



# STANDARD OPERATING PROCEDURE

**TITLE: Vibrissae-Evoked Forelimb Placing (Paw-Whisker) Test**

**CATEGORY: Behavioral Assay**

## Introduction

**Goal:** This document aims to provide the reader information on how to conduct the Vibrissae-Evoked Forelimb Placing (Paw-Whisker) Test. The test is used to evaluate asymmetry in the sensorimotor cortex and striatum as well as sensorimotor integration across the right and left hemispheres. The combination of same-side and cross-midline tests has been used to assess the extent of damage to the cerebral hemispheres caused by different brain lesions. This test may be performed in conjunction with the 28-Point Neuroscore and Garcia Neurological Score Tests. As this is a general description of standard materials, test settings, and procedures, variations may be made to fit specific needs.

## **Materials**

- *Subjects:* any strain of rats or mice. No prior training is required, though subjects should be acclimated to testing environment and experimenter before testing.

## **Test Settings**

- *Test area:* clean tabletop with 90° edge without lip or rounded corners.
- *Lighting:* well-lit.

## Detailed Standard Operating Procedure

Before testing:

- *Acclimation:* subjects in home cage are placed in testing room for at least 1hr before testing to minimize effects of stress on behavior during testing.
- *Subject training:* none required.

Testing procedures:

- Animal is held with paws suspended in the air. Animal should be habituated to this handling to avoid struggling during trials.

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**1. Same-side placing**

With contralateral paw restrained by experimenter, animal is brought to edge of table so that whiskers brush against table. Successful placement of forepaw ipsilateral to whisker on table edge is recorded. 10 trials are performed on each lateral side.

**2. Cross-midline placing**

With ipsilateral paw restrained, animal is held sideways and brought to edge of table so that whiskers brush against table. Successful placement of forepaw contralateral to whisker on table edge is recorded. 10 trials are performed on each lateral side.

- Animal is returned to home cage.

**Data Analysis**

- Percent of successful placements is presented:  

$$[(\text{Paw Placements}) / (10 \text{ trial attempts})] * 100$$

