



Standard Guide for Conducting the Frog Embryo Teratogenesis Assay-Xenopus (FETAX)¹

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1. Scope

1.1 This guide covers procedures for obtaining laboratory data concerning the developmental toxicity of a test material. The test utilizes embryos of the African clawed frog, *Xenopus laevis* and is called FETAX (Frog Embryo Teratogenesis Assay-Xenopus) (1).² Some of these procedures will be useful for conducting developmental toxicity tests with other species of frogs although numerous modifications might be necessary. A list of alternative anurans is presented in [Appendix X1](#).

1.2 A renewal exposure regimen and the collection of the required mortality, malformation, and growth-inhibition data are described. Special needs or circumstances might require different types of exposure and data concerning other effects. Some of these modifications are listed in [Appendix X2](#) although other modifications might also be necessary. Whenever these procedures are altered or other species used, the results of tests might not be comparable between modified and unmodified procedures. Any test that is conducted using modified procedures should be reported as having deviated from the guide.

1.3 These procedures are applicable to all chemicals either individually or in formulations, commercial products or mixtures that can be measured accurately at the necessary concentrations in water. With appropriate modification these procedures can be used to conduct tests on the effects of temperature, dissolved oxygen, pH, physical agents, and on materials such as aqueous effluents (see [Guide E1192](#)), surface and ground waters, leachates, aqueous and solid phase extracts, and solid phase samples, such as soils and sediments, particulate matter, sediment, and whole bulk soils and sediment.

¹ This guide is under the jurisdiction of ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action and is the direct responsibility of Subcommittee E50.47 on Biological Effects and Environmental Fate. A standard guide is a document, developed using the consensus mechanisms of ASTM, that provides guidance for the selection of procedures to accomplish a specific test but which does not stipulate specific procedures.

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² The boldface numbers in parentheses refer to the list of references at the end of the text.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.5 This guide is arranged as follows:

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