

# Isolite Clinical Applications

By Dr. Randy Bryson



## OVERVIEW

I am always looking for something to reduce the stress for myself, my team, and my patients.

We all encounter anxious patients, and are expected to perform delicate and intricate procedures while dealing with active tongues, saliva, flying restorations, and copious amounts of moisture. Additionally, these procedures and restorations require precision that is often measured in microns. How can we even begin to try to accomplish this without the proper isolation to create a safe clinical treatment area for the patient, the dentist, and the team?

## ABOUT THE AUTHOR

### Dr. Randy Bryson



Dr. Randy Bryson, a 1986 graduate of Temple University School of Dentistry, has a general dental practice with his wife Toni Margio in Las Vegas, NV. Dr. Bryson is a Fellow of the International Academy of Dental Facial Esthetics and is active in local dental study clubs, including the Las Vegas Chapter of the Seattle Study Club. Dr. Bryson has lectured at many local and national dental conferences, including the Greater New York Dental Meeting.

**E**stablishing proper isolation greatly improves the chances of clinical success. Isolation also keeps the patient safe from accidental injury to the tongue or cheek during the procedure.

Historically, we've used familiar methods of isolation—cotton rolls, dry tips, and rubber dam—with varying degrees of effectiveness, placement difficulty, and patient comfort. When the Isolite system was introduced, it changed the isolation game for all intraoral procedures.

Between the 3 available systems—Isolite, Isodry, and Isovac—we can provide effective isolation with the added benefits of suction, illumination, retraction, and a mouth prop.

The Isolite model offers 5 levels of lighting, including one that prevents polymerization of any of our dental materials during bonding procedures. Also, a flange helps to reduce saliva from the parotid gland by suction, without having to use cotton rolls or dry tips. The dual vacuum system keeps the treatment field dry from saliva build-up and quickly removes water from the handpiece spray. All 3 systems have the unique ability to enable the dentist to turn off the dual vacuum completely or just utilize the upper or lower control, which comes in handy with sensitivity issues on some of our patients.

I use all of these methods of isolation at various times and in different clinical situations:

- restorative and fixed prosthetic dentistry
- endodontic procedures where placing a clamp is either not possible or does not warrant the risk of potential tissue damage that would result from clamp placement
- oral surgery to keep the patient open and prevent accidental aspiration of teeth and implant components
- hygiene procedures such as root planing/scaling and placing sealants on children.

In this article, I will focus on the use of Isodry for:

- placement of direct composite resin restorations,
- digital impressions and indirect preparation/placement;
- and scaling and root planing.

### Direct Composite Placement

Moisture is often the enemy of dentin adhesion when it comes to the longevity of a composite resin restoration. Obtaining isolation in the treatment zone is imperative.

Historically, 4-handed dentistry has been essential for proper isolation and control of the patient and the treatment area. The Isolite System vacuum has changed my expectations and the duties of team members during a clinical procedure. Instead of focusing on retraction of the tongue and cheek my assistants are free to concentrate on successful direct composite resin placement.

Placing the Isolite Mouthpiece is very easy and takes less than 1 minute. The system's disposable (single-use) mouthpieces come in 5 sizes to accommodate all patients: Small, Medium, Medium DV, Large, and Pedo.

The Isolite Mouthpiece immediately establishes clear vision by retracting the tongue and providing a bite block for the contra-lateral side of the mouth. Its flexible flange helps to retract and protect the cheek on the working side. When working on the buccal surfaces of second molars, the Isolite gives me more confidence that I won't inadvertently nick the patient's cheek with a bur.

For many reasons, I prefer the Isolite Mouthpiece for placing direct composites. We have already established that the Isodry dual vacuum system is exceptionally effective for handling the build-up of saliva and water while eliminating the task of suctioning. In addition, the Isolite Mouthpiece prevents many of the challenges presented by rubber dam isolation.

Rubber dam makes it more difficult to place either a Tofflemire matrix band or one of the different ring clamp systems; Isolite Mouthpiece eliminates this problem. When treating Class V restorations, Isolite Mouthpiece eliminates the need to ligate the treated tooth with dental floss to keep

the rubber dam below the cervical restoration. If a patient requires more anesthesia mid-procedure, it is easier to give an infiltration when using Isolite as opposed to the rubber dam which requires removal of the frame and rearrangement of the dam. You also avoid catching the rubber dam with the bur and hearing the loud screeching noise that startles both the dentist and patient. In addition, the Isolite Mouthpiece makes it easier when dealing with missing, tipped, and rotated teeth and those that have tight contacts.

