

**Poster Number**

<b>27</b>
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<b>Topic</b>	Effect assessment
<b>Title</b>	<b>New Sediment Toxicity Test Methods Under Development at Environment Canada</b>
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**Keywords:** Biological test methods, amphibians, amphipods, echinoids, sediment toxicity

**Summary:** Experimental data used in risk assessments are evaluated for quality based on whether or not they have been obtained using accepted standardized test methods (e.g., Organisation for Economic Co-operation and Development (OECD) test guidelines, Environment Canada (EC) biological test methods). The need for toxicity data derived from longer-term studies, using relatively low or realistic exposure concentrations, and measuring sublethal endpoints on sensitive organisms has prompted the development of new test methods. Four different methods will be presented, each at different stages of development. First, Environment Canada has revised their standardized 14 day method with the freshwater amphipod *Hyalella azteca* (EPS 1/RM/33 2<sup>nd</sup> edition, January 2013) to include a water-only exposure to compare the effects on survival and growth from the sediment compartment given their epibenthic lifestyle. A longer-term (42 day) reproduction test with this same organism is also being investigated. In late 2013, EC will be ready to release a new marine sediment contact test that evaluates echinoid embryo development (i.e., sea urchins and sand dollars). Lastly, EC is conducting research to standardize a test method on Canadian amphibians, namely early life stages of leopard and wood frogs. The availability of toxicity data for amphipods, echinoids and amphibians are greatly desired for species sensitivity distributions used in risk assessments for chemical substances.