

# V VARDIS

SWITZERLAND

BIOMIMETIC DENTAL SCIENCE

V VARDIS PROFESSIONAL

## Biomimetic technologies for tooth preservation



# A disruptive technology with a variety of applications

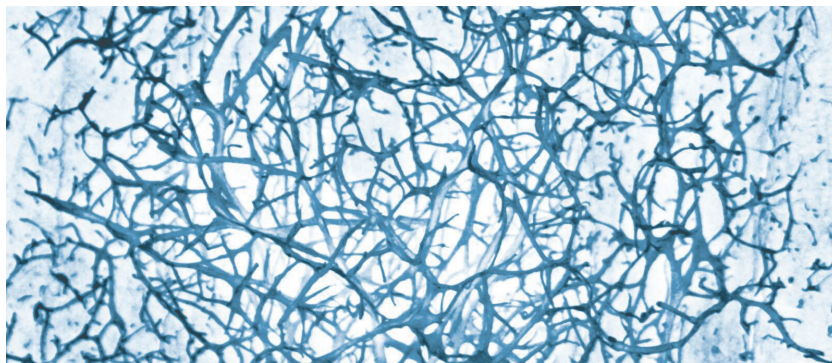
## vVARDIS BIOMIMETIC TECHNOLOGY

Nature as a model: During odontogenesis, an enamel matrix enables the ordered growth of hydroxyapatite crystals. Once odontogenesis is complete, the natural matrix is degraded. As a result, enamel cannot regrow or repair itself naturally.

The vVARDIS technology is a peptide-based technology that takes the enamel matrix as its model. Developed at the vVARDIS research centre in Switzerland, this technology has a high affinity for hydroxyapatite and can regenerate enamel by mimicking the natural biological mineralisation process.

This revolutionary, clinically proven, patented, and award-winning technology has many uses:

- In the liquid form, it can provide deep mineralisation of early caries safely, easily and without pain. It can diffuse into carious lesions where it self-assembles to form a three-dimensional biomatrix. This serves as a seed of crystallisation for new hydroxyapatite crystals and as a scaffold for new enamel.
- As a stable, three-dimensional matrix in dental gels, it adheres well to enamel and dentin thanks to the high affinity of the peptide to hydroxyapatite. It forms a stable protective barrier on the tooth surface and - together with fluoride and calcium ions - acts as protection against acids and as a desensitiser.
- In combination with hydroxyapatite, it creates a smooth, bright, and white enamel surface that naturally improves the aesthetic appearance of teeth while protecting the underlying enamel.



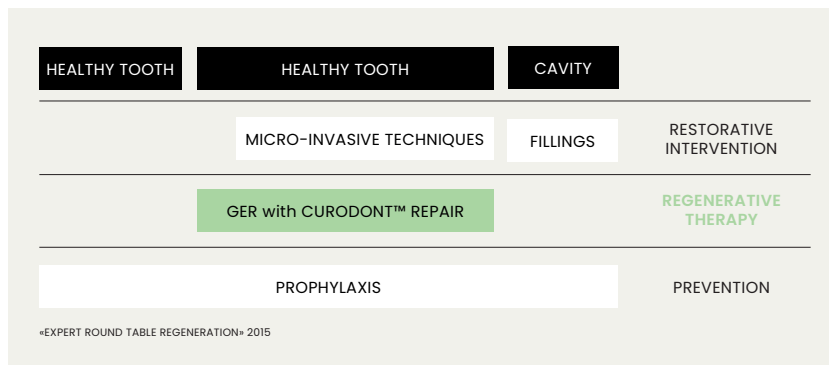
P11-4 nano-fibres (Curodont™) × 120'000.  
Picture: A. Aggeli and S. Maude, Leeds

## CURODONT™ REPAIR

# Guided Enamel Regeneration for initial caries treatment

## EASY, SAFE AND PAIN FREE

Guided Enamel Regeneration (GER) is the regenerative treatment of initial caries lesions (tooth decay). GER is the as yet untapped link between prevention and invasive restorative treatments. It enables effective therapy of initial caries, in-depth regeneration of the enamel and leads to the need for fewer restorations. CURODONT™ REPAIR offers all your patients a safe, easy and pain-free solution.



Fluoride varnishes stop approximately 35% of caries lesions after 6 months. CURODONT™ REPAIR stops and regenerates between 80% and 100% of early caries lesions in the same period.<sup>1,2</sup>

CURODONT™ REPAIR is applied with an easy-to-use applicator onto the cleaned surface of the caries lesion. It forms a biomatrix within the lesion. This biomatrix guides remineralization down to the bottom of the lesion. Calcium and phosphate ions from saliva are attracted to the biomatrix and new hydroxyapatite crystals are formed in the following weeks. The enamel layer is regenerated and the natural tooth is preserved.



New pack design as of April 2022

<sup>1</sup> Alkilizy M. et al. (2017), "Self-assembling Peptide P11-4 and Fluoride for Regenerating Enamel", Journal of Dental Research 1-7.

