

Materials List for:

A Procedure to Observe Context-induced Renewal of Pavlovian-conditioned Alcohol-seeking Behavior in Rats

Jean-Marie Maddux¹, Franca Lacroix¹, Nadia Chaudhri¹

¹Department of Psychology, Center for Studies in Behavioral Neurobiology, Concordia University

Correspondence to: Nadia Chaudhri at nadia.chaudhri@concordia.ca

URL: <https://www.jove.com/video/51898>

DOI: [doi:10.3791/51898](https://doi.org/10.3791/51898)

Materials

| Name | Company | Catalog Number | Comments |
|---|--------------------------|----------------|--|
| Heavy-duty utility cart | Rubbermaid | #4520-88 | Used to transport rats in their home cage from the colony room to the behavior room or other facilities |
| Rats, Long-Evans | Harlan | | Rats weighed 220-240 g on arrival |
| Ohaus scale | Fisher | #S402421 | For weighing rats; tare the bottom of a plastic container first, then put the rat in it to weigh it |
| Beta-chips, aspen | Harlan | #7090A | Bedding for home cage |
| Nylabone | Bio-Serv | #K3580 | Enrichment provided in the home cage |
| Autoclavable rodent chow | Agribands, Charles River | #5075 | For feeding rats |
| Wire bar cage lid | Ancare | #R20SS2B | Custom made with two slots for bottles |
| Cage bottom | Ancare | #R20PC | To house rats |
| Stoppers | Ancare | #8.5 | Rubber stoppers to occlude opening in water bottles & graduated cylinders; goes with ball point sipper tubes |
| Ball point tubes, 1.5" length | Ancare | #TD-99 | Inserted in stoppers, enables rats to drink from water bottles and graduated cylinders |
| Water bottles | Ancare | #FSPC8HT | 473 ml (16 oz) capacity, needs to be occluded with stopper |
| Graduated cylinders, 100 ml | Fisher | #0300741 | To contain ethanol during alcohol exposure in the home cage; spouted end needs to be cut off to enable occlusion with stoppers |
| Mettler scale | Mettler Toledo | #MS6001S | For weighing water bottles and ethanol cylinders |
| Polyethylene tubing, 1/32" inner diameter, 1/32" wall thickness, 3/32" outside diameter | Fisher | #14-169-1A | To connect 20 ml ethanol syringe to fluid port |
| Needle, 18 g, 1.5" length | Fisher | #B305199 | To connect polyethylene tubing to ethanol syringes; needs to be filed |
| Syringes, 20 ml, Luer-Lok non-sterile | Fisher | #1482316J | To contain ethanol on the fluid pumps; needs to be connected to the polyethylene tubing by a 18 G 1 1/2 needle |
| Syringes, 60 ml, Luer-Lok non-sterile | Fisher | #14-820-11 | To flush polyethylene tubing after PDT sessions |
| Single speed syringe pump, 3.33 rpm | Med Associates Inc. | #ENV-018MD | To hold 20 ml ethanol syringes and deliver ethanol |

| | | | |
|--|--------------------------|---------------|--|
| Fluid port | Med Associates Inc. | #ENV-254-CB | To enable ethanol delivery during PDT sessions; connected to ethanol syringes with polyethylene tubing |
| Port entry infrared detector | Med Associates Inc. | #ENV-215M | Fixed on both sides of fluid port; need 2 per fluid port |
| Houselight, 28 V, 100 mA | Med Associates Inc. | #ENV-135M | Provides general lighting in conditioning chamber |
| Clicker module | Med Associates Inc. | #ENV-225SM | Auditory stimulus for conditioning chamber |
| White noise generator with speaker | Med Associates Inc. | #PHM-100 | Auditory stimulus for conditioning chamber |
| Bar floor | Med Associates Inc. | #ENV-009A-GF | To go with modular test chamber |
| Bench coat, absorbent | VWR | #89126-790 | Absorbent paper to put in metal tray, needs to be cut to fit the metal tray |
| Polycarbonate sheet, 1/8" thick, 12-5/8" x 10" | Johnston Plastics | #30102515 | To make smooth transparent floor insert used for context 1. Needs to be cut in 11.5" x 12.25" pieces |
| Aluminium sheet perforated, 0.063" thick, 48" x 96", 0.250" holes x 0.375" centers | Anica Steel | | To make perforated floor insert used for context 2. Needs to be cut in 11.5" x 12.25" pieces |
| Black cardboard, 0.053" thick, 28" x 44" | Omer DeSerres | #P1909 | To construct panels covering the ceiling, door and back wall of the conditioning chamber in context 1. Needs to be cut to size. Each chamber needs three panels measuring approximately 11.5" x 13.25". The panels can be joined by the narrower side using duct tape. |
| All-purpose strength duct tape, 1.88" x 45 yd. | Duck Tape | | Adhesive material to connect the black cardboard panels used to cover the back wall, ceiling and door in context 1. |
| Modular test chamber | Med Associates Inc. | #ENV-009A | Conditioning chamber |
| Sound attenuating cubicles | Med Associates Inc. | #ENV-200R3AM | Comes with installed 28 V DC fan (#ENV-025F) |
| Petri dish | Fisher | #08748B | Bottom only, to contain the sprayed solution that provides the odor stimulus; needs to be centered in the metal tray in conditioning chambers |
| PCI interface package | Med Associates Inc. | #DIG-700P2-R2 | Connects tabletop interface cabinet to computer; includes 1 interface card, 1 Decode card, 1 ribbon cable and 1 28 V DC power cable |
| Large tabletop cabinet and power supply | Med Associates Inc. | #SG-6510D | Used to contain the 12 cards included in the SmartCtrl 8 Input, 16 Output package |
| SmartCtrl 8 Input, 16 Output package | Med Associates Inc. | #DIG-716P2 | Used to connect and control the devices in the conditioning chamber. The package includes all the cables, the interface module and the connection panel. |
| Med PC IV software | Med Associates Inc. | #SOF-735 | Software to run programs. Needs to be installed on the computer. |
| Monitor LG, 19" LCD | Concordia computer store | #W1942TQ-BF | Computer monitor; to go with computer running Med PC IV |

| | | | |
|-------------------------------------|--|----------------|--|
| HP Z200 tower workstation | Concordia computer store | #BZ788US#ABA | Computer on which Med PC IV is run |
| Benzaldehyde, ≥99% | Les produits chimiques OMEGA Chemical Company Inc. | #B37-50 | Dilute in tap water for almond context odor |
| Lemon oil, cold pressed, California | Sigma Aldrich | #W262528-1KG-K | Dilute in tap water for lemon context odor |
| Ethyl alcohol, 95% | Commercial Alcohols | | Dilute in tap water to desired concentration |