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Sociability Apparatus (3-chambered social test)

for MOUSE or RAT

General

Research has shown that, although human social behavior is generally more complex, humans and animals share some aspects of social behavior

The 3-chambered test is a valuable tool to assess general sociability and interest in social novelty in rodent models of CNS disorders.

Rodents normally prefer to spend time with another rodent (**sociability**) and will investigate a novel intruder more than a familiar one (social novelty).

Based on these inclinations, the Three Chamber Test can help identify rodents with deficits in sociability and/or social novelty.

The **Ugo Basile Sociability Apparatus** consists of a 3-chambered cage, with transparent or grey opaque walls, a special non-reflective grey-colored floor and 2 grid enclosures.

Many authors (e.g. Moy et al. 2004; Nadler et al. 2004) have shown that a 3-chambered box can be used to test:

- Social Novelty Preference
- Sociability
- Dominance
- Autism



FOR STUDIES ON:

- Autism
- Social Memory & Novelty
- Pair-bonding
- Dominance hierarchies



Main Features

- Works even with the most basic videotracking software
- Grid Enclosures maximize animals interaction
- The grey floor gives high contrast with both light and dark animals
- The special painting gives a slightly rough surface, pleasant for the animals to walk on.
- Available with transparent or opaque walls
- Sociability Cages for Rat are also available in two sizes: standard 120x40x40(h)cm) and XL 120x80x40(h)cm

Rationale and Outline of the Procedure

The Ugo Basile 3-Chambered Apparatus can be used with many different procedures.

In their 2004 paper, Moy and co-authors (see bibliography), describe a typical protocol: after a period of habituation a mouse sociability is determined by measuring the time spent by the freely-moving subject in the proximity of the grid enclosures containing the first 'stranger' mouse.

A second 'stranger' mouse is then introduced in the box and the preference for the new 'stranger' mouse can be easily assessed.

3-Chamber Box & Grid Enclosures

The 46553 perimetral walls and internal partitions of grey opaque PVC form a 3 compartment box, each 20x40x22(h)cm; two sliding doors (5x8(h)cm), opening on the central compartment, can be closed to confine the animal.

Partitions can be easily removed for cleaning (or replaced with transparent ones, if preferred). Transparent lids 46503-320 can be ordered as optional.

The grey metal floor gives high contrast with both light & dark animals, allowing for automated video-tracking of the animals.



Its special painting also gives a slightly rough surface, pleasant for the animals to walk on.

The grid enclosures allow mice to interact closely; the grid bars have a diameter of 3mm and are spaced 7mm.

The standard **enclosures** are 15cm tall with an I.D. of 7cm. The top and the bottom are made of grey (**46503-003**) or white (**46503-013**) PVC.

Model 46503 with transparent walls is also available: the clear Perspex is ideal for visual observation of the experiment or for side positioning of the video-camera.



Optimized for Video-Tracking

The grey floor gives best contrast to both light and dark animals, which is the most critical factor for <u>all</u> videotracking softwares to work properly.





Images and videos, courtesy of Dr. Patrizia D'Adamo (San Raffaele Institute, Milan, Italy)

Ordering Information

- 46553 Mouse Cage for 3-Chamber Sociability Test, opaque walls & internal partitions (no lids). With 2 grid cages (grey, I.D. 7cm, height 15cm)
- 46503 Mouse Cage for 3-Chamber Sociability Test, transparent walls, internal partitions and lids. With 2 grid cages (grey, I.D. 7cm, h 15cm)
- **46552 Rat Cage for 3-Chamber Sociability Test, opaque walls & internal partitions (no lids).** With 2 grid cages (grey, I.D. 15cm, h 25cm)
- 46562 Rat Cage XL, opaque
- **46502 Rat Cage for 3-Chamber Sociability Test**, transparent walls, internal partitions and lids. With 2 grid cages (grey, I.D. 15cm, h 25cm)m, 15cm(h)

46512 Rat Cage XL, transparent

Physical	Mouse	Rat
Dimensions	60x40x22(h)cm	120x40x40(h)cm
		120x80x40(h)cm XL
Weight	9Kg	18Kg
Shipping Weight	12Kg	25Kg
Packing	67x42x53cm	Pallet

Bibliography

- A.J. Mierzwa et alia: "FGF2 and FGFR1 Signaling Regulate Functional Recovery Following Cuprizone Demyelination" Neuroscience Letters 548: 280-285, 2013
- M. J. Kane et alia: "Mice Genetically Depleted of Brain Serotonin Display Social Impairments, Communication Deficits and Repetitive Behaviors: Possible Relevance to Autism" PLos ONE 7(11): e48975, 2012
- M. Yang et alia: "UNIT 8.26 Automated Three-Chambered Social Approach Task for Mice" Current Protocols in Neuroscience Published Online: 1 July 2011

Method Papers

- S.S. Moy et alia: "Sociability and Preference for Social Novelty in Five Inbred Strains: an Approach to Assess Autistic-Like Behavior in Mice" Genes, Brain and Behavior 3(5):287-302, 2004
- J.J. Nadler et alia: "Automated Apparatus for Quantitation of Social Approach Behaviors in Mice". Genes, Brain and Behavior 3(5): 303–314, 2004.