

	Flinders University Standard Operating Procedure Morris Water Maze Test 21/05/19		
			College of Medicine and Public Health Animal Facility
SOP Number	RA Number	AWC Approval Date	
SOP-MED-1-2013	RA-	21/05/2019	
Contact Person	SOP prepared by		Review Date
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The SOP **Morris Water Maze Test** contains the following sections:

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Legislation

- *Australian Code for the Care and Use of Animals for Scientific Purposes 8th Ed.*
- *Animal Welfare Act 1985*
- *Animal Welfare Regulations 2012*
- [Gene Technology Act 2000](#) (the Act)
- [Gene Technology Regulations 2001](#)
- *Work Health and Safety Regulations 2012*

University Policy

- Work Health and Safety Policy 2013
- Responsible Conduct of Research Policy 2016
- NHMRC Guidelines

Local Policy

Use of the College of Medicine and Public Health Animal Facilities by all staff and researchers of the College of Medicine and Public Health, Flinders University, is subject to awareness of, and adherence to the following:

Research Involving Animals:

- The University holds a permit for the use of animals for teaching and research purposes. To satisfy the requirements of the permit, anyone wishing to undertake teaching and research using animals must submit a proposal to the Animal Ethics Review Sub-Committee. No work with animals may commence until written approval has been received from the Animal Welfare Committee. Standardised application forms for Research and Teaching can be found on the Flinders University website listed below. It is your responsibility to regularly check this site for updates to guidelines, forms etc http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm
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- **All staff and students involved in animal research must complete Animal Ethics Online Training (AEOT) and must also regularly attend Animal Researcher Information Sessions (ARIS).**

Safe Operating Procedures

Refer to Risk assessments, Safe Operating Procedures for chemicals, processes and plant equipment where appropriate. All projects must have an accompanying Risk Assessment signed by the Animal Facility Manager

Personal Protective Equipment Required

- Gloves
- Gown
- Mask
- Hair Net
- Shoe Covers

Hazards and Controls

- **Animal Bites- SOP and training**
- **Animal Allergies- PPE**
- **Animal Scratches- SOP and training**
- **Needle Stick- do NOT recap needle, dispose immediately in a sharps container**
- **Risk of Exposure to hazardous substances- Follow advice in RA's, SOPs and MSDS**

Before Work Commences

Ensure that you are aware of the locations of the following:

- Spill Kit
- Fire Extinguisher
- Eye Wash
- Exits

Risk Assessment and MSDS (Material Safety Data Sheet) - Ensure that you have read and understood for all the substances being used.

Equipment

- Check for safety and electrical compliance
- Ensure that you have read and understood the Risk Assessment and Safe Operating Procedure
- Obtain training before using any lab equipment

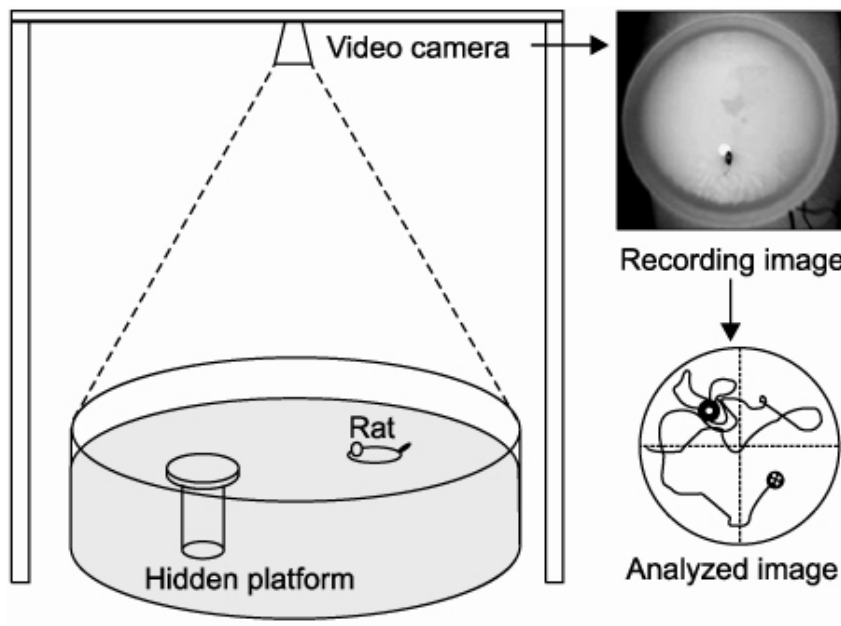
Morris Water Maze Method

Equipment:

- Circular Washtub 4-5 feet (120-150 cm) in diameter with 2 feet (60 cm) high walls.
- Height adjustable, circular platform (8 inches diameter).
- Cues cabinets, doors, posters.
- Milk.
- Stopwatches.

Procedure:

1. Fill a 1.5 m diameter, 45 cm deep, Morris water maze with water to a depth of 26.5 cm.
2. Adjust the water temperature to 25°C ($\pm 0.5^\circ\text{C}$).
3. Place a circular platform, 25 cm high and 12 cm in diameter, into the tank at a fixed location in the centre of one of four imaginary quadrants.
4. Use approximately 1.5 litres of milk to make the water opaque.
5. Immediately prior to behaviour testing, allow the rat an adaptation period of 10-15 minutes (to adapt to white light).



6. Give the rat 1 minute rest upon the platform before undergoing 3 swim training trials.
7. During each training trial, remove the rat from the stand and release facing the platform at a distance of 12-18 inches.
8. Guide the rat to swim to the platform.
9. A rest period of 30 seconds will be followed by 10 test trials:
 - Two sets of 5 trials (3 trials from each of the 3 start positions, with a rest period of 30-45 minutes (in a small heated cage in a different room) separating the two test periods).
10. During the test trial, release the rat into the water at one of the three different starting positions, facing the wall, and use distal cues (e.g. cabinets, doors, posters, etc.) to navigate to the platform.
 - The start positions will all be equidistant from the platform, and will be located immediately adjacent to the wall in the centre of the three quadrants that will not contain the platform.
11. Allow the rats to swim for up to 1 minute to locate the platform. If the rat fails to locate the platform within that time, escape will be assisted.
12. Measure distance travelled and escape latency on each trial. Swim speeds, in cm/s will be calculated by dividing the distance travelled by the escape latency.
13. After each trial, dry the animal immediately.

SOP Review

This SOP currently applies to the animals housed in the College of Medicine and Public Health Animal Facility. This SOP will be reviewed 3 yearly, but also updated more frequently as policies, techniques and animal care requirements change.

Position	Name	Contact Details
Manager Animal Facility	Roxanne Collingwood	8204 4380 roxanne.collingwood@flinders.edu.au
Animal Welfare Officer	Lewis Vaughan	0450 424 143 awo@flinders.edu.au

Useful References

<http://www.nhmrc.gov.au>

<http://www.adelaide.edu.au/ANZCCART/>

http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm

Any questions regarding the above guidelines and any technical advice/ assistance required can be directed to Animal Facility Manager.