BIOSEB
In *Vivo* Research **Instruments**

A QUICK & EASY ASSESSMENT DEVICE FOR THE MECHANICAL NOCICEPTIVE THRESHOLD OF BIG MAMMALS

BIO-VETALGO
Big Mammals Analgesimeter

INSTRUMENT OVERVIEW

Bioseb's Vetalgo is a **new pressure-based analgesimeter designed for big mammals**. Delivered with 3 different-size stimulators, the profile of mechanical stimulus & the application surface fit various animals (horses, cats, dogs, pigs, sheep, calves) and testing sites: joints, vertebras, pelvic area, hoof, wound, soft tissue, muscle, horn, metatarsus, carpal pad, etc.

Von Frey filaments are commonly used to quantify pain or assess sensory sensitivity, but are time-consuming and do not avoid cross-contamination - moreover, it is limited to 300g of force. The large capacity of our Pressure Algometer, 5000g, allows mechanical nociceptive threshold measurement for most big mammals.

Veterinary studies, such as "Briley J.D et al. Feasibility and repeatability of cold & mechanical quantitative sensory testing in normal dogs. The Veterinary Journal (2013)" show the importance of quantitative sensory testing (QST) to evaluate pain threshold in mammals with OA inflammation, pelvic pain or muscle-related troubles.

The Vetalgo's repeatability & validity have been demonstrated and it is recommended as part of a multimodal, complete somatosensory evaluation set: a must in veterinary's standard equipment for the improvement of animal's life quality.

HOW DOES IT WORK?

Bioseb's Vetalgo is **simple to operate**: a force-gauge display is equipped to an external stimulator. The assembly is mounted on an ergonomic handle, that fits both left-handed and right-handed investigators. The type of stimulator is to be chosen according to the application surface and the type of nociceptive stimulus to be applied.
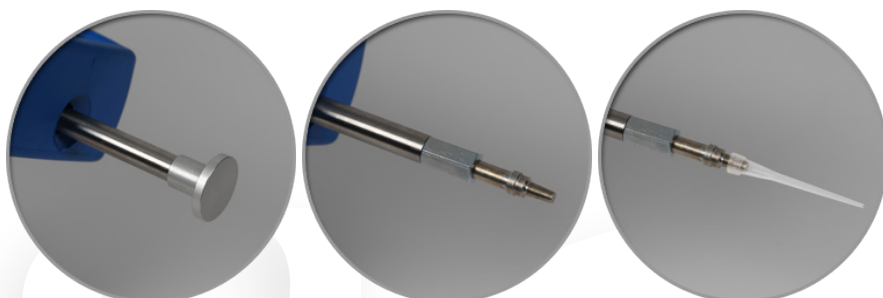
After placing the animal on a secured position, a progressive force is applied by the investigator on the area of interest, until a response from the animal is noticed: deliberate escape movement away from the device, vocalization, attempts to bite or to scratch the instrument, turning the look at the testing site, etc.

Both **maximum and current pressure values** are shown in real-time on the large display. The **MNT (Mechanical Nociceptive Threshold)** value is the value at which the animal reacts, being the Max. value of Pressure application, in the standard steadily increasing procedure.

The measurement is accomplished using a highly accurate sensor of 5000g Max. Capacity and an electronic device offering a sampling rate of 1000 Hz, which ensures that the maximum force is perfectly captured and displayed, even for short and low force peaks – allowing test of a wide range of animal's pain sensitivity.

