

The Future of  
**Bio Protection**  
is Here



**Dental Restorative System** with **Antibacterial Technology**  
Reduces Mineral Loss that is Part of the Caries Process



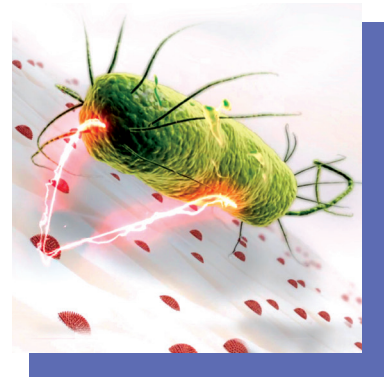
# The Story Behind the Science

## New Restorative Materials with Antibacterial Technology that Fights Demineralization and Secondary Caries

One of the biggest issues within dentistry is managing the marginal integrity of a restoration and fighting the future demineralization and secondary caries.

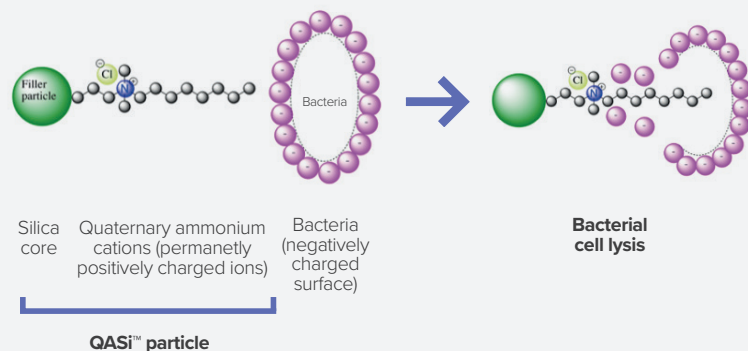
Nobio developed a non-leaching, long-term antibacterial QASi technology that is incorporated into the Infinix resin based dental restorative materials product-line that has been cleared by FDA.

Nobio technology electrostatically kills bacteria that come in direct contact with the restorative material, at its interface with the cavity wall, to reduce mineral loss that is part of the caries process.



### Mechanism of Action

**QASi™ particles are solid, macromolecules with a silica core and a high concentration of antimicrobial groups (quaternary ammonium), which are covalently bound to the silica core.**



### Proven Advantages

**QASi™ particles, a non-leaching, long term antibacterial technology**

**Integrated into the restorative material**

**Effective against a broad spectrum of bacteria and viruses**

**Kills bacteria only where needed at the interface between the tooth and the cavity wall restoration, where the damage occurs**

**Reduces mineral loss that is part of the caries process**

**Does not impact normal oral flora**

**Unlikely to induce resistance**

# Clinical Evidence

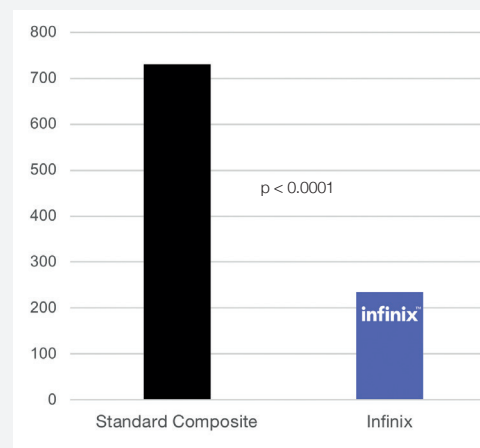
## Clinical Studies

### Demineralization Prevention with a New Antibacterial Restorative Technology

Prevention of mineral loss by Infinix composites (in situ study),  
Rechmann, *Clinical Oral Investigations*, 2020  
Self-control (split-mouth) in situ clinical study at UCSF (n=25).

De-mineralization from enamel adjacent to standard composite was three fold higher than enamel adjacent to Infinix composite, and the effect was present in all cases.<sup>(1)</sup>

### Mineral Loss from Adjacent Enamel ( $\mu\text{m} \times \text{vol} \% \text{ mineral}$ )



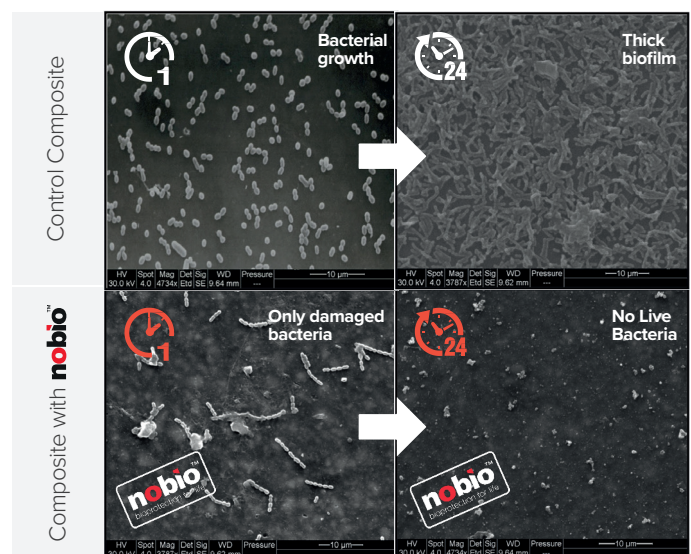
## Antibacterial Testing

QPEI particles were potent antibacterial agents,

- ✓ Did not leach out
- ✓ Inhibited breakdown of the composite
- ✓ Maintained their antibacterial action over time.<sup>(2)</sup>

