Thomas MULTICORE FIBER MICROELECTRODES
Tetrodes & Heptodes

**Product Features**

- **Material:** Quartzglass insulated Platinum/Tungsten
- **Tetrodes** (4 metal cores)
- **Heptodes** (7 metal cores)
- **Tetrode & Heptodes** with fiber diameters of 100µm
- **Unique material combination**
- **Biocompatible materials**
- **Well suited for acute and also for long term chronic recordings**
- **Very close electrode spacings** are possible (down to 80µm) when using Thomas microdrives
- **Very thin shafts** minimize tissue damage
- **Suitable for cortical as well as deep brain recordings**

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Advantages of Thomas Fiber Multielectrodes:

- The passage between the glass isolation of our heptodes & tetrodes and the metal cores is very smooth, this minimizes tissue damage.

- Due to the geometrical shape of our fiber tetrodes & heptodes tissue is displaced radially during penetration, with little tissue compression.

- Microgrooves, caused by the grinding process (see electron microscope photo on the left side, white area = metal), increases the effective tip area at a given tip volume. This results in a tip capacitance which is considerably higher than the tip capacitance of etched tips. This is one reason for their excellent signal-to-noise ratio and single-unit isolation.

- Our tetrodes & heptodes have a wide recording bandwidth and a low cut-off-frequency, so that both, spike potentials and (slow) local field potentials can be recorded from the same microelectrode (see picture on the left side for S/N ratio of Thomas tetrodes).

- Because of our precision manufacturing techniques the geometrical shape of the electrode tip can be made exactly and reproducibly according to specifications.

- Thomas fiber electrodes do not bent in the brain. They move straight over distances of up to 40,000µm.

- We have a long tradition since 1987 in tetrode & heptode manufacture, see original scanning electron microscope photo on left side, dated March 6, 1987 made by Mr. Uwe Thomas (U.Th.)

We are looking forward to your request:

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