Retraction Made Easy by the 3M™ ESPE™ Retraction Capsule

Product Features and Benefits

General advantages:
- Enables a clean, safe and easy sulcus and interproximal maintenance
- Effectively opens the sulcus
- Hygienic unit-dose capsule

Versus denture retraction cords:
- Conventional and time-consuming retraction process: 50% faster
- Lower risk of hemorrhage after removal
- Gentle on tissue for improved patient comfort

Versus competing pastes:
- Easy access into the sulcus
- Narrow interproximal access
- Easy access into the sulcus

- Better interproximal access
- Easy access into the sulcus

- Easy sulcus access
- No discernible dispenser residue

- Easy extrusion of high-viscous paste

- Hygienic and clean unit-dose capsule

- Attaches securely to most composite dispensers

- Easy sulcus access and opening

How to use the 3M™ ESPE™ Retraction Capsule

Simple steps to a clean and dry working field

1. The 3M™ ESPE™ Retraction Capsule fits most composite dispensers. Extrude a small amount of paste and discard.

2. Insert retraction capsule tip into the sulcus. The capsule is mechanically retracted.


4. Insert additional retraction paste for a minimum of 2 min.

5. Complete retraction process with suction.

6. Vascular retraction paste can be used in combination with retraction cords.

Technical Data Sheet

Indications
For more than 45 years, 3M ESPE has led the way in the field of dental impressions. Whether with the introduction of Impregum™ Polymer Impression Material or the digital "3D-in-Motion" Technology—solutions developed by 3M ESPE deliver clinical results that help set the standard for patient care and dental practice success. Now the innovative 3M™ ESPE™ Retraction Capsule sets another groundbreaking milestone: It is a single-step effective means of gingival retraction. Because of the capsule’s fine tip, the astringent retraction paste can easily be inserted right where it belongs—right into the sulcus.

Product Description
3M ESPE Retraction Capsule delivers a retraction paste that contains 15% aluminum chloride. The astringent retraction paste is placed directly by the capsule tip, a polished, easy-to-use, hygienic anti-class dispenser. The capsule is compatible with most composite dispensers.

Introduction


Clinical Performance

Gingival retraction—the prerequisite for successful precision impressions

Gingival retraction plays an important role in accurate impressions. Normally, the margins of preparations are not accessible for impression material when bracket plus or substructurally, and the enamel may be filled with saliva, lacked, or other fluids after tooth preparation. Therefore, effective retraction is needed to create a space around the preparation and to avoid dry saliva on the area.

Key results of field testing

After field testing, over 250 dentists worldwide provided clinical feedback on the 3M™ ESPE™ Retraction Capsule. Here’s what they had to say:

- 88% of dentists were overall satisfied or very satisfied
- 74% of dentists were satisfied or very satisfied with the innovation
- 93% of dentists were satisfied or very satisfied with the hemorrhage
- 84% of dentists would recommend the 3M™ ESPE™ Retraction Capsule to colleagues

Also great for digital impressions

The 3M ESPE Retraction Capsule retains the special needs of digital impression systems. In a survey with customers (n = 159) using a digital impression system (Leica DuoChip Plus Scanner; CED Co., Ltd), years were asked to evaluate the 3M ESPE Retraction Capsule as part of their self-fabrication management prior to scanning a digital impression:

- 84% of dentists stated using the 3M ESPE Retraction Capsule is faster than using retraction cords. Dentists reported the capsule being 60% faster on average than cords.
- 80% of dentists stated the 3M ESPE Retraction Capsule is easier to apply and overall more convenient to use. It is also faster to remove than other retraction pastes.

Advantages of the 3M ESPE Retraction Capsule

Advantages vs. Cords

- 84% of dentists stated using the 3M™ ESPE Retraction Capsule is easier than using retraction cords.
- 85% of dentists stated the risk of posthemorrhage after using 3M ESPE Retraction Capsule is lower than using retraction cords.

Advantages vs. Competing Pastes

- 80% of dentists stated the paste application with the 3M ESPE Retraction Capsule is easier than with competitive retraction pastes.
- 59% of dentists stated the removal of the 3M ESPE Retraction Capsule is easier than with competitive retraction pastes.

Scientific Data

Retraction pastes vs. cords: effect on gingival health

A recent study investigated the effect of retraction materials on gingival health and, in particular, the injury of the gingival sulcular epithelium. The study used various retraction pastes with different tissue manipulation and chemical techniques. Retraction pastes were found to be far better than cords, as assessed histologically. This resulted in a grading system for cords that could lead to gingival recession and marginal exposure of the dentin, which severely affects esthetics. Moreover, this retraction procedure is inconvenient, time-consuming, and uncomfortable for the patient. The study confirmed that this method had several disadvantages and showed significant gingival recession after operation, while cords caused no significant gingival changes.

In another study, it was shown that the use of cords as well as the use of paste (Exampal) caused a temporary gingival inflammation, which was greater with Exampal. All of the inflammation recovered. Paste did not reduce bleeding during or after retraction.

Influence on bond strength of self-adhesive cements

It is well known that residual retraction pastes on the prepared tooth have a negative influence on the bond strength of bonding or cements when cementing them. An in vitro study, the effect of Exampal and 3M ESPE Retraction Capsule on the bond strength of two self-adhesive cements, RelyX™ Unicem Self-Adhesive Universal Resin Cement in the Clicker™ Dispenser and Maxcem Elite, on human superficial dentin was investigated. The bond strength of RelyX Unicem cement decreased when retraction pastes were used; the decrease with Exampal was significantly greater than retraction paste by 3M ESPE. The bond strength of Maxcem Elite cement improved somewhat when placed on dentine that had been exposed to retraction paste by 3M ESPE, in both the crown and root conditions.

Rinse time

In another study it was shown that the autogenous retraction paste from 3M ESPE was easier to rinse off than Exampal and Exampal Premium. The authors state that “… this may influence subsequent procedural steps by reducing contamination …”. The innovative 3M ESPE retraction paste can be easily rinsed off.

To view the clinical videos, visit www.3MESPE.com/Retraction