

## SOP Test 16 - Optomotor Assay (OMR)

### 1 Purpose

Assessing visual performance by triggering directional swimming response.

### 2 Scope

Larvae have a tendency to follow apparently moving objects and hence converge to the side of the arena in the direction of the moving objects.

### 3 Safety requirement

### 4 Associates documents

### 5 Notes

This behavior works most reliably in larvae older than a 6 dpf. It complements the OKR but is dependent on the larvae's ability to swim. Many larvae can be tested in parallel.

### 6 Quality control

### 7 Equipment

Personal Computer

Stimulation software (it is easy to write a movie of black stripes with most programs. We wrote our "movies" in NIH image or Powerpoint)

Monitor

Plexiglass Arena (here are many options; the most convenient is a plexiglass with swimming tracks grooved in. An easier option is to simply place a large petridish on the screen)

### 8 Supplies

Pipettes (plastic)

E3 medium

### 9 Procedure

5. Flip monitor screenside up
6. Place swimming track (or any other arena of choice) on the screen
7. Fill track with E3 and pipette group of larvae into arena
8. Play apparent movie
9. Wait appropriate time (in the order of few minutes) and score distribution
10. Scoring may be done in many ways. You can virtually divide the track in 6 equally large compartments and count the number of larvae per compartment. This step can be helped by shooting a digital image and use NIH Image to score the distribution.

### 10 Supporting Information