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Tail Flick V.2

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1 Works for me dx.doi.org/10.17504/protocols.io.7thhnj6

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ABSTRACT

Summary:

The Tail Flick assay is a pain receptive assay in which a mouse is placed within a restraining tube with its tail protruding. The tail is placed on a level surface, a radiant heat is applied to the tail and the latency of the mouse to remove its tail from the heat is recorded. This latency is used as a measure to indicate neurological pathology.

Diabetic Complication:

EXTERNAL LINK

https://www.diacomp.org/shared/document.aspx?id=34&docType=Protocol

MATERIALS TEXT

Equipment:

- IITC Model 336 Plantar/Tail Analgesic Meter with True tail Temp and Heated Glass
- HP laser printer
- Mouse restraint
- #2 Phillips screwdriver
- Foot switch
- Temp probe with stand and guide (Needed for tail flick only)
- Plastic mouse chamber
- Black Sharpie

1 **Setup:**

− Must clean equipment with sporeklenz before entering the animal room

− All restrainers need to be exclusively used in same room. If restrainer has been in another animal room, it **CANNOT** be used!

− Never remove cable from test head or back of tail flick machine when it is on. Failure to pay attention may damage electrical circuits in machine.

2 **Instrument Instructions:**

− Keyboard commands ///There are 7 commands/// \\\number plus E shows the setting of the function\\\

1) #1 – Current Temperature (1E shows temp
2) #2 – animal number e.g. 2011E for animal 11
3) #3 – Active Intensity (During Test) e.g. 3050E for 50% intensity
4) #4 – Idle Intensity (Temp during the ready state) e.g. 4050E for 50%
5) #5 – Cutoff timer (Harm prevention) e.g. 5025E for 25 seconds
6) #6 – Trigger Temperature (Pre-warming) e.g., 6025E for 25ºC.
7) #7 – Time of day (24 hr format{ 5 digit sequence}) e.g. 00100E for 1am
8) #8 – Date (6 digits must be used) eg.020501 for Feb 5th, 2001

3 **Pre-Operating Instructions:**

− Mice need to be acclimated to the machine. This is accomplished with by placing mouse in restrainer 2-3 times briefly before test occurs.

4 **Operating Instructions:**

− Measure and mark tail 3 cm from tip.

− Place temp sensor on the groove in ready state (if needed).

− For first animal type 6000E(this disables pre-warm feature), 4001E, 3025E, 5010E, and set time and date.

− Place mouse in restrainer and align tail mark over pinhole opening (Head should be towards keypad)

− There are two ways to start test; The footswitch or the red button. Hit either one to arm the system, hit it again to start the test. The temp will ramp up to desired temp (if needed) and the test will begin and end without any user input. When the mouse moves tail, the machine will shut off.

− Make sure to keep tail as close to the groove as possible.

− When the test ends, there will be three numbers that flash.
− - P = Finish temp
- B = Start temp
- Blank = elapsed time
The time should be recorded only.

Test is over

5 **Additional Notes:**

– Collecting the data can occur in two ways. After each test, the data can manually be collected or a printer can be set up to the machine and will print the data when there is one full page of data. Manual data collection is recommended at this point.

– Settings to be used
- Active Intensity is 25%
- Idle Intensity is 1%
- Trigger Temperature is 25 ºC
- Cutoff time is 10 seconds

– If the machine becomes confused, consult manual page 8, Troubleshooting.

– If climate of test area is controlled, then temperature ramping does not need to be used.