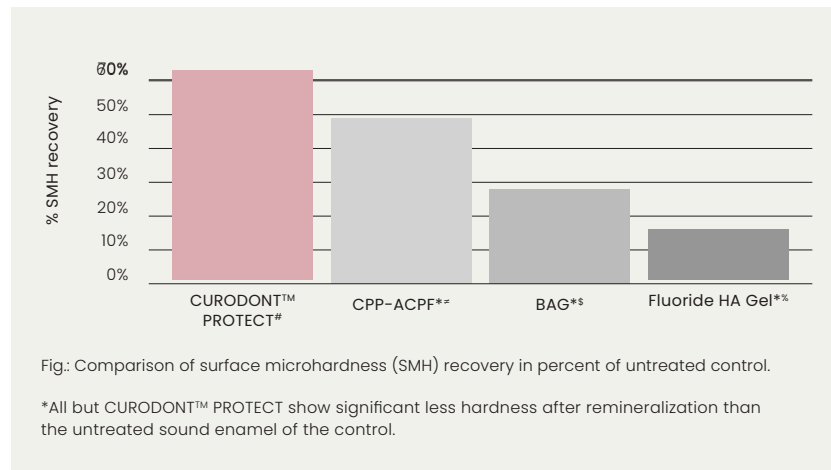
<sup>2</sup> Doberdoli D. et al. (2020), "Randomized Clinical Trial investigating Self-Assembling Peptide P11-4 for Treatment of Early Occlusal Caries", Scientific Reports 10:4195.

## CURODONT™ PROTECT

# Protection from caries and erosion in one

## THE IDEAL FINISH FOR A PROFESSIONAL CLEANING

CURODONT™ PROTECT is a remineralizing tooth gel with the vVARDIS peptide technology. In combination with calcium, phosphate and fluoride ions, it forms a stable protective layer on the tooth. This mineral-rich layer provides effective and long-lasting protection of enamel and dentine from bacterial and food acids. Thus, it counters the onset of caries, improves enamel hardness and protects the tooth from erosion. It can also stop white spots around orthodontic brackets, as such being an ideal preventive solution for orthodontic patients.



CURODONT™ PROTECT helps prevent the formation of early caries in the enamel around fixed orthodontic appliances, remineralizes the enamel and restores its hardness better than fluoride varnish.<sup>3,4</sup>

CURODONT™ PROTECT can be directly applied onto the tooth with a finger or with the help of a polishing cup. Simple handling, excellent protection and a unique smooth-tooth sensation makes CURODONT™ PROTECT the perfect finishing touch following professional dental cleaning or a bleaching session.



New pack design as of April 2022

<sup>3</sup> Jablonski-Momeni A, Nothelfer R, Morawietz M, Kiesow A, Korbmacher-Steiner H. Impact of self-assembling peptides in remineralisation of artificial early enamel lesions adjacent to orthodontic brackets. Sci Rep. 2020 Sep 15;10(1):15132

<sup>4</sup> Soares R, De Ataíde IN, Fernandes M, Lambor R. Assessment of Enamel Remineralisation After Treatment with Four Different Remineralising Agents: A Scanning Electron Microscopy (SEM) Study. J Clin Diagn Res. 2017 Apr;11(4):ZC136-ZC141

<sup>5</sup> Self-Assembling Peptide P11-4 (CURODONT™ PROTECT)

<sup>6</sup> Casein Phosphopeptide-Amorphous Calcium Phosphate Fluoride (CPP ACPF - GC Tooth Mousse Plus; GC Corporation, Tokyo, Japan)

<sup>7</sup> Bioactive Glass (BAG- NovaMin (SHY-NM, Group Pharmaceuticals Ltd, India))

<sup>8</sup> Fluoride enhanced Hydroxyapatite Gel (Remin-Pro (VOCO-GmbH, Germany))

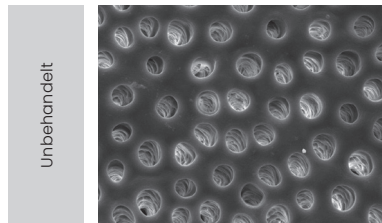


CURODONT™ D'SENZ

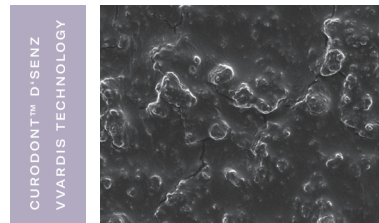
# Desensitizes and protects hypersensitive teeth

## FAST ACTION

CURODONT™ D'SENZ is a desensitizing tooth gel. The biomatrix, based on the vVARDIS TECHNOLOGY, swiftly forms a stable protective barrier on the exposed dentine. It takes 2 minutes for the open dentinal tubules to be effectively occluded inhibiting the transmission pain-inducing thermal and contact stimuli.



