

Rota Rod Test
IACUC Standard Procedure
Effective Date October 2021

Description of Procedure:

Animals are placed on a rotating rod apparatus. This test is used to screen for motor balance & coordination deficits and/or motor learning ability, two important variables that could also influence performance in other behavioral tests that rely on motor ability, and be a potential predictor of future physiological and/or motor impairments.

Supplies:

- Rotarod apparatus
- Computer-controlled automated system (optional)
- Padding that is easy to maintain and disinfect (optional depending on height of apparatus).

Procedure Steps:

1. The rod is typically 15 cm above the base. The rod and base are cleaned with Vimoba prior to use.
2. The animal is placed on either a stationary rod (accelerating version of the test) or an already rotating rod (fixed speed version of the test) facing away from researcher.
3. In the fixed speed version of the test, the rod turns at a constant rotation speed (4-16 rpm) for the entire length of the trial, which is typically 3-5 minutes. In the accelerating speed version of the test, the rod slowly accelerates from 4 rpm up to 20-80 rpm. Performance is usually assessed on multiple trials (1-3) and across multiple days (1-3), and the age span.
4. The test terminates when the animal is no longer able to remain on the rod or the maximum duration of the test is reached. The maximum trial time or latency to fall is either recorded with a timer or automatically registered by the apparatus.
5. Computerized systems can automatically record the rpm at the time of fall, latency to fall and termination of the trial.

Example of Rota Rod:



Mouse Rota Rod Treadmill