester;
- 1 Ground Wire and 1 Clip;
- 4 Autoclavable Probe Tips for all different clinical situations

The following are some different clinical cases in which I used Digitest 3





**Fig. 4:** Close to an old onlay.



**Fig. 5:** Stump under a crown.



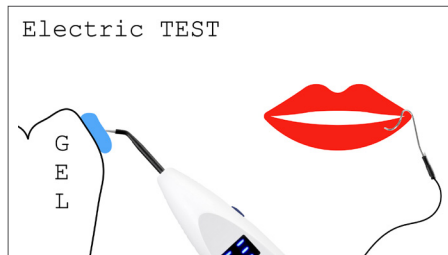
**Fig. 6:** Thin, curved tip for distal access to a crown or fork.



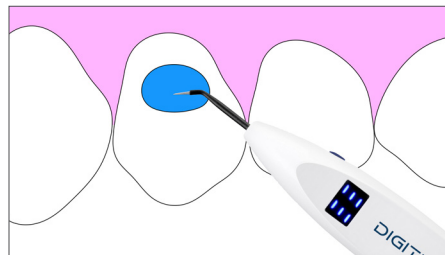
**Fig. 7:** Straight thin tip for direct access to an exposed tooth collar.



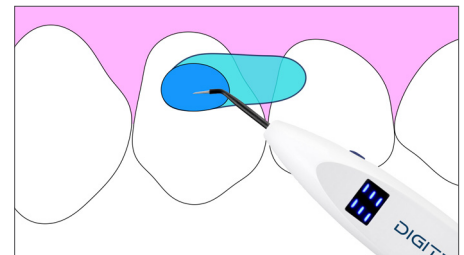
**Fig. 8:** Curved tip for palatal access to an abutment.



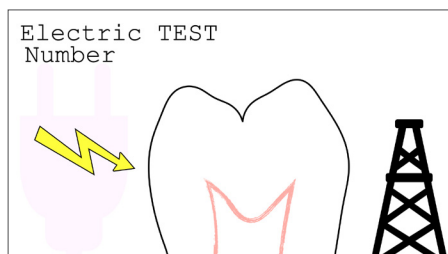
**Fig. 9: How it works:** Placing some gel toothpaste on the top of the instrument helps to conduct electricity in order to have a more precise measurement.



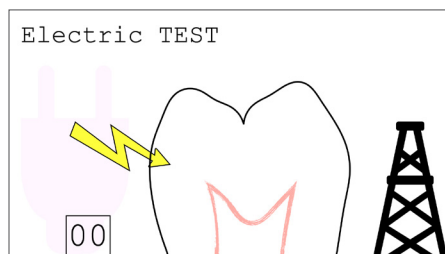
**Fig. 10:** It's important to put the gel only on the tooth we are testing.



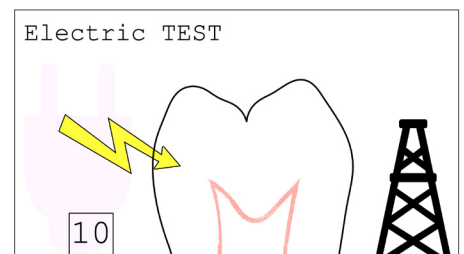
**Fig. 11: TIP:** The gel should not "go" on other nearby teeth, otherwise it will conduct the electrical impulse to them too! In this example, the test will not only measure the values of the first premolar, as it should have done if the gel had remained only on that tooth.



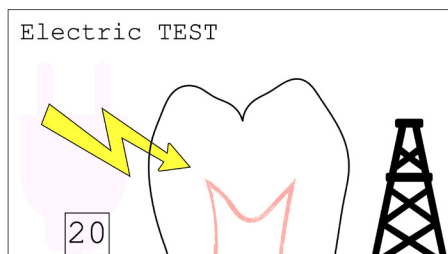
**Fig. 12:** When we turn on Digitest 3 a progressive discharge of electricity starts. We can decide to increase it or to stop it at any time.



