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## Advanced Topics in Hazard Prediction

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# **Novel Glovebox and Exposure Chamber Design to Conduct Full Emersion Aerosol Testing of Large Items With Super Toxic Materials**

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Toxicity and detector testing sometimes requires working with super toxic compounds. These compounds are typically in a liquid form and must be converted to an aerosol for the purposes of conducting experiments. Due to the fact that these compounds are super toxic, the aerosol generation, disseminating and sampling systems must be secondarily contained within a glovebox. To conduct full emersion aerosol testing of large detectors or toxicity testing of a large animal, a high volume chamber must be used. This poster will discuss one approach that has been used to construct a 1000 liter chamber and secondary containment glovebox. This system is capable of full emersion aerosol testing of large items up to a 2 foot cube and weighing 330 lbs. (150 kg).