## Effective Against High Bacteria Concentrations

*S. Mutans*  $10^9/\text{ml}$



Images: Scanning electronic microscopy (x4000)

For additional information or studies, go to [www.infinix.com](http://www.infinix.com)

References:

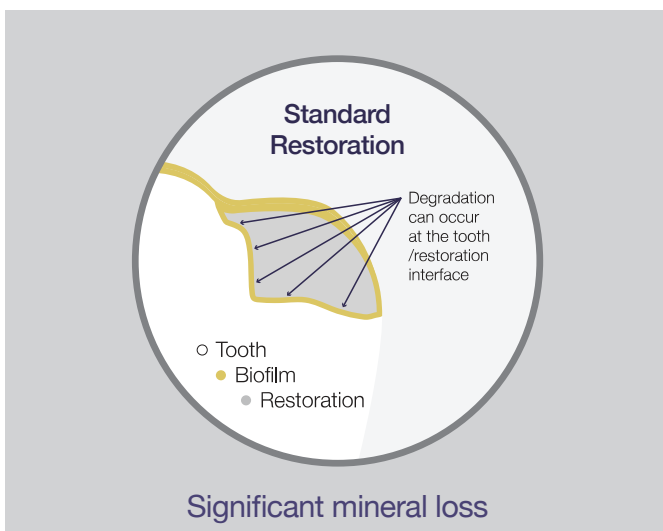
1. Clin Oral Investig. 2021 doi:10.1007/s00784-021-03837-4
2. Beyth et al, Biomaterials (2006)



# Infinix Product Line System to Ensure Optimal Results

Infinix Advanced Dental Restorative System that Provides Maximum Strength and Effectiveness

- ✓ **Easy to use, no learning curve** – using it does not require any change to the procedure
- ✓ **Provides 2-in-1 support - Restoration** (current tooth structure) + **Prevention** (future caries)
- ✓ **The QASi particles remain embedded in the polymerized resin matrix**
- ✓ **Proven reduction** in demineralization and future secondary caries
- ✓ **Excellent solution** for High Risk Caries Patients



” The QASi antibacterial particles remain in place and continue their action over time, eliminating the problems of leaching, loss of activity, unnecessary ingestion, and accumulation in the body and the environment.

John D.B. Featherstone, MSc, PhD, Professor Emeritus and Dean Emeritus,  
School of Dentistry, University of California San Francisco (UCSF), San Francisco, USA.

Clinical Case  
Class II MO  
Infinix™ Universal Composite (A2)  
Contribute by Dr. Yuval Wind DMD, Israel



# Infinix Advanced Restorative Products

## Infinix™ Universal Bond



The Infinix Universal Bond System that provides a proven **Antibacterial Cavity Cleansing Effect**

Light-Cured Self-Etch Two-step Bonding System (Prime and Bond)

- ✓ Bonding Agent with QASi Antibacterial Technology to provide continual antimicrobial support
- ✓ The system for maximum strength and antibacterial effectiveness
- ✓ Compatible with total-etch, self-etch and selective etch techniques
- ✓ Low risk of post-operative sensitivity
- ✓ Optimized marginal efficacy

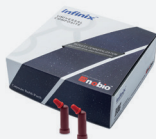
## Infinix™ Flowable Composite



Light-cured, low viscosity flowable composite for class III and V restorations, base liner and pit and fissures

- ✓ With QASi Antibacterial Technology to provide continual antimicrobial support
- ✓ Excellent handling
- ✓ Perfect adaptation to cavity wall
- ✓ Excellent radiopacity and good flow rate

## Infinix™ Universal Composite



Light-cured, high viscosity universal composite for class I through class VI indications

- ✓ With QASi Antibacterial Technology to provide continual antimicrobial support
- ✓ Outstanding performance
- ✓ Adaptation with structural integrity

The only dental composites with FDA clearance:

“The addition of QASi particles reduce demineralization, which is part of the caries-forming process.”

*To obtain maximum bond strength and antibacterial effectiveness, use Infinix Universal Bond with Infinix Composites*

## Ordering Information

**infinix**<sup>TM</sup>  
advanced dental restoratives

| Item No.               | Production information   |
|------------------------|--|
| <b>INF-UB-FP-MD</b>    | <b>Infinix<sup>TM</sup> Universal Bond</b><br>1 – 5 ml Bottle Primer<br>1 – 5 ml Bottle Bonding Agent<br>Technique Procedure Guide<br>Instructions for use |
| <b>INF-FL-FP-MD-A2</b> | <b>Infinix<sup>TM</sup> Flowable Composite</b><br>1 - 2g Syringe<br>Shade A2<br>10 Dispensing Tips<br>Technique Procedure Guide<br>Instructions for use    |

| Item No.               | Production information  |
|------------------------|---|
| <b>INF-UC-FP-SD-A2</b> | <b>Infinix<sup>TM</sup> Universal Composite</b><br>20 - 0.25g Capsules<br>Shade A2<br>Technique Procedure Guide<br>Instructions for use |
| <b>INF-UC-FP-SD-A3</b> | <b>Infinix<sup>TM</sup> Universal Composite</b><br>20 - 0.25g Capsules<br>Shade A3<br>Technique Procedure Guide<br>Instructions for use |



CELLERANT  
**BEST OF CLASS**  
TECHNOLOGY AWARD

RA-DNT-US-065 Rev. 02

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**nobio**<sup>TM</sup>