

**GC TiON™ In-Office Tooth Whitening System (GC America Inc.)  
(Project 06-25) (7/07)**



GC TiON™ is a light-activated in-office bleaching system. It is indicated for whitening discolored teeth due to aging, extrinsic staining not removable by polishing agents and staining caused by systemic disease. This product can be used as a stand-alone treatment or in conjunction with GC America's TiON™ Home Bleach Kit. The active ingredients in the office system are 30% hydrogen peroxide and 30% carbamide peroxide. According to the manufacturer, this combination of bleaching agents causes less treatment sensitivity. The system includes GC TiON Reactor liquid which contains a nitrogen-doped, titanium-dioxide photocatalyst that can be activated with any commercially available bleaching light or visible light curing (VLC) unit. Prior to bleaching, the teeth to be whitened are cleaned with TiON prophy paste and the marginal gingival tissues are isolated and protected from bleaching agents by either a rubber dam or GC TiON Gingival Protector, a light activated resin barrier material that is supplied in the kit. After the teeth have been isolated the Reactor liquid is painted on the teeth. The syringes containing the whitening liquid and a whitening gel are joined together and the materials in the syringes are thoroughly mixed. After mixing, the syringes are separated and the mixture is expressed directly onto the involved teeth in a 0.5- to 1.0-mm thick layer using the supplied disposable dispenser tip. Irradiation of the material can be accomplished with either a whitening/bleaching light, following manufacturer's instructions or with a VLC unit, one minute per tooth. When using a VLC unit, the light should be placed as close to the tooth as possible. The process can be repeated up to a maximum of three cycles. After completion of the bleaching procedure, Prospec™ MI Paste, an amorphous calcium phosphate (ACP) with casein phosphopeptides (CPP) is applied to the teeth with a prophy cup, finger, or tray to relieve any post-bleaching sensitivity, minimize shade relapse, and buffer against any acid produced postoperatively by plaque. GC America recommends that the MI Paste should remain on the teeth for 3-5 minutes for maximum effectiveness. The GC TiON™ In-Office system is packaged as a single-use kit in two boxes. The smaller box containing the whitening gel and liquid should be refrigerated at 2-8 C.



**Manufacturer:**

GC America Inc.  
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**Suggested Retail Price:**

\$87.50 GC TiON™ Tooth Whitening System kit (item number 440002) contains:

- 1 syringe of whitening liquid
- 1 syringe of whitening gel
- 1 bottle of Reactor
- 1 syringe of Prospec™ MI Paste
- 1 syringe of Gingival Protector
- non-fluoridated prophy paste
- face drapes
- shade guide
- accessories

**Government Price:**

\$52.50 GC TiON™ Tooth Whitening System kit (item number and contents listed above)

**ADVANTAGES:**

- + All components of the in-office system in one kit
- + Simple to maintain proper supply of kits to meet treatment needs
- + Evaluators noted that the product generally produced desired result for patients
- + Easy to mix and apply whitening gel
- + Produced minimal or no post-treatment thermal sensitivity during the evaluation
- + Can be used with bleaching/whitening light or visible light curing unit

**DISADVANTAGES:**

- Whitening liquid and gel requires refrigerated storage
- More costly than in-office systems packaged for multiple patient treatments
- May require more than one treatment

**SUMMARY AND CONCLUSIONS:**

The GC TiON™ In-Office System was judged to be a safe and effective in-office bleaching technique by clinicians, with high patient satisfaction being reported. The product uses a "Reactor" material that is painted on the tooth surface before a freshly mixed viscous whitening solution is syringed on the tooth. The applied mixture can be irradiated with a whitening/bleaching light or with a VLC unit commonly found in federal dental clinics for restorative procedures. TiON was highly appreciated by the evaluators, having very good clinical handling characteristics in being easy to mix, place and remove. Although laboratory testing found the bleaching material to be slightly acidic, the pH was less acidic than other comparable materials. Furthermore, laboratory testing found negligible pulpal temperature differences than normally experienced with VLC unit use. Clinicians should be aware that proper isolation is required during treatment because the gel's concentration of hydrogen peroxide and carbamide peroxide can cause irritation and burning when in direct contact with gingival tissue. Evaluators who used the Gingival Protect resin dam material included in the kit found that it was very effective in isolating the treated teeth. The TiON kit is packaged as a complete system for one patient treatment. Prophylaxis paste and Prospec™ MI Paste are included with the system. For clinics that perform in-office bleaching infrequently this may be a convenient system to use since it would help ensure that in-office whitening treatments are accomplished with bleaching chemicals that have full potency. Clinics that routinely treat patients with in-office bleaching treatments may want to consider alternative products that are packaged for multi-patient use. The GC TiON™ **In-Office Tooth Whitening System** is rated **Excellent** for use in US Air Force dental facilities.