Quality Control Parameters for Probabilistic Reversal Learning (PRL)

1) - 4) (i.e., pre-training) only applicable if PRL is first and/or only task performed:

1) Schedule name has to contain **-** **"PRL - Mouse Habituation 1"**
Each animal ID has to have **ONLY ONE** (1) "PRL - Mouse Habituation 1" session in the entire project life cycle.
  • Analysis script: VD Analysis Folder —> PD Habit 1
. **Max Number Trials** – no value (empty) or 0
. **Max Schedule Time** = 600
. **End Summary Condition** = 600

2) Schedule name has to contain **-** **"PRL - Mouse Habituation 2"**
Each animal ID has to have **THREE (3)** "PRL - Mouse Habituation 2" sessions in the entire project life cycle.
  • Analysis script: VD Analysis Folder —> PD Habit 2
. **Max Number Trials** – no value (empty) or 0
. **Max Schedule Time** = 1200 or 2400
. **End Summary Condition** = 1200 or 2400

3) Schedule name has to contain **-** **"PRL - Mouse Initial Touch"**
Each animal ID has to have **AT LEAST ONE (1)** "PRL - Mouse Initial Touch" sessions in the entire project life cycle.
  • Analysis script: VD Analysis Folder —> PD Initial Train
    • Though should change analysis script to include no. trials because no. images = 0 for PR
. **Max Number Trials** – 30
. **Max Schedule Time** = 3600
. **End Summary – Condition** = greater than "0"
. **End Summary – No. Images** = greater than "0"
        (should be no. trials, not no. images; no. images = 0)

. **End Summary – Condition** has to be equal to **"3600"** if the **End Summary – No. Images** is less than "30"

    (again, should be no. trials)

. **End Summary – No. Images** has to be equal to "30" if the **End Summary – Condition** is less than "3600"

    (again, should be no. trials)

4) Schedule name has to contain **- "PRL - Mouse Must Touch**"

Each animal ID has to have **AT LEAST ONE (1)** "PRL - Mouse Must Touch" sessions in the entire project life cycle.

  • Analysis script: VD Analysis Folder —> PD Must Touch

. **Max Number Trials** – 30

. **Max Schedule Time** = 3600

. **End Summary – Condition** = greater than "0"

. **End Summary – Corrects** = greater than "0"

. **End Summary – Condition** has to be equal to **"3600"** if the **End Summary – Corrects** is less than "30"

. **End Summary – Corrects** has to be equal to "30" if the **End Summary – Condition** is less than "3600".

5) is technically optional, but I recommend all users of PRL perform PRL-specific punish incorrect because the incorrect response outcome is different from standard punish incorrect.

5) Schedule name has to contain **- "Punish Incorrect**"

Each animal ID has to have **AT LEAST TWO (2)** "Punish Incorrect" sessions in the entire project life cycle.

  • Analysis script: VD Analysis Folder —> PD Punish Incor

. **Max Number Trials** – 30

. **Max Schedule Time** = 3600

. **End Summary – Condition** = greater than "0"

. **End Summary – Trials completed** = greater than "0"

. **End Summary – Condition** has to be equal to **"3600"** if the **End Summary – Trials completed** is less than "30"

. End Summary – Trials completed has to be equal to "30" if the **End Summary – Condition** is less than "3600".

From 6) onward: Must be present for all PRL data, regardless if PRL is the only task performed or one of many.

6) Schedule name has to contain - **"PRL"**
Each animal ID has to have **AT LEAST THREE (3)** "PRL" sessions for <mark>each database</mark>
  • Analysis script: PRL Analysis Folder —> PRL analysis w Rev
. Max Number Trials – 90
. Max Schedule Time = 3600
. Non_Reward_probability = 100
. Non_Reward_probability_alternate_side = 0
. Whole session analysis – Condition = greater than "0"
. Whole session analysis – Trials completed = greater than "0"
. Whole session analysis – Condition has to be equal to **"**3600" if the **Whole session analysis – Trials completed** is less than "90"
. Whole session analysis – Trials completed has to be equal to "90" if the **Whole session analysis – Condition** is less than "3600".

7) Schedule name has to contain - **"PRL"**
Each animal ID has to have **AT LEAST THREE (3)** "PRL" sessions for <mark>each database</mark>
  • Analysis script: PRL Analysis Folder —> PRL analysis w Rev
. Max Number Trials – 90
. Max Schedule Time = 3600
. Non_Reward_probability = 80
. Non_Reward_probability_alternate_side = 20
. Whole session analysis – Condition = greater than "0"

. Whole session analysis – Trials completed = greater than "0"

. Whole session analysis – Condition has to be equal to **"**3600" if the **Whole session analysis – Trials completed** is less than "90"

. Whole session analysis – Trials completed has to be equal to "90" if the **Whole session analysis – Condition** is less than "3600".

NOTE

The same schedule and analysis script are used for both 6) (i.e., deterministic reversal training) and 7) (i.e., probabilistic outcomes/task proper). The only thing that changes to differentiate between the two phases are changing the reward probabilities under the "Properties" tab when the schedule is loaded into ABET II.

For deterministic reversal training (6):

    Non_Reward_probability = 100

    Non_Reward_probability_alternate_side = 0

For PRL main task (7):

    Non_Reward_probability = 80

    Non_Reward_probability_alternate_side = 20