D.ZAP™ Microelectrodes

The standard bearer for single unit neural recording devices

Microelectrodes with D.ZAP™ finishing are quickly becoming the most popular of FHC’s MER products.

FHC’s microelectrodes have been designed specifically for use in functional neurosurgical procedures, including placement of Deep Brain Stimulating electrodes, the use of ablative techniques, or whenever intraoperative recording of single unit neuronal activity in the brain is required.

Our microTargeting™ electrodes have been used at most DBS centers throughout the world. The numerous configurations and customization options make the electrodes compatible with most drive and stereotactic systems.

Microelectrodes with D.ZAP™ finishing have activated recording surfaces for improved cell isolation at lower impedances. Additional benefits include their exceptionally stable and durable insulation and distinctly visible recording areas. The D.ZAP™ finishing option reduces microphonics and is suitable for any microelectrode.

D.ZAP™ electrodes can be fabricated with tungsten, stainless steel or platinum/iridium recording tips. Most microelectrodes are available in the sterile configuration, in convenient individual boxes.

D.ZAP FEATURES:

- Activated recording surfaces for improved cell isolation at lower impedance
- Exceptionally stable and durable insulation with distinctly measurable recording areas
- Reduction in microphonics

"The first time I used a D.ZAP microelectrode, I nicknamed it the 'Stradivarius' for its clear, musical signal. Not only is the signal-to-noise ratio outstanding, but there is some intangible difference in the signal quality that makes discriminating neuronal targets easy. I now refuse to use any instrument other than my D.ZAP 'Stradivarius!'"

Jaimie Henderson, MD.
Stanford University Medical Center

D.ZAP™ microelectrode tip

Traditional microelectrode tip

FHC, Inc.
1201 Main Street
Bowdoin, ME 04287
Fax +1-207-666-8292
www.fh-co.com

24 hour technical service:
1-800-326-2905 (US & Canada)
+1-207-666-8190

FHC Europe
(TERMOBIT PROD srl)
42A Barbu Vacarescu Str; 3rd Fl
Bucharest 020281 Sector 2
Romania

FHC Latin America
Carrera 43 A # 1sur 31
Ed. BBVA oficina 401
Medellin-Colombia

L022/DZAP A1 June 2012
All of our clinical electrodes, including D.ZAP™, are available in 4 types:

**mTD**  
**Differential electrodes**  
(shown above)  
Differential microelectrodes are our most popular microelectrodes. They are designed to more easily allow differential recording techniques by providing both a microelectrode contact and macroelectrode contact. The microTargeting™ electrode tip can be retracted up inside its protective tube for risk free insertion into the guiding tube. The protective tube is insulated so only a small surface is exposed at the end which can be used for macro recording/stimulating. The macroelectrode contact provides a low impedance reference contact which can be plugged directly into the negative input of a differential amplifier. Single contact electrodes require the negative input to be connected directly to a patient ground.

**mTB**  
**Back Loaded electrodes**  
Back Loaded microTargeting™ Electrodes are intended to be threaded back first up into the guiding tube prior to insertion of the guiding tube into the brain. It is for this reason that they are provided with no termination pins.

**mTF**  
**Front Loaded electrodes**  
Front Loaded microTargeting Electrodes are intended to be threaded tip first down into the guiding tube. Great care must be taken not to damage the tip of the electrode while doing this. These electrodes are all provided with a stop collar (set at a calibrated, specified distance) and a termination pin.

**mTS**  
**Shielded electrodes**  
Shielded microTargeting electrodes are provided in their own protective tube. The microTargeting electrode tip can be retracted up inside this protective tube for risk free insertion into the guiding tube. An additional benefit of this arrangement is that a shielding tube on the electrode serves to completely shield the entire length of the electrode from electrical noise pick-up for a dramatically quieter recording environment.

ORDERING INFO:

- **Frame Array microelectrodes**  
  22675Z Sterile D.ZAP / 5 pk  
  22675L Sterile D.ZAP Leadpoint / 5

- **Frame Single microelectrodes**  
  34685Z Sterile D.ZAP / 5 pk  
  34685L Sterile D.ZAP Leadpoint / 5

- **Platform microelectrodes**  
  44975L Sterile D.ZAP Leadpoint / 5 pk  
  44975Z Sterile Platform D.ZAP / 5 pk

- **Nexframe® microelectrodes**  
  (Array and Single for use with STar™ Drive)  
  5705Z Sterile STar™ Drive D.ZAP / 5 pk  
  5705L Sterile STar™ Drive D.ZAP Leadpoint / 5 pk

- **Nexframe® microelectrodes**  
  (Array and Single for use with mT Drive or Nexdrive)  
  5005Z Sterile D.ZAP / 5 pk  
  5005L Sterile D.ZAP Leadpoint / 5 pk

This is a small sampling of FHC’s most popular D.ZAP™ microelectrodes. For different metals, lengths, insulation and tip configurations as well as non-sterile versions, please contact us directly to discuss your specific recording and targeting needs.