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Protocol status: Working
We use this protocol and it's working

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Odor Retention

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ABSTRACT

Odor retention test optimized for mice. This test assesses short term olfactory memory. Mice with olfactory impairments or deficits should score lower.

GUIDELINES

ODERANT PAIRS: limonene (diluted 1:10) and carvone (diluted 1:10); Amylacetate (1:100) and Anisol (1:100); and propyl acetate (1:10) and Pentanal (1:10).

Notes:
- Paper swabs soaked in a given odorant were used inside the cartridges.
- Investigation time defined as the duration of active sniffing with the nose placed less than 1 cm away from the cartridge.

MATERIALS

- ODERANT PAIRS: limonene (diluted 1:10) and carvone (diluted 1:10); Amylacetate (1:100) and Anisol (1:100); and propyl acetate (1:10) and Pentanal (1:10).

- Paper swabs

- Mesh balls (tea balls)

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1 Prepare and empty rodent cage with no bedding.

2 Prepare the odorants by diluting in mineral oil. (See guidelines)

3 Acclimate mouse to setup (empty cage with odor cartridges). Place mouse in the cage and expose to 2 empty odor cartridges on either side of the cage for 5 mins.

4 Expose mouse to the same unfamiliar odor in both cartridges for 5 mins. (**Acquisition**)

5 After 6, 16 or 30 mins post-acquisition, expose the mouse to a novel odorant and the familiar odorant from Step 4 and record the time spent investigating both the novel and familiar odorant for all trials. (Total investigation time capped at 1 min). (**Recall**)

6 The preferred odor was recorded and the preference was calculated based on the recall trial.