

SYSTEM FOR MEASURING THE NEUROPATHY OF THE BODY SURFACE SENSORY NERVE PATHWAYS

NM-01

The NM-01 measurement and evaluation system non-invasively assesses the status of sensory nerve fibres on the surface of the body. This test provides a quantitative measure of the extent of neuropathic abnormalities in the fibres.

The current pulses emitted in 3 constant frequency ranges (5Hz, 250 Hz, 2000 Hz) selectively determine the state of each fiber. The monitoring of the condition during the measurement is supported by a comparison with the continuously displayed normal values.

Tests can be performed at the assistant level qualification. The online automatically evaluated data can be printed in medical report format.

The system has an independent *Database Management Software* to manage the primary waves and the evaluated data.



MEASURED AND EVALUATED PARAMETERS

✓ **General features:** The system is suitable for testing all sensory fibres using pulses of emitted sinusoidal current. The intensity of the emitted pulses can be varied between 0.01 and 9.99 mA. Three constant frequencies (thick myelin sheathless fibre 5Hz, thick myelin sheathed fibre 250Hz, thin myelin sheathed fibre 2000Hz) are tested with manually adjustable current. The software provides the current values in CPT accepted in clinical practice (1CPT = 0.01mA).

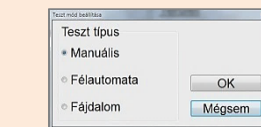
✓ **Software supported instructions:**

❖ Loading Test Algorithms required for Test-management

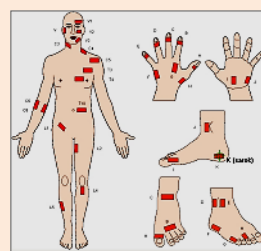
❖ Check sensors for open/short circuits.



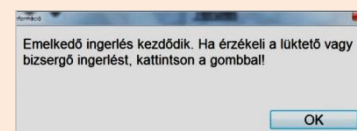
❖ Select the area to be examined based on a map.



Place the velcro sensor on the selected body surface.



❖ Instructions of the dialogs associated with the test steps.



❖ Presentation of the data obtained and evaluated from the steps of the test in relation to the validated Guideline score.

Értékek (CPT)	
2000 Hz =	109 (120 - 398)
250 Hz =	115 (26 - 183)
5 Hz =	75 (17 - 104)

Vizsg.idő: 00:06:47

Clinical applications

The testing procedure implemented in our NM-01 measurement and evaluation device is based on peer-reviewed scientific papers and published scientific papers based on more than 1 million sensory neural pathway studies worldwide. We validated the system on 40 healthy and 40 neuropathic patients taking into account the thresholds developed on the basis of expert opinions and scientific papers. Our test results confirmed the specificity and reliability of the data implemented by the system. The system has a wide range of diagnostic applications and the most common applications are described below.

❖ Diabetes

The NM-01 measurement system tests detect pre-diabetic and established diabetic nerve damage. Testing of nerve fibres in the limbs e.g., at the tips of the toes, allows detection of the earliest neuropathic lesions. This can allow early therapeutic intervention before the damage is irreversible. It also provides optimal hand control of the pathological processes that have developed.

❖ Obesity

The tests of the NM-01 measurement system identify obesity-related nerve damage at an early stage and thus prevent deterioration in quality of life.

❖ Kidney

The NM-01 measurement system tests show the therapeutic efficacy of dialysis by assessing the state of sensory nerve fibres.

❖ Pain (e.g. spine, back)

The NM-01 measurement system test quickly detects and evaluates the difference between neural or muscle damage. The diagnosis is essential in case of accidents.

- ❖ The system can be used effectively in the case of children, adolescents and adults. Data and primary curve cycles can be transmitted electronically linked to the patient ID. Tests can be performed at the assistant level qualification.
 - ❖ Diabetology clinics, outpatient clinics.
 - ❖ Specialist neurology clinics, outpatient clinics
 - ❖ Accident emergency care
 - ❖ Rehabilitation and prevention centers
 - ❖ General Practitioner Community

❖ References:

- ❖ Heim Pál National Paediatric Institute, University of Szeged Department of Internal Medicine, Semmelweis University Departments of Internal Medicine and Oncology, University of Debrecen, Departments of Internal Medicine and Sport Sciences, Roy Academic Directorate of Diabetes & Endocrinology University of Sheffield, Wörwag Pharma (Hungary, Romania, Baltics), Royal Prince Alfred Hospital University of Sydney.