

# PROSTHODONTICS

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## Effect of two irrigants on adaptability of cross-linked gutta-percha core

**Nirvana Khalaf Mansour**

Cairo University, Egypt

**Objective:** The objective of this study was to evaluate the effect of two irrigants, Nano silver, and QMIX 2IN1 on the adaptability and seal ability of gutta-core.

**Materials and methods:** A total number of 120 extracted human straight single-rooted premolars were collected. Root canals were cleaned and shaped using the crown-down technique to a master apical file size of 40. Samples were divided into three groups (n=40) according to the irrigating solution: G1, 5.25% naocl; G2, Nano silver; G3, QMIX 2IN1. Each group was subdivided into two subgroups according to the obturation materials. Subgroup A, Gutta-Core, and subgroup B, Thermafil. Stereomicroscope and fluid filtration methods were used to evaluate the adaptability and seal ability of Gutta-Core and Thermafil. Data were statistically analyzed using one-way ANOVA.

**Results:** Regarding the obturating materials, Gutta-Core showed statistically significantly higher adaptability mean values than Thermafil. The apical level of the root canal showed the highest leakage than the middle and coronal levels.

**Conclusion:** QMIX 2IN1 and Nano silver irrigants enhance the adaptability of obturating material. Gutta-core is a promising obturating material. Adaptability is a problem with the apical third of the root canal.

**Keywords:** Adaptation, Gutta-core, Fluid filtration, Nano silver, qmix, Stereomicroscope, Thermafil.

### Recent Publications:

1. Fayyad, Dalia & Khalaf, Nirvana. (2023). Reparative calcified barrier characterization after mixing injectable-platelet rich fibrin with bioactive direct pulp capping agents; an exp. Study. 2. 89-98.
2. Khalaf, Nirvana & Fayyad, Dalia & Sharaan, Marwa & Hashem, Mohamed. (2021). Effect of Injectable-Platelet Rich Fibrin on marginal adaptation of Bioactive Materials Used as Direct Pulp Capping; An Experimental Animal Study. 2.

### Biography

Nirvana k. Mansour, an endodontic specialist. She graduated from Cairo University, in 2009 with a bachelor's degree. She earned her master's Degree in endodontics in 2016 and a Ph.D. Degree in 2021. She represented as a speaker at a pan-endo international conference and as a speaker at the yrc2021 conference, Speaker at the Suez dental syndicate scientific day 2021, Speaker at the Ismailia dental syndicate scientific day 2022, speaker at International Dental Expo & Clinical Congress 2022. She serves as a member of the scientific committee of Princess Fatma Academy, Ministry of Health.

dr.nirvana34@gmail.com