

Materials List for:

Neurodevelopmental Reflex Testing in Neonatal Rat Pups

Antoinette T. Nguyen¹, Edward A. Armstrong¹, Jerome Y. Yager¹

¹Department of Pediatrics, University of Alberta

Correspondence to: Jerome Y. Yager at jyager@ualberta.ca

URL: <https://www.jove.com/video/55261>

DOI: [doi:10.3791/55261](https://doi.org/10.3791/55261)

Materials

| Name | Company | Catalog Number | Comments |
|--|--------------------------|----------------|--|
| <i>Breeding</i> | | | |
| Transfer pipettes | Fisherbrand | 12-711-9AM | Used for vaginal flushes. |
| Sterile Saline | Hospira | 7983254 | The solution used to collect cells during vaginal flushes. |
| 400 μ L Microcentrifuge tubes | Fisherbrand | 05-408-120 | Used to hold the saline solution. |
| Light microscope | Leica | Leica ATC 2000 | For observation of the saline solution. Can be any light microscope used in the lab. |
| Slides | Fisherbrand | 12-552-5 | The saline solution is placed on the slide. Can be any slides used in the lab. |
| Coverslips | Fisherbrand | 12-545-F | To coverslip the slides. Can use any coverslips used in the lab. |
| <i>Dietary Supplementation</i> | | | |
| Broccoli Sprouts seeds | Mumm's Sprouting Seeds | | Broccoli sprouts seeds are ordered and grown in the lab. |
| Countertop Seed Sprouter Box | Mumm's Sprouting Seeds | | A box is used to germinate and grow the seeds prior to harvest. |
| 250 mL beaker | | | The beaker is used to soak the seed. Any size beaker that would fit can be used. |
| <i>Maternal Inflammation</i> | | | |
| Lipopolysaccharide (LPS) | Sigma | L3129 | The endotoxin used to mimic maternal inflammation. |
| 1 mL Syringe | BD Syringe | 309659 | Used to inject the pregnant rat. |
| Gauge (30 G x 1/2) | BD PrecisionGlide Needle | 305106 | Use the smallest needle to avoid pain and discomfort. |
| Sterile Saline (0.9% Sodium Chloride, USP) | Hospira | | Saline is used to dissolve LPS. |
| <i>Weights</i> | | | |
| Scale | Denver Instrument | | For recording the weights. Can be any scale with 2 decimal places used in the lab. |
| <i>Neurodevelopmental Reflexes</i> | | | |
| Thin blunt rod | | | Can be a paperclip or toothpick. This is for forelimb and hindlimb grasping. |
| Round filter paper | Whatman | 1001 150 | 15 cm diameter paper used for gait analysis. |
| Timer | Fisher Scientific | 06-662-51 | For timing the time allocated to righting and gait. |

| | | | |
|------------------|------|------------|--|
| Blunt surface | | | Can be an edge of a table. This is for hindlimb placing and cliff avoidance. |
| Foam landing | | | For when the pups perform accelerated righting. |
| Video recorder | Sony | VCT-D580RM | To record all reflexes tested. Must be able to record at 1/1,000 fps |
| Bell | | | For auditory startle. |
| Heat lamp or pad | | | To maintain the body temperature of the pups undergoing examination. |