

# Y-maze IMPC\_YMZ\_001

- [Purpose](#)
- [Experimental Design](#)
- [Equipment](#)
- [Procedure](#)
- [Parameters](#)
- [Metadata](#)

## Purpose

The Y-maze is used to assess spontaneous alternation performance as an index of active retrograde working memory in rodents.

## Experimental Design

Minimum number of mutant animals required: 7 males + 7 females

Minimum age of animals: 11 weeks.

Sex: both males and females

## Equipment

Y shaped arena with three arms of identical length at 120° angles.

Camera and computer with tracking software if using video tracking.

## Procedure

1. Transport animals to testing room at least 15 minutes prior to testing.
2. Ensure lighting conditions are as desired and if using video tracking that the camera is working.
3. Remove mouse from its cage and place in the start arm alternating start arms for each mouse tested.
4. Either manually score the entries or use the automatic tracking while the mouse explores the arena for the duration of the test. Arm entry is defined differently depending on the scoring system.
  - a. Manual: arm entry is scored when all four paws enter the new location.
  - b. Automated tracking: arm entry is scored when the centre of the mouse enters the new location.
5. Remove mouse from the arena and place back in home cage.
6. Clean area with consistent disinfectant (i.e. ethanol/clidox) before testing next mouse.

## Parameters

	Version	Type	Req. Upload	Req. Analysis	Annotation	Increment	Option	Ontology Options	Derived	Unit	Data Type
<a href="#">Latency to leave start arm IMPC_YMZ_001_001</a>	1.0	simpleParameter	✓		✓					s	FLOAT
<a href="#">Total arm entries IMPC_YMZ_002_001</a>	1.0	simpleParameter	✓		✓						INT
<a href="#">Number of triplets IMPC_YMZ_003_001</a>	1.1	simpleParameter							MPC_YMZ_002_001 2 -		INT

