

# Evaluation of a tooth gel with Curolox®-Technology as part of professional tooth-cleaning, with regards to patient satisfaction and the effects of hypersensitivity

A single-centered, uncontrolled post-marketing study

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## 1 Introduction

For general tooth-care and especially the treatment of tooth hypersensitivity, patients and dental professionals today have a broad choice of products at their disposal. The tooth gel Curodont Protect based on the patented Curolox-Technology offers a new biological approach. It contains a fibrous matrix formed by the self-assembling peptide P11-4 [1]. With the application of the gel on the tooth's surface, this matrix forms a protective barrier against acid attacks [2] and inhibits stimuli through occlusion of exposed dentine tubules, while promoting remineralization by supplying fluoride and calcium phosphate. The aim of the present study was to evaluate patient satisfaction after application of Curodont Protect on the one hand and the investigation of its benefits in the treatment of hypersensitive teeth on the other hand.

## 2 Methods



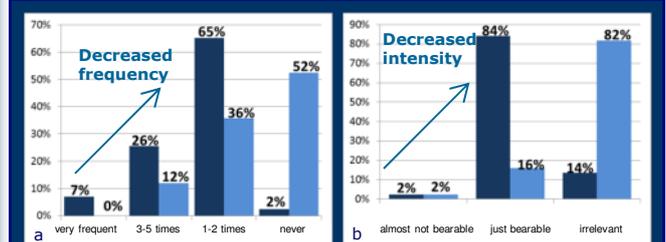
## 3 Results

- A total of 90 participant feedbacks were evaluated (Ø 48 years). 44 participants had pain-sensitive teeth.
- Participants with sensitive teeth mostly reacted to several stimuli: 75% to cold temperatures; 43% to brushing teeth, 25% to acid-contacts; 11% to heat.
- The taste and feeling of the tooth gel was evaluated as **«good and pleasant» by 93% of all participants.**
- The general patient acceptance of the tooth gel was positive: **76% of the participants with insensitive teeth recommend the tooth gel after a PZR.**

### Participants with hypersensitivity of teeth:

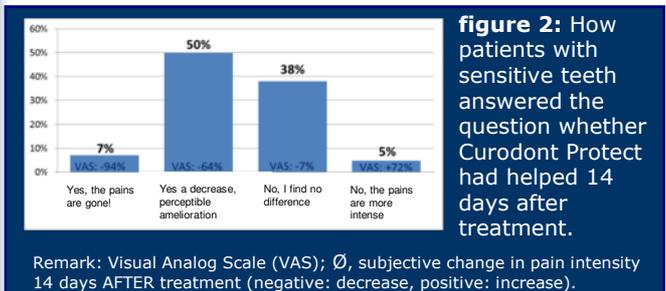
- Fall in the frequency and intensity of pain in most cases (figures 1a,b).

## 3 Result (Continuation)



**figure 1:** (a) Pain frequency and (b) pain intensity before treatment (dark blue) and 14 days after treatment with Curodont Protect (lightblue).

- Pain-relief with Curodont Protect for 57% of the participants; 7% are completely «painless» (figure 2).



**figure 2:** How patients with sensitive teeth answered the question whether Curodont Protect had helped 14 days after treatment.

Remark: Visual Analog Scale (VAS); Ø, subjective change in pain intensity 14 days AFTER treatment (negative: decrease, positive: increase).

- 65% of participants recommend the tooth gel for treatment against dentine hypersensitivity.

## 4 Discussion

The results show a **good patient acceptance** as well as a **pain-relieving ability in case of dental hypersensitivity**. The tooth gel contains Saccharin; this explains why patients with sensitive teeth, who experienced more intensive pains after the treatment (5%), all mentioned to be sensitive to sweet. The next step is to test this tooth gel based on the Curolox-Technology in comparison to similar products (e.g., Pro-Argin or Novamin Technology) in a more wide-spread and controlled study. Other important parameters to be considered are the influence of brushing teeth as well as the lasting of effects.

## 5 Conclusions

The prophylaxis tooth gel Curodont Protect is accepted by patients and in most cases clearly shows a pain-relieving ability in case of dental hypersensitivity.

## Literature

- [1] Aggeli, A., M. Bell, et al. (1997). "Responsive gels formed by the spontaneous self-assembly of peptides into polymeric beta-sheet tapes." *Nature* 386(6622): 259-262.  
[2] Kirkham, J., A. Firth, et al. (2007). "Self-assembling peptide scaffolds promote enamel remineralization." *J Dent Res* 86(5): 426-430.