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Performing the Reflex Decay Test: a Guide to Controls and Settings

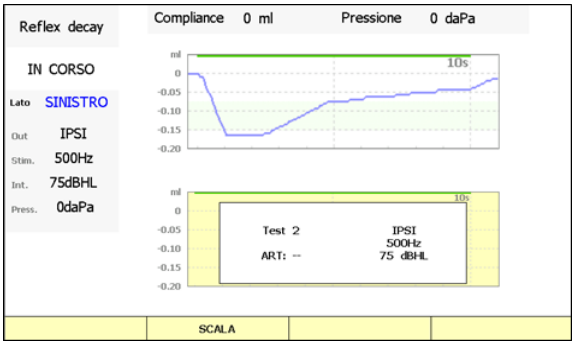
PRODUCT INSIGHTS

The reflex decay test is a complementary assessment used alongside acoustic reflex testing, designed to evaluate the ability of the stapedius muscle contraction to endure over time. While the underlying principles of the test are well known in clinical practice, this Product Insight focuses on the practical aspects of performing the exam with Inventis instruments (Clarinet, Flute Plus, Viola Plus).

The document outlines how to access the test window, configure key parameters such as stimulus duration and pressure, and interpret the graphical results. With a clear overview of controls and settings, it provides operators with the essential guidance to efficiently perform and analyze reflex decay measurements.

REFLEX DECAY TEST

The acoustic reflex decay test can be accessed by pressing the OTHER TESTS button and selecting the option using the left-hand knob.



Acoustic reflex decay test window

The interface closely resembles that of the acoustic reflex test. On the left side of the screen, information about the current stimulus is displayed, while the rest of the window is dedicated to graphs. Four graphs are available for each ear, mirroring the organization of the acoustic reflex test. Two graphs are shown at a time on the test screen, and the operator can move between them using the right-hand knob.

The procedure for conducting the examination is essentially the same as in manual acoustic reflex testing. The test may also be performed without stimulus ("NO STIM."). Once the test begins, the active graph displays key information: the test number, the Acoustic Reflex Threshold

(ART) associated with the stimulus (previously obtained during reflex testing), and the stimulus characteristics. This ART reference is particularly useful since the reflex decay test is typically conducted at 10 dB above threshold.

The stimulus on-time can be configured to 10 or 20 seconds (via Settings) and is represented in the graph as a green bar. If the operator wishes to adjust the pressure value, pressing the PRESSURE button provides access to the pressure adjustment screen.

At the conclusion of the examination, results are displayed beneath the corresponding graph along with the stimulus characteristics. The following indices are provided:

- **T(50%)** – The time (in seconds) at which the reflex amplitude decays to 50% of its maximum. The portion of the curve where decay remains below 50% is highlighted in light green.
- **C(10s) / C(20s)** – The percentage reduction in reflex amplitude at the end of the stimulus (10 or 20 seconds) compared to the peak amplitude.

If the test has not been performed, or if the values cannot be calculated, the indices are shown with the label "--".

The Reflex Decay test mode can also be used to record electrically evoked stapedial reflexes (eSRT) by selecting "NO STIM." as the stimulus type.

ADDITIONAL NOTE – ESRT (ELECTRICALLY EVOKED STAPEDIAL REFLEX THRESHOLD)

The Reflex Decay test mode can also be used to record electrically evoked stapedial reflexes (eSRT) by selecting "NO STIM." as the stimulus type.

In this configuration, the system records a reflex response triggered by an external electrical source, such as a cochlear implant, instead of the standard acoustic stimulus generated by the middle ear analyzer. Using the Reflex Decay mode for this purpose is particularly useful because its extended acquisition window allows easier synchronization with the external trigger and more time to observe the complete reflex response. This represents an alternative operational approach for eSRT measurements and does not replace the standard Acoustic Reflex test.

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INVENTIS S.r.l.
CORSO STATI UNITI, 1/3
35127 PADOVA – ITALIA
TEL: +39.049.8962 844
FAX: +39.049.8966 343
info@inventis.it
www.inventis.it