

ISRP 1999 abstract

Presenter/author	Title	Abstract
Hern, J. A. Smith, S. J. <i>3M Canada</i> <i>1360 California</i> <i>Ave.</i> <i>P.O. Box 665</i> <i>Brockville,</i> <i>Ontario K6V2E4</i> <i>Canada</i>	Non- Destructive Testing of Collective Protection Carbon Filters	Quality assurance tests for respiratory protective filters containing activated carbon are typically destructive tests, in that an irreversibly absorbed and usually toxic gas or vapor is used as the test agent. Collective protection respiratory filters, such as those used for buildings, military vehicles and ships can be large and expensive, so a destructive test is not ideal. An alternative test is described in which the carbon bed is not saturated or otherwise rendered unusable by the test agent. The method is non-destructive, does not use toxic test agents, is a fast test and adaptable to 100% testing. It has been applied successfully to personal respiratory protective filters. The scale-up to larger collective protection filters and high airflow rate is described. The test is capable of discriminating between defective, and properly packed activated carbon beds, as well as providing some information on the condition of the activated carbon.