KEY FEATURES

- Objective, immediate reading of MNT (up to 50 N)
- Repeatable & reliable values over time
- Ergonomic handle (left/right-handed operators)
- Robust design for use in animal housing
- No cross-contamination: delivered with disposable plastic tips and cleanable steel tips
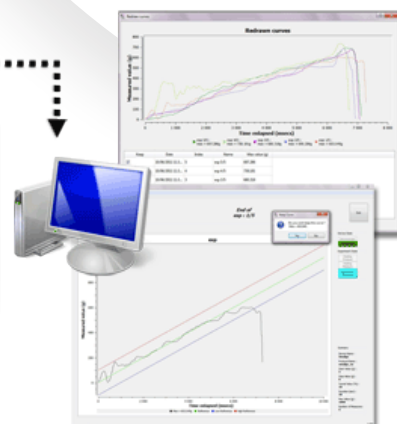

Supplied with 3 different probes

The Vetalgo fits various animals (horses, cats, dogs, pigs, sheep, calves) and testing sites: joints, vertebras, pelvic area, hoof, wound, soft tissue, muscle, horn, metatarsus, carpal pad, etc.

BIO-VETALGO: Bioseb's Pressure Algometer for Big Mammals

DEDICATED SOFTWARE

An **embedded statistical computation** has been included in the electronic device. This is a very useful feature that has been very well received by researchers, especially when a large number of tests is required. The display shows in real time the mean, standard deviation and variation coefficient from groups of animals.

The **optional BIO-CIS software** sends data acquired via the Pressure Algometer into an MS Excel spreadsheet using the RS232 port and USB converter. Easy to set up, this soft interface also allows the display of the applied force vs. time for different trials, which is a useful function for the technician training (repeatability improvement).

Bioseb's Bio-CIS software: Export data from the Vetalgo to Microsoft Excel

DOMAINS OF APPLICATION

- Veterinary Medicine, Animal Welfare & Pain Release
- Prior to surgery : Adjustment of anesthetic methods to the animal's sensitivity level
- Post-operative pain and wound sensitivity, ie ovariohysterectomy
- Rehabilitation practice: daily use as objective Pain release Evaluation
- Drug screening, especially Analgesics efficacy for Post-surgery and Anesthetics
- Chronic Pain, Osteoarthritis , rheumatoid Arthritis
- Musculoskeletal sensitivity, Orthopedic dysfunctions, ie. cruciate ligament rupture
- Abdominal Ventral , Pelvic, Visceral pain

and much more...

HIGHLIGHTHED BIBLIOGRAPHY Exhaustive list on our website

Comparison of a new metamizole formulation and carprofen for extended post-operative analgesia in dogs undergoing ovariohysterectomy, Veterinary Journal (2015) Kalchofner Guerrero KS et al, DOI: 10.1016/j.tvjl.2015.01.028

Feasibility and repeatability of cold and mechanical quantitative sensory testing in normal dogs
Veterinary Journal (2013), Briley JD et al, DOI: 10.1016/j.tvjl.2013.10.025

Efficacy of tolfenamic acid and meloxicam in the control of postoperative pain following ovariohysterectomy in the cat
Veterinary anaesthesia and analgesia (2008), Benito-de-la-Víbora J et al, DOI: 10.1111/j.1467-2995.2008.00407.x

TECHNICAL SPECIFICATIONS

Sensor Capacity	0 – 5 kg (50N)
Accuracy	0,1 % of full scale
Resolution	0,1 g
Sampling frequency	1000 Hz
Data output	RS232 for computer, analog output for graphic recorders
Internal Memory	100 individual values
Overall dimensions	178x85x151 without probe
Power Supply	Battery or power adaptor (110-220 V)
Stimulator Probes	Steel, Round, flat, application surface 314 sq.mm Steel, Round, flat, application surface 7 sq.mm Plastic, sharp tip
Crating	33x30x13 cm – 4 kg

ORDERING INFORMATION

Reference	Description
BIO-**VETALGO**	Complete Vetalgo Device
BIO-**CIS**	Optional Bio-CIS Software

SUPPLIED WITH

- 1 Force-gauge display
- 1 handle
- 3 stimulator tips
- 1 power adaptor (110-220 V)
- User Manual
- Delivered in its smart suitcase

FOR MORE INFORMATION, VISIT OUR WEBSITE: WWW.BIOSEB.COM/VETALGO

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