

## About the Baseline® Multi-Filament Pen

The Baseline® Multi-Filament Pen sensory evaluator is used to measure cutaneous sensory perception threshold. The monofilament test provides a non-invasive evaluation of the diminished protective sensation with objective and repeatable results. The pen contains 4 nylon monofilaments, each representing a unique amount of force which is marked by force and size. Monofilament force (size) is indicated by 4 color-coded levers on the side of the pen. Easily slide down the lever of the desired force (size) until it clicks into place to extend out the selected monofilament. These nylon filaments retract into the pen when not in use for protection. Pen is easy to store and easy to carry.

## How To Use the Baseline® Multi-Filament Pen

1. Select the monofilament force (size) you want to use, as indicated on the color-coded side levers on the pen. (fig. 1)
2. Slide down on the lever until it clicks into place. The selected monofilament will extend out of the pen. (fig. 2)
3. Perform sensation test on the patient. (fig.3)
4. To retract the monofilament back into the pen, lightly tap one of the monofilament levers not in use. The nylon filament will retract back into the pen. (fig. 4)

**NOTE:** Make sure all the nylon filaments are retracted back into the pen when not in use to keep the nylon filaments protected.

## Cleaning and Maintenance

These monofilaments are precision instruments. Care should be taken to protect the integrity of the nylon filament. The filament may be cleaned with a mild disinfectant.

evaluator size	force (grams)	color
2.83	0.07	normal
3.61	0.4	diminished light touch
4.56	4	diminished protective sensation
5.07	10	loss of protective sensation



figure 1



figure 2

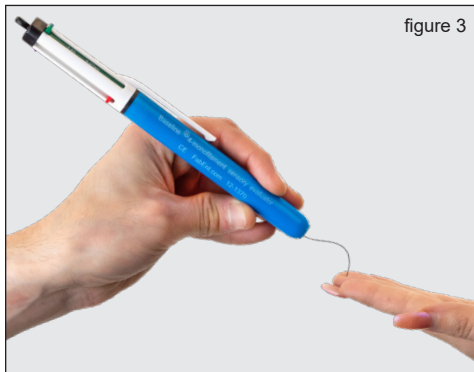


figure 3

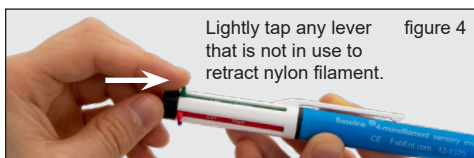


figure 4



Fabrication Enterprises Inc.  
250 Clearbrook Rd, Suite 240  
Elmsford, NY 10523 (USA)  
tel: +1-914-345-9300 • 800-431-2830  
fax: +1-914-345-9800 • 800-634-5370  
FabEnt.com



AJW Technology Consulting GmbH  
Breite Strasse 3  
40213 Düsseldorf (Germany)

## About the Cutaneous Sensation Test

The monofilament test provides a non-invasive evaluation of cutaneous sensation level with objective and repeatable results.

## Perform the Cutaneous Sensation Test

1. Rest patient's hand or foot on a stable, padded surface. Make sure patient cannot see the filament being applied during the test.
2. Instruct the patient regarding the testing procedure and ask the patient to indicate when stimulus is felt.
3. You may use screening forms to record results. Note any areas on callus, abrasion, scarring or other blemishes by drawing them on the screening form.
4. While testing, proceed from distal to proximal and from small to large monofilaments.
5. Determine where to test. Checks can be done over areas innervated by different nerves.

**For the hand,** test the palmar surface of the index finger and thumb for median nerve function; test the little finger and hypothemar eminence for ulnar nerve function; test the dorsum of the hand for radial nerve function (fig. 5).

**For the foot,** test the sites indicated in (fig. 6).

**For Diabetic Foot Screening,** apply the 10 gram (5.07) monofilament to the foot test sites shown in (fig. 7).

6. While holding the pen, push the filament at a 90° angle against the skin until the filament bows. Hold in place for 1.5 seconds and then remove. For monofilament sizes 2.83 through 3.61 apply the monofilament in the same location up to 3 times to elicit a response. A single response indicates a positive response. For monofilament sizes 4.56 through 5.07, apply the stimulus once.
7. When testing, begin with the 2.83 monofilament. If patient responds to stimulus at all sites, normal cutaneous sensation can be documented. If patient does not respond to a stimulus, choose next largest monofilament and repeat.
8. Record a ✓ to indicate sensation and ✗ to indicate lack of sensation on each site.

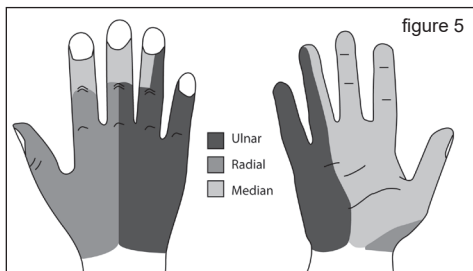


figure 5

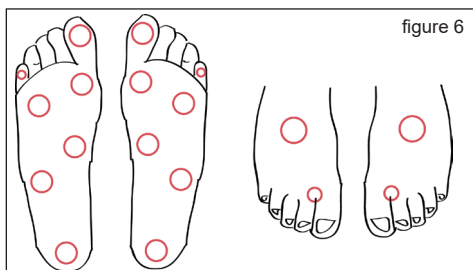


figure 6

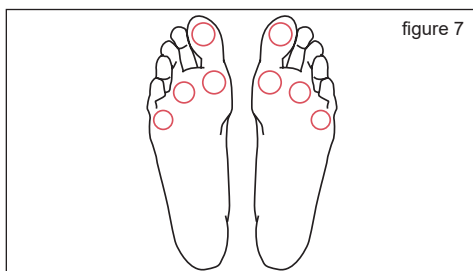


figure 7

## References

*Rehabilitation of the Hand: Surgery and Therapy*; Mosby; ed. Hunter, Macken, Callahan; Vol I, 4th Edition; Chapter 9. 1995



Fabrication Enterprises Inc.  
250 Clearbrook Rd, Suite 240  
Elmsford, NY 10523 (USA)  
tel: +1-914-345-9300 • 800-431-2830  
fax: +1-914-345-9800 • 800-634-5370  
FabEnt.com



AJW Technology Consulting GmbH  
Breite Strasse 3  
40213 Düsseldorf (Germany)