

SOP Test 12 - Phototaxis (OKR)

1 Purpose

Assessing visual performance of larvae by phototactic movements

2 Scope

Probably the easiest visual assay is phototaxis, the directed swimming of larvae towards light. It is important that all larvae are light adapted before the experiment, since adaptation of larvae will influence the behavior tremendously (see Curr Biol. 20(4):381-6).

3 Safety requirement

4 Associates documents

5 Notes

This behavior is robust and independent of motion vision.

6 Quality control

7 Equipment

Personal Computer

Stimulus Software (any imaging or presentation program such as Powerpoint, Photoshop etc.)

Monitor

8 Supplies

Petridish

Pipettes (plastic)

E3 medium

9 Procedure

1. Larvae (we take 20 at a time) are placed in a large petridish or any other transparent container
2. The screen is divided into two compartments, one black and one white
3. Distribution of larvae is quantified after given enough time for redistribution (15 minutes)

10 Supporting Information

Burgess, H.A., Schoch, H., and Granato, M. (2010). Distinct retinal pathways drive spatial orientation behaviors in zebrafish navigation. Current Biology 20(4):381-6