

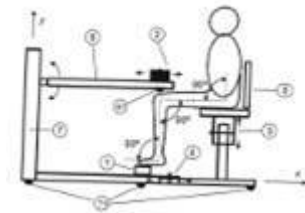
**Patent: Device and Method for Measuring the Visco-elastic Characteristics of the Triceps Surae by means of Longitudinal Vibration of the Tibial Segment**

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**Description**

This invention consists of a **device for the measurement *in vivo*, using a one hundred per cent non-invasive procedure, of the visco-elastic properties of the triceps surae.** Said method is based on the association of the vibration of the tibial segment with the individual seated and the metatarsal arch supported on a force-measuring platform, with the free vibration of a system with a degree of freedom, said degree being the vertical displacement of the tibial segment. The vibration is initiated by applying a blow to a weight located on the knee of the individual being studied.



**Need or problem it solves**

- The invention is of interest to centres training sportspersons to carry out **periodical checks measuring the fitness level of the subject.**
- It is of interest for **monitoring the state of training and/or recovery of muscular tone after a period of inactivity arising from operations or injuries.**

**Innovative features/competitive advantages**

- This procedure is **one hundred per cent non-invasive.**
- **The procedure and, therefore, the results, are independent of the subject.** In other tests to measure the fitness level of a subject, using runs, lifting weights etc., the subject can voluntarily interfere with the results. In the case of this invention, the will of the subject has no influence on the properties measured.
- The procedure invented is very **fast** due to the decoupling of the taking of measurements and the information processing procedure. One of the tests comprising the procedure lasts between 20 and 30 seconds and the total procedure takes some 15 minutes.
- The device invented is **portable**, thus facilitating its being taken to sports training centres in order for periodical checks to be carried out with minimal impact on habits and schedules.

**Types of businesses interested**

- Sports Training Centres
- Public and private entities in the sports sector