Hargreaves-Nociception Test

Version: 1/Sept 2023
Edited by: Lynette Bower/Louise Lanoue

Summary:

The purpose of this test is to assess acute pain sensitivity to a thermal stimulus using the paw. It will indicate detection and processing of thermal sensory input. Tests are performed on the plantar surface of the mouse hind paw by a focused, radiant heat light source. The light beam is focused to the top of the glass and creates a 4X6mm intense spot on the paw.

Reagents and Materials:

Reagent/Material	Vendor	Stock Number
Hargreaves Plantar testing apparatus	IITC or other vendor	
Timer		
Lab coats/gloves/PPE		
Disinfectant Coverage Plus	Setris	

Protocol:

a. Transfer the mouse from its home cage to the testing unit (Plexiglas enclosure on a testing platform) and allow to acclimate for 30 min but no longer than one hour.
b. Set the temperature of the movable heat source (visible radiant light), to between 47°C-52°C.
c. Using the guiding mirror, align the "test head: of the heat source under the mouse paw. A light beam is focused to the top of the glass (test head) and creates a 4X6mm intense spot on the paw. **NOTE: Prior to the test, use the "guide light" (non radiant) to ensure that the light will beam at the right location on the paw.**
d. Latency to paw withdrawal is recorded. The heat source emits for a total 30 seconds at which time if the paw is now withdrawn from the heat source the light will turn off.
e. Repeat the test 3 times and average the results.
f. At the end of the procedure, return mice to their home cage and disinfect the chambers and surface of the stand with Coverage Plus.