

Evaluating Toxicity of Chemicals using a Zebrafish Vibration Startle Response Screening System

Gaëlle Hayot¹, Daniel Marcato^{1,2}, Christina A. Cramer von Clausbruch¹, Giuseppina Pace¹, Uwe Strähle^{1,3}, John K. Colbourne⁴, Christian Pylatiuk⁵, Ravindra Peravali¹, Carsten Weiss¹, Stefan Scholz⁶, Thomas Dickmeis¹

¹Institute of Biological and Chemical Systems - Biological Information Processing, Karlsruhe Institute of Technology - Campus Nord ²DITABIS AG - Digital Biomedical Imaging Systems AG ³Centre for Organismal Studies, Heidelberg University ⁴School of Biosciences, University of Birmingham ⁵Institute for Automation and Applied Informatics, Karlsruhe Institute of Technology - Campus Nord ⁶Department of Bioanalytical Ecotoxicology, Helmholtz-Centre for Environmental Research - UFZ

Corresponding Author

Thomas Dickmeis

thomas.dickmeis@kit.edu

Citation

Hayot, G., Marcato, D., Cramer von Clausbruch, C.A., Pace, G., Strähle, U., Colbourne, J.K., Pylatiuk, C., Peravali, R., Weiss, C., Scholz, S., Dickmeis, T. Evaluating Toxicity of Chemicals using a Zebrafish Vibration Startle Response Screening System. *J. Vis. Exp.* (2023), e66153, doi:10.3791/66153 (2024).

Date Published

January 12, 2024

DOI

10.3791/66153

URL

jove.com/video/66153

Materials

Name	Company	Catalog Number	Comments
Fine test sieves, Brass frame, pore size 250 µm	Sigma-Aldrich	Z289744-1EA	Or comparable material
High-speed camera	XIMEA	MQ013MG-ON USB 3	
Laboratory Bottles, Narrow Neck, with Screw Cap	VWR	215-3261	Reference number for 50 mL, available up to 20 L. Or comparable material
Pipette tip, working volume: 10 µL	SARSTEDT	70.3010.210	Or comparable material
Pipette tip, working volume: 1000 µL	SARSTEDT	70.3050.100	Or comparable material
Pipette tip, working volume: 20 µL	SARSTEDT	70.3020.210	Or comparable material
Pipette tip, working volume: 200 µL	SARSTEDT	70.3030.100	Or comparable material
Serological pipette 10 mL	SARSTEDT	86.1254.001	Or comparable material
Serological pipette 25 mL	SARSTEDT	86.1685.001	Or comparable material
Serological pipette 5 mL	SARSTEDT	86.1253.001	Or comparable material
Tissue culture dish 60,0 mm/15,0 mm vented (Polystyrene)	Greiner bio-one	628102	Or comparable material
Tissue culture dish 100, suspension (Polystyrene)	SARSTEDT	83.3902.500	Or comparable material
Transfer pipette 6 mL	SARSTEDT	86.1175	Or comparable material
Tube 15 mL 120 mm x 17 mm PP	SARSTEDT	62.554.502	Or comparable material
Tube 50 mL 114mm x 28 mm PP	SARSTEDT	62.5472.54	Or comparable material