

# NEUROMETER® CPT/C®

Automated Neuroselective Sensory Nerve Conduction Thresholds (sNCT)



## Clinical



## Industry



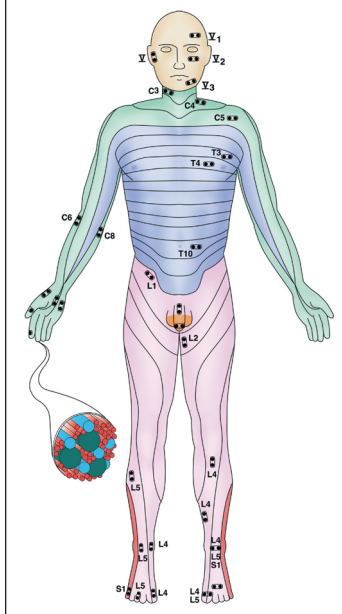
## Research



Neurometer® CPT/C electrodiagnostic devices perform automated neuroselective sensory Nerve Conduction Threshold (sNCT) evaluations by determining Current Perception Threshold (CPT) measures. Neuroselective sinusoidal electrical stimuli quickly, painlessly and objectively quantify the conduction and functional integrity of the large and small myelinated and unmyelinated sensory nerve fibers. Easy operation, portability and versatile computer controlled testing modes provide standardized double blind automated sensory evaluations for clinical, occupational and research settings.

The Neurometer®CPT/C can evaluate and document sensory nerve impairments at any cutaneous or mucosal site. The sNCT/CPT evaluation is extremely sensitive, detecting and quantifying hyperesthesia in early stage progressive neuropathy and hypoesthesia in more advanced conditions. The CPT/C conducts a full range of self-administered, automated, manual and programmable neuroselective sensory nerve evaluations in addition to the sNCT/CPT procedure. The fast and accurate RCPT mode allows individuals and groups to be quickly assessed for changes and abnormalities in sensory nerve function. The atraumatic Pain Tolerance Threshold (PTT) mode

## Test Sites



provides a reproducible, non-invasive method for neuroselective evaluations of conditions like allodynia and analgesia. The external computer control package adds programmable control functions to the CPT/C for creating atraumatic sensory evaluation procedures for both humans and laboratory animals. Special cabling also allows concurrent use of the CPT/C with fMRI and other imaging procedures and with bladder mucosal evaluations.

The Neurometer®CPT/C stimulus is self-calibrating and patented circuitry maintains a constant current output that compensates for normal variations in skin thickness and impedance. Compliance Guard® software monitors the consistency of patient responses assuring high reproducibility and significant reliability ( $p < 0.006$ ). Neuval® software, included with each device, performs a multi-dimensional analysis of CPT measures through comparison to clinically established healthy measures and generates a narrative laboratory report. Hundreds of peer reviewed publications and presentations establish the reliability of the sNCT/CPT examination. The Neurometer®CPT/C is uniquely sensitive and effective for evaluating sensory nerve impairments, and can provide significant benefits for you and your patients.

# NEUROMETER® CPT/C® Applications

**Differential Diagnosis:** axonal versus demyelinating polyneuropathy, radiculopathy, myelopathy, compressive neuropathy, focal nerve lesions/peripheral nerve injuries, differentiate between large and small fiber neuropathies

**Clinical Monitoring:** document sensory impairments at any cutaneous or mucosal site, determine clinical severity of impairment or evaluate disability, high compliance for serial evaluations, assess neurotoxicity or neuro-protective sensation

**Outcome Measurements:** pharmaceuticals efficacy/neurotoxicity, nerve blocks, response to therapeutic interventions, nerve regeneration and recovery of function post surgery/injury

**Occupational Testing:** neck & low back injury, carpal tunnel syndrome, vibration neuropathy, neurotoxic exposure, epidemiological studies

**Laboratory Research:** non-invasive neuroselective animal response testing, atraumatic stimulus permits repeated testing of the animals at the same cutaneous site

## Used in the Following Specialties:

Anesthesiology  
Dentistry  
Dermatology/Cosmetics  
Endocrinology  
Family Practice  
Nephrology  
Neurology  
Neuro, Orthopedic & Plastic Surgery  
Occupational Medicine  
Oncology  
Pain Medicine  
Pharmacology and Toxicology  
Physical Medicine & Rehab  
Podiatry  
Rheumatology  
Urology

Comparison of Sensory Neurological Assessment Techniques	sNCT/CPT	sNCV	Vibratory / Thermal	SSEP
Selectively Evaluates Large & Small Fibers	✓			
Measures Hyperesthesia & Hypoesthesia	✓			
Differentiates between Polyneuropathy, Radiculopathy, Compressive Neuropathy	✓			
Detects Carpal Tunnel Syndrome (Compressive Neuropathies)	✓	✓		
Objective Automated Double Blind Forced Choice Testing	✓			
Not Effected by Skin Thickness, Impedance, Temperature, Bone Conduction	✓			
Painless, Non-invasive	✓		✓	✓
Nerve Fiber Function Test Not a Receptor Test	✓	✓		✓

## Neurometer® CPT/C: TECHNICAL SPECIFICATIONS

### CPT/C

**Control:** Microprocessor

**Size:** 15.5"(L), 11.75"(W), 5"(H)

**Weight:** 14.25 lbs (6.45 kg)

**LCD Display:** 9" (L), 15/16"(H)

**Power:** Rechargeable Internal Battery

**Battery Charging Time:** 8-18 hrs.

**Battery Life:** 10-12 hrs. Fully Charged

**Output:** 5Hz, 250Hz, 2000Hz Sinusoid

**Output Accuracy:** Digital/Quartz

**Output Current:** 0-10 mA Constant AC

**Resolution Measurement:** 0.001 mA

### Remote Switch Box

**Size:** 4.5" (L), 3.5" (W), 2.5" (H)

**Weight:** 0.75 lbs (0.4 kg)

Audio & Visual Automated Test Cues

### PRØI Printer

**Size:** 7.5"(L), 4.5" (W), 4.0" (H)

**Weight:** 1.3 lbs (0.4 kg)

### Neuval® Software Features

- Normative values established for more than 30 multiple testing sites
- Easy to read patient reports
- Analyze CPT data for up to 3 bilateral sites per report
- Multi-dimensional analysis for unilateral and bilateral evaluations
- Automatic database repair feature
- Reports can be saved to disk for use in other software
- Minimum requirements: 512K RAM, hard disk drive, MS DOS 2.1 or greater and a printer

For Additional Information on the Neurometer® CPT/C, Contact:



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