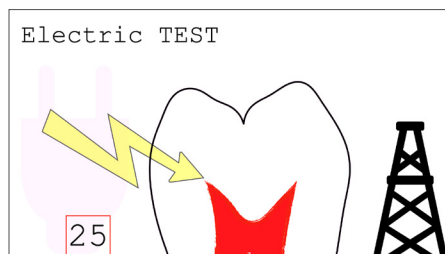
**Fig. 13:** Start from 0



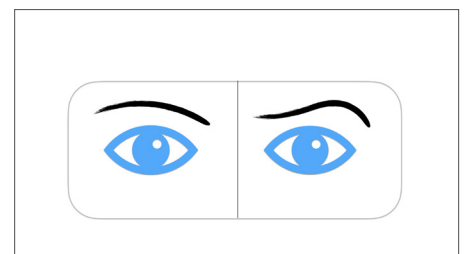
**Fig. 14:** and then increase



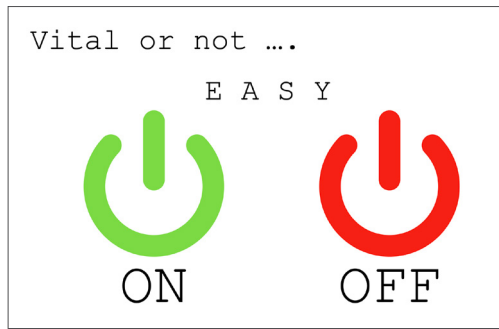
**Fig. 15:** more and more



**Fig. 16:** until we reach a response from the patient. Digitest 3 can be used to measure if the tooth is sensitive (and therefore alive) and also by what numerical value is sensitive.



**Fig. 17: TIP:** It's important to notice, in addition to the patient's conscious response, also and above all the unconscious response given by the eyebrows. When the patient starts frowning, it means that he is starting to feel pain. This is the first signal.



**Fig. 18:**  
**Digitest 3 can be used in 2 different cases:**

1. **To detect if a tooth is alive:**  
If the patient, even if we increase the electrical impulse till the end of the scale (maximum 66), perceives nothing, then most probably the tooth is no longer vital.
  - **TIP:** It's always useful to test also a nearby or contralateral tooth, to verify that the instrument is working well and to make the patient understand what he should have felt.
2. **To detect if a restored tooth is still viable over time:**  
If we made a deep restoration or a pulp hooding we need to check over time if this restored tooth is still alive or is most probably no longer viable.



**Fig. 19:** Let's see the step by step procedure.



**Fig. 20:** Put the gel both on the tooth and on the tip of the instrument.



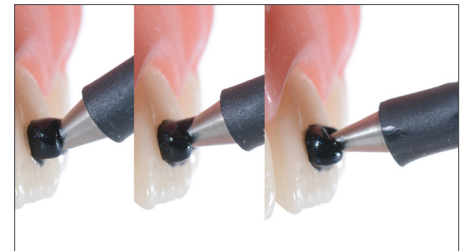
**Fig. 21:** Touch the tooth where you put the gel before. Using gel toothpaste helps as these are usually high density gels.



**Fig. 22:** In this case, instead, we start with the gel on the tip of Digitest 3. **TIP:** If you want to check that the gel does not touch other teeth, I suggest you to use a colored gel, to work as a stain with teeth and gum.



**Fig. 23:** Once in contact, we can start the measurement.



**Fig. 24:** Different tip angle do not affect the measurement.



**Fig. 25:** Using the tip without gel we will have no conduction and the measurement will be less precise.



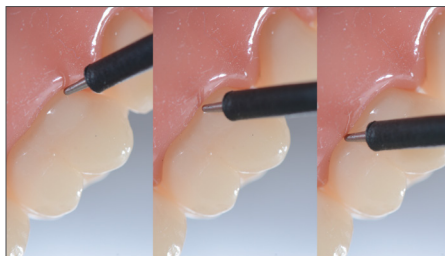
**Fig. 26:** Better to add some toothpaste...



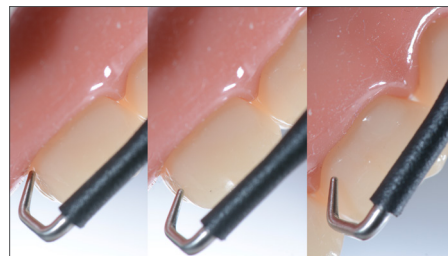
**Fig. 27:** The curved tip is perfect for difficult to reach areas...



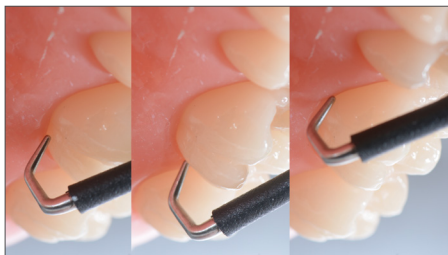
**Fig. 28:** Thanks to the different shapes of Digitest 3 tips, we can reach all areas useful for testing the tooth.



**Fig. 29:** Vestibular areas



**Fig. 30:** In the distal portions



**Fig. 31:** As well as in the palatal – lingual portions.

## Conclusions

It is an incredibly easy to use instrument, useful for both diagnosis and monitoring! Compared to other tests such as the traditional cold cotton one, Digitest 3 is less annoying for the patient, as we can modulate the discharge intensity. Immediate understanding by both the clinician and the patient!