

Introducing MED Pro™

The game-changing mouse estrus detector, designed to revolutionize research involving mouse models. Powered by cutting-edge technology, **MED Pro™** utilizes advanced sensors and exclusive algorithms to provide researchers with real-time data on the reproductive status of their mouse models. This groundbreaking approach not only enhances the accuracy of breeding programs but also dramatically reduces the time and resources traditionally required for estrus detection.



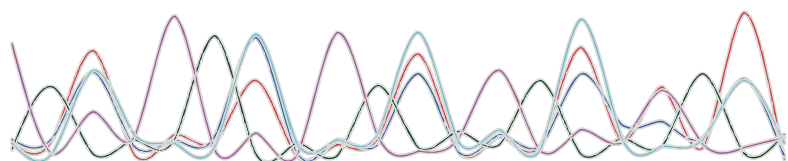
- Digital monitoring:** MED Pro™ operates without causing stress or harm to the animals, ensuring the integrity of your research and the well-being of the mice.
- Real-Time Data Access:** With MED Pro™ user-friendly interface, researchers can access up-to-the-minute information on each mouse's estrus cycle, enabling timely and informed decision-making.
- Increased Efficiency:** By automating the estrus detection process, MED Pro™ frees up valuable research time and resources, allowing scientists to focus on the critical aspects of their studies.
- Enhanced Reproductive Success:** Timely and accurate identification of estrus cycles leads to improved breeding outcomes, maximizing the success rate of your research projects.
- Animal-Friendly technology:** Extensive laboratory trials and research have reliably proved that number of mice in the colony can be reduced by factor 2 due to higher predictability and accuracy that MED Pro™ unlocks. Resulting in far more animal-friendly research pipeline as well as substantially reduced costs.



Intuitive touch screen



Immediate real time reading





Instrumental Method For Determining The Estrous Cycle Stages In Small Laboratory Rodents

Abstract

Summary.

An instrumental method/device for detecting of estrous stages in small rodents was tested in mice and rats. Cyclic changes in active resistance (RS) of the epithelial cell layer of vaginal mucosa were studied with a new mouse estrous detector device - MED-PRO 100 (Elmi Ltd., Latvia). The active resistance (AR) was measured at the frequency of 1 kHz by inserting the probe ($l=14$ mm, $d=1.82$ mm; measuring range ω 0-50 k Ω), into the animal's vagina for 1-2 sec. The use of small probe detector was compared to the classical vaginal smear collection procedure, using a lavage, and followed by cytological evaluation. The instrumental method was found to be similarly accurate, more expedient, less traumatic to an animal and less time consuming. The AR curves were quite similar during a few estrous cycles (especially in rats), and the AR changes corresponded to the cytological changes in vaginal smears. However, the maximum AR values corresponded to different stages of the cycle in mice and rats. In rats, the electrical AR was significantly higher at proestrus (over 5 k Ω) when compared to other stages of the estrous cycle, and statistically higher in metestrus, when compared to estrus and diestrus stages. In mice, the increase in AR occurred at the estrus stage. We conclude that the use of the MED-PRO 100 device provides an accurate approach to evaluate the estrous cycle in rats and mice. It can be used to determine an optimal time for animal mating, the use of hormonal superovulation or artificial reproduction technologies, as well as for optimization of behavioral, pharmacological and toxicological studies in female laboratory rodents.

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