

## **Beryllium Sensitivity Testing from *Specialty***

Beryllium is a metallic element found abundantly in the Earth's crust that is used not only in major industries such as aerospace and electronic communications but also in small commercial ventures such as dental laboratories. Beryllium is added to some alloys because it is lightweight yet stable, has high heat resistance, corrosion resistance, insulating properties, nonmagnetic and nonsparking qualities and the ability to conduct electricity. A single wire made with beryllium can carry hundreds of electronic signals.

When beryllium is machined, respirable dust is formed. The adverse health effects of inhalation of Beryllium dust were first described in the 1940's. In 1949 an exposure limit of 2 :g/m<sup>3</sup> was adopted by the Atomic Energy Commission and became the industry standard. On the assumption that reducing beryllium exposure eliminated beryllium disease, many of the surveillance and reporting mechanisms were essentially put into mothballs until the 1980's. Reports of chronic beryllium disease (CBD) occurring in modern industry led to a resurgence of interest in how occupational exposure caused this granulomatous lung disease. The development of the beryllium lymphocyte proliferation test (BeLPT) helped to confirm that CBD was immune-mediated and became the standard for detecting sensitized individuals.

It is estimated that more than 500,000 workers have had occupational exposure to beryllium. Occupational exposure occurs not only to machinists and others with direct contact with beryllium but also to office staff and maintenance personnel. It seems likely that genetic factors contribute to determining who will develop the allergic reaction known as beryllium sensitization. The percentage of workers exposed to beryllium dust who will eventually develop CBD is difficult to determine, in part because the time from exposure to development of beryllium disease can range from less than 3 months to more than 30 years.

The Energy Employees Occupational Illness Compensation Act of 2000 provides compensation for Energy Department and federally contracted employees with established beryllium sensitization. The accepted diagnostic test for beryllium hypersensitivity is the BeLPT. The government has established rigorous standards for test performance and quality control. Specialty Laboratories is one of only four laboratories nationwide authorized to perform the BeLPT for this program.

Specialty Laboratories, a leading research-driven clinical reference laboratory serving the hospital, laboratory and physician specialist community, offers a broad menu of more than 3,500 specialized tests. Through internal research programs and partnerships with biotechnology companies, *Specialty* focuses on the development of new and enhanced tests that provide optimal clinical value for reliable and cost-effective patient assessment.

For more information on Beryllium testing or other assays available from *Specialty*, please contact Client Services at 800-421-4449 or visit our Web site: [www.specialtylabs.com](http://www.specialtylabs.com).