

Diabrux

Device and fully automated evaluation for the quantitative diagnosis of bruxism

Invention

The invention discloses a device for the quantitative diagnosis of bruxism, thus allowing to determine the degree of bruxism activity. In addition to an early diagnosis of bruxism, also therapy planning for example regarding implants or treatment of paradontosis can be scheduled more accurately. The device is based on a hard plate, which is covered by five, specifically linked layers with different colours and defined abrasion properties. A fully automatic evaluation is provided for standardised, objective, quantitative analysis.



Device – prototype after intraoral use by volunteer and close-up of detail

The device is easy to apply and patient compliance is high as irritation by the thin device is low. Production of the device is based on established processes and production costs underline the economic feasibility.

Challenge

Outside the scientific setting of a sleep laboratory, diagnosis of sleep bruxism currently relies on examination for clinical evidence – e.g. indicated by the tips of the teeth appearing flat – and on standardised questionnaires. No standardised, fully automatic diagnostic system is available.

Bruxers are often diagnosed at late stage, when severe consequences of the teeth grinding are apparent, such as abraded teeth, facial pain, headaches, hypersensitive teeth, tense jaw muscles, damage to the temporomandibular joint and others. As simple management of bruxism such as mouthguards/splints is available to prevent damage, early diagnosis and treatment follow-up is clearly needed.

Commercial Opportunities

On behalf of the University of Duesseldorf PROvendis offers access to rights for commercial use as well as the opportunity for further co-development.

Current Status

In case of interest we will be pleased to inform you about the current patent status. A prototype of the device evaluation process as well as patient data are available.

An invention of the University Duesseldorf(UniDüsseldorf)

Competitive Advantages

- Clear unmet need for early diagnosis of bruxism
- Fully automatic evaluation allowing standardised quantitative diagnosis
- Allows personalised planning for example regarding implants or paradontosis treatment
- High patient compliance
- Easy to apply
- White surface allowing use also during the day
- Straight-forward manufacturing based on established processes
- Low production costs

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