

DEVELOPMENT OF DOE-SPEC-1142-2001: BERYLLIUM LYMPHOCYTE PROLIFERATION TESTING

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Beryllium sensitivity testing is used as a screening tool for possible chronic beryllium disease, as a surveillance tool in indicating hazardous working conditions, and as part of the diagnostic criteria for the disease. The blood lymphocyte proliferation test (BeLPT) is used to determine if an individual is sensitized to beryllium. The Department of Energy (DOE) has developed a directive that describes the laboratory procedure and statistical analysis for use in this work. This document and the review process that was used to provide comments and improvements are available in an "electronic notebook". The new procedure standardizes the interpretation of BeLPT results by using a metric that controls for the inter-laboratory and host differences inherent to this test. The statistical analysis takes into account the biological variability in the patient test result and the distribution of the maximum test result in a reference data set of nonexposed (control) individuals. Results obtained using this procedure for a group of beryllium workers are presented. For Additional information see TT-BeLPT Notebook at <http://www.csm.ornl.gov/~frome/BE/tnote.html>.

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