### Digital Impressions and Indirect Preparation/Placement

To capture an accurate digital impression, the patient's tongue must be out of the way, the cheek retracted, and the area kept dry. Any moisture or movement will distort the digital images.

The stable and improved retraction obtained with the Isolite Mouthpiece makes capturing a digital impression much easier. The bite block on the mouthpiece enables even the most difficult patient to remain open and stable during the scanning process. Digital scanners vary in size and design. The Isolite Mouthpiece accommodates all of them, enabling the user to capture even the tough areas like the upper 2nd molars.



Figure 1—With its built-in bite guard, the Isodry System provides comfort for patients during lengthy dental procedures. The 5 different sizes of mouthpieces allow the dentist to meet individual patient needs.



Figure 2—Using Isolite Systems is a game changer when it comes to 4-handed dentistry. Both the dentist and the dental assistant are free from worrying about retraction and suctioning, allowing them to concentrate on providing the best dental care for their patients.

The Isolite Mouthpiece is very helpful in preventing accidental aspiration of restoration. When removing a failing crown or bridge. Another valuable advantage of the Isolite is the bite block component of the apparatus. Many times during a long procedure, such as quadrant dentistry, a patient's jaw starts to weaken and shake due to fatigue. With the muscles more relaxed in a closed position rather than stretching open, the Isolite Mouthpiece significantly reduces muscle soreness and fatigue. It is true that a bite block can be used by itself, but it is more cumbersome as a stand-alone component, and doesn't address moisture control.

Successful placement of the fabricated indirect restoration from our digital impression is also simplified with Isodry vacuum capability. Whether you decide to use traditional cement or a bonding resin system, you want to ensure control. Use of the Isodry vacuum helps reduce the risk of an improper seating or contamination to the prepared tooth due to saliva. The retraction obtained with the Isodry System vacuum simplifies and speeds clean-up of excess cement after polymerization.

### Scaling and Root Planing

Most practices don't have the resources to supply a dental assistant for their dental hygienists during patient treatment. However, they still have to deal with many of the difficulties discussed earlier that dentists encounter. Hygienists have to treat patients with a sensitive gag reflex, those who have difficulty opening, and some who feel the need to frequently



Figure 3—The Isolite System uses a disposable mouthpiece to assist the dental team in addressing infection control standards.

swallow during dental treatment. We want our hygienist to have the very best chance for a successful outcome for their treatment, and at the same time provide comfort and safety for our patients. The Isolite Mouthpiece fills this need.

For dental hygienists who are certified to use a soft-tissue diode laser as part of scaling and root planing, the Isolite Mouthpiece simplifies the process by keeping the tongue and cheek out of the way. Also, because power scaling has become a regular part of scaling and root planing, the mouthpiece's efficient removal of water build-up is appreciated by all patients.

Our patients are being educated and exposed to information on the associated health risks with untreated periodontal disease, and they are becoming more accepting of recommended dental treatment. We want to give our patients and our hygienists the very best chance in treating this disease. The Isolite Mouthpiece will efficiently assist dental hygienists throughout their treatments, without the assistance of another dental team member. The hygienist has complete control of both the upper and lower quadrants when an Isolite is in place.

Sealants in children also become a breeze with the usage of the Pedo sized Isolite mouthpiece, and longevity is assured with the proper isolation.

### Conclusion

The Isolite Mouthpiece has many advantages that enhance dental procedures, improve safety, and make our patients more comfortable. A small percentage of the patient population is not going to tolerate the mouthpiece, just as some patients cannot tolerate the placement of a rubber dam.

For endodontic procedures, rubber dam remains my first choice for isolating a single tooth, provided it can receive a clamp easily.

In writing this article, I asked many of my patients how to describe their experience with the Isolite Mouthpiece. The feedback was very positive, and they felt it made the procedure much more tolerable. Some of the more common comments were they felt less jaw fatigue, didn't worry about where to place their tongue, and didn't have the feeling of water build-up. Many are impressed when I use it, since they never had it as an option before.