

DEVICE FOR USE IN STUDIES RELATED TO THE CHEWING PROCESS

Description:

There is a wide variety of disorders that can be evaluated through chewing. The decrease in chewing capacity directly affects the quality of life of the person, especially in vulnerable population groups such as the elderly, the disabled and infants; or people with reduced motor skills, such as people affected by trauma, stroke, TMJ or prosthetic implants. Objective evaluation of the chewing process in people can be carried out in two ways: firstly, by quantifying the level of degradation that a test food has undergone subjected to chewing, also called Chewing Performance; and, second, determining the number of chewing cycles that a fully toothed reference person would need to achieve a similar level of degradation with the test food, defined as Chewing Efficiency. It is important to note that all existing techniques for the analysis of Chewing Performance and Efficiency require execution times of 6 to 14 hours per individual. In addition to this, there are no specialized equipment to perform chewing performance and efficiency analysis procedures. For all this, these types of techniques are reserved for scientific research environments, being virtually non-existent in medical-dental clinical practice. The present invention consists of a device and algorithms for the measurement of Chewing Performance and Efficiency in people. The analysis is carried out by measuring the level of mixture obtained by chewing a bi-color chewing gum, using digital image analysis techniques.

Keywords:

[Odontology](#), [Chewing Performance](#), [Chewing Efficiency](#), [Dentures](#), [Digital Imaging](#)

Sectors:

[ICT](#), [Health](#)

Areas:

[Hardware / Devices / Components](#), [Health Sciences](#), [Equipment](#), [Diagnosis](#), [Technological Improvements](#)



Advantages:

The invention integrates all the necessary components to perform the Chewing Performance and Efficiency analysis test. The execution of the Chewing Performance and Efficiency analysis test is carried out in a short time, less than 5 minutes, which is a considerable advantage over the current state of the art that requires 10 to 14 hours per sample.

Uses and Applications:

The device can be used to perform Chewing Performance and Efficiency tests in dental offices and clinics, medical offices, hospital centers, insurance companies and mutual societies, clinical examination laboratories, nursing homes and Geriatric Centers, as well as in dental prosthesis and orthodontic laboratories.

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