

Supplemental Video Legends

Video1.avi

Title: Horizontal loading of zebrafish into ZEBRA device

Caption: Video shows a 4 days post fertilization (dpf) zebrafish embryo being loaded into the ZEBRA device horizontally. The zebrafish is taken tail-first into the pipette by the user, and then loaded head-first into the channel. Via passive pumping, the droplet of water containing the embryo is driven to the other end of the channel and the zebrafish is trapped horizontally in place upon reaching the restriction in the channel.

Keywords: zebrafish, passive pumping, pipette, microchannel

Video2.avi

Title: Vertical loading of zebrafish into ZEBRA device

Caption: Video shows a 4 days post fertilization (dpf) zebrafish embryo being loaded into the ZEBRA device vertically. The zebrafish is taken head-first into the pipette by the user, and then loaded tail-first into the channel. Via passive pumping, the droplet of water containing the embryo is driven to the other end of the channel and the zebrafish is trapped vertically in place upon reaching the restriction in the channel.

Keywords: zebrafish, passive pumping, pipette, microchannel

Video3.avi

Title: Adding treatment to zebrafish using ZEBRA device with access port

Caption: Video shows a 4 days post fertilization (dpf) zebrafish embryo loaded into a ZEBRA device with access port. 5 μ L of diluted blue food dye is added to the access port via a micropipette. Due to passive pumping the dye is driven to the main inlet and outlet ports (not shown in video), and the embryo is immersed in the dye.

Keywords: zebrafish, passive pumping, pipette, microchannel, port, treatment

Video4.avi

Title: Rinsing treatment from zebrafish in ZEBRA device with access port

Caption: Video shows a 4 days post fertilization (dpf) zebrafish embryo loaded into a ZEBRA device with access port following the addition of diluted blue food dye. 5 μ L of water is added to the access port via a micropipette. Due to passive pumping the water is driven to the main inlet and outlet ports (not shown in video), rinsing the dye from the embryo.

Keywords: zebrafish, passive pumping, pipette, microchannel, port, treatment, rinsing