Exposed dentine with open tubules



Dentine with CURODONT™ D'SENZ – a stable protective barrier has formed after a single application.

CURODONT™ D'SENZ gives fast and easy recovery from sensitive teeth helping to effectively reduce pain for over 81% of all users.<sup>5</sup> An intensive cure ensures long-lasting protection.<sup>5</sup>

The fast desensitization and simple application makes CURODONT™ D'SENZ the ideal product for use before professional dental cleaning, ensuring a more pleasant treatment for both patient and hygienist. The repeated application at home by the patient leads to a long-lasting desensitization.



New pack design as of April 2022

<sup>5</sup> Schlee, M., Rathe, F., Bommer, C., Bröseler, F., & Kind, L. (2018). Self-assembling peptide matrix for treatment of dentin hypersensitivity: A randomized controlled clinical trial. *Journal of Periodontology*, 89(6), 653–660.

# Indications

## CURODONT™ REPAIR

Guided Enamel Regeneration for initial caries

	CURODONT™ REPAIR VWARDIS TECHNOLOGY
	CARIES THERAPY
PROXIMAL CARIES D1, D2, (D3)	●
OCCLUSAL CARIES	●
BUCCAL CARIES	●
PRIMARY TOOTH CARIES	●

Application:

Only use CURODONT™ REPAIR after dental hygiene cleaning.

- Removal of the organic pellicle with sodium hypochlorite 1–3 %, 20 sec.
- Etching with 35–37% phosphoric acid gel, 20 sec.
- Rinse and air dry
- Application of CURODONT™ REPAIR on the carious site, 5 min.

## CURODONT™ PROTECT | CURODONT™ D'SENZ

Effective Protection and Desensitization

	CURODONT™ PROTECT VWARDIS TECHNOLOGY	CURODONT™ D'SENZ VWARDIS TECHNOLOGY		
CARIES PREVENTION	APPLICATION	APPLICATION		
AFTER DENTAL HYGIENE CLEANING	●			
HIGH RISK CARIES PATIENTS	ONCE OR TWICE PER WEEK			
DURING ORTHODONTIC TREATMENT	ONCE OR TWICE PER WEEK			
INVISALIGN THERAPY	ONCE OR TWICE PER WEEK			
XEROSTOMIA	ONCE OR TWICE PER WEEK			
EROSION	REGULARLY - DEPENDING ON SEVERITY			
DENTINE HYPERSENSITIVITY				
EXPOSED ROOTS		ONE TO MULTIPLE USE DAILY UNTIL DESENSITISATION SUCCESSFUL		
BEFORE PROFESSIONAL CLEANING		●		
BLEACHING				
IN-OFFICE BLEACHING, HYPERSENSITIVITY		AFTER BLEACHING		
IN-OFFICE BLEACHING, EROSION PROTECTION	AFTER EACH BLEACHING			
HOME BLEACHING, HYPERSENSITIVITY		ON THE PAINFUL SITE		
IN OFFICE				
BEFORE THE VISIT	TREATMENT	ORTHODONTIC	PROPHYLACTIC	AT HOME
CURODONT™ D'SENZ	CURODONT™ REPAIR	CURODONT™ PROTECT	CURODONT™ PROTECT	CURODONT™ PROTECT
			CURODONT™ D'SENZ	CURODONT™ D'SENZ

Are you interested? Learn more on [professional.vvardis.com](https://professional.vvardis.com)

# vVARDIS

## White Enamel Serum

### INTENSIVE TREATMENT FOR THE ENAMEL

The vVARDIS Serum is a one-week intensive treatment which restores a layer of new, white enamel while simultaneously protecting and strengthening teeth. The peroxide-free Hydroxya-Peptide 500 patented formula in highest concentration combines the original biomimetic vVARDIS technology with hydroxyapatite. The Serum covers superficial irregularities and naturally brightens the enamel without causing sensitivity or gum irritation. It works on natural teeth as well as crowns, fillings and ceramic veneers. Without fluoride.

The vVARDIS White Enamel Serum showed significant and visible whitening after one application, increasing throughout the first week of home application and remaining stable for 30 days.<sup>6</sup>

### UNIQUE BENEFITS

- Protects and nourishes the enamel
- Effective and gentle whitening without attacking the enamel
- Does not cause sensitivity or gum irritation
- Easy and fast application (3 minutes)
- Silky-smooth feeling on teeth
- Makes white and yellow spots less visible
- Visible brightening of fillings, porcelain crowns and veneers
- Protects from stains
- Helps reduce teeth sensitivity
- Suitable also for teenagers
- Vegan, clean, sustainable



### HOW TO USE

For instructions on how to use it, please visit [vvardis.com](http://vvardis.com):



<sup>6</sup>Bommer C, Flessa HP, Xu X, Kunzelmann KH. Hydroxyapatite and self-assembling peptide matrix for non-oxidizing tooth whitening. J Clin Dent 2018;29(2):57-63

