

Materials List for

# Maximum Isometric Tetanic Force Measurement of the Tibialis Anterior Muscle in the Rat

Meiwand Bedar<sup>1,2</sup>, Tiam M. Saffari<sup>1,2</sup>, Patricia F. Friedrich<sup>1</sup>, Guilherme Giusti<sup>1</sup>, Allen T. Bishop<sup>1</sup>, Alexander Y. Shin<sup>1</sup>

<sup>1</sup>Department of Orthopedic Surgery, Mayo Clinic <sup>2</sup>Radboud University Medical Center, Radboud Institute for Health Sciences, Department of Plastic Surgery, Nijmegen, The Netherlands

## Corresponding Author

Alexander Y. Shin  
shin.alexander@mayo.edu

## Citation

Bedar, M., Saffari, T.M., Friedrich, P.F., Giusti, G., Bishop, A.T., Shin, A.Y. Maximum Isometric Tetanic Force Measurement of the Tibialis Anterior Muscle in the Rat. *J. Vis. Exp.* (172), e61926, doi:10.3791/61926 (2021).

## Date Published

June 26, 2021

## DOI

10.3791/61926

## URL

jove.com/video/61926

## Materials

| Name                           | Company   | Catalog Number | Comments    |
|--------------------------------|---|----------------|-------------|
| 0.9% Sodium Chloride           | Baxter Healthcare Corporation, Deerfield, IL, USA | G130203        |             |
| 1 mm Kirshner wires            | Pfizer Howmedica, Rutherford, NJ                  | N/A            |             |
| Adson Tissue Forceps           | ASSI, Westbury, NY, USA                           | MTK-6801226    |             |
| Bipolar electrode cables       | Grass Instrument, Quincy, MA                      | N/A            |             |
| Bipolar stimulator device      | Grass SD9, Grass Instrument, Quincy, MA           | N/A            |             |
| Cotton-tip Applicators         | Cardinal Health, Waukegan, IL, USA                | C15055-006     |             |
| Curved Mosquito forceps        | ASSI, Westbury, NY, USA                           | MTK-1201112    |             |
| Force Transducer MDB-2.5       | Transducer Techniques, Temecula, CA               | N/A            |             |
| Gauze Sponges 4x4              | Covidien, Mansfield, MA, USA                      | 2733           |             |
| Ground cable                   | Grass Instrument, Quincy, MA                      | N/A            |             |
| Isoflurane chamber             | N/A   | N/A            | Custom-made |
| Ketamine                       | Ketalar, Par Pharmaceutical, Chestnut, NJ         | 42023-115-10   |             |
| LabView Software               | National Instruments, Austin, TX                  |                |             |
| Loop                           | N/A   | N/A            | Custom-made |
| Microsurgical curved forceps   | ASSI, Westbury, NY, USA                           | JFA-5B         |             |
| Microsurgical scissors         | ASSI, Westbury, NY, USA                           | SAS-15R-8-18   |             |
| Microsurgical straight forceps | ASSI, Westbury, NY, USA                           | JF-3           |             |
| Retractor                      | ASSI, Westbury, NY, USA                           | AG-124426      |             |
| Scalpel Blade No. 15           | Bard-Parker, Aspen Surgical, Caledonia, MI, USA   | 371115         |             |
| Slim Body Skin Stapler         | Covidien, Mansfield, MA, USA                      | 8886803512     |             |
| Subminiature electrode         | Harvard Apparatus, Holliston, MA                  | N/A            |             |
| Surgical Nerve Stimulator      | Checkpoint Surgical LCC, Cleveland, OH, USA       | 9094           |             |

|  |   |           |                               |
|--|---|-----------|-------------------------------|
| Terrell Isoflurane   | Piramal Critical Care Inc.,<br>Bethlehem, PA, USA       | H961J19A  |                               |
| Testing platform   | N/A   | N/A       | Custom-made                   |
| Tetotomy Scissors  | ASSI, Westbury, NY, USA                                 | ASIM-187  |                               |
| Traceable Big-Digit Timer/Stopwatch                        | Fisher Scientific, Waltham, MA, USA                     | S407992   |                               |
| USB-6009 multifunctional I/O data acquisition (DAQ) device | National Instruments, Austin, TX                        | 779026-01 |                               |
| Vacuum Base Holder   | Noga Engineering & Technology Ltd.,<br>Shlomi, Isreal   | N/A       | Attached clamp is custom-made |
| Weight (10 g)  | Denver Instruments, Denver, CO,<br>USA                  | 820010.4  |                               |
| Weight (20 g)  | Denver Instruments, Denver, CO,<br>USA                  | 820020.4  |                               |
| Weight (50 g)  | Denver Instruments, Denver, CO,<br>USA                  | 820050.4  |                               |
| Xylazine   | Xylamed, Bimeda MTC Animal<br>Health, Cambridge, Canada | 1XYL002   |                               |