To our customers we offer:

Tests of protective clothing materials with chemical and biological agents or against exposure to heat or flames. In addition to the tests on samples of clothing materials we offer also tests on the total protective suit. Tests are performed according to international standards (NATO, EN, ISO, FINABEL) or customer specified conditions (e.g. air flow, type of agent, agent concentration, temperature, relative humidity, duration). We have built tailor-made test equipment to be able to provide a vast array of services. The equipment is installed in a high toxicological facility in Rijswijk, with the containment area for handling extremely toxic compounds.

Material tests with toxic agents

The protective performances of materials to be used in protective gear can be evaluated with many different compounds in our laboratories. Materials are evaluated by challenging them with a specific agent in a liquid or a vapor phase, and monitoring the breakthrough of the agent. A wide range of chemical warfare agents (CWA’s) and toxic industrial chemicals (TIC’s) can be applied. Furthermore we can provide tests with biological warfare agents. The filtering efficiency of protective materials as well as the inactivation of micro organisms can be evaluated.

Heat and flame resistance tests

Materials can be characterized by a heat flash test, that simulates the heat pulse of a representative nuclear bomb. After exposure to the specified heat source, the effects on the material (melting, ignition, charring) are assessed. The heat transport to the skin is evaluated and expressed as the time at which the pain or blister level is reached.

Proof of reliability.
Whole system tests with simulants
The protection offered by the protective ensemble is not determined solely by the material properties itself, but also by the design of the suit ensemble. Zippers, openings at sleeves or the neck can contribute significantly to the reduction of the protective performance of a suit. To evaluate the design-aspects of protective clothing we have developed a ‘whole system’ test facility. This facility consists of a test chamber, in which an animated mannequin or a human volunteer is exposed to a simulant of chemical warfare agent while wearing the suit under investigation. The amount of chemicals deposited onto the skin is determined on locations distributed over the body.

Products and services
• The service of the independent Proqares company.
• Security screened employees.
• Well validated test methods.
• A short lead time for your test request.
• A report describing the test set-up, the actual test conditions, the test data and a brief discussion of the results.
• Access to scientific back-up and other testing facilities within several departments of the TNO organization.

Many professionals worldwide trust their lives to protective equipment against chemical and biological hazards. Proqares is an internationally leading provider of testing, evaluation and certification services targeted at such personal protective equipment. Proqares has an extensive track record in testing CBRN (Chemical, Biological, Radiological and Nuclear) protection devices for military personnel and first responders; commonly tested devices include respirators, CBRN protective clothing, boots and gloves. Also, Proqares provides a range of services targeted at personal protective equipment for the Chemical, Medical en Pharmaceutical industry. Within its High-Tox facility, Proqares is capable of working with the most toxic chemicals known to man, providing the fastest and most reliable results in the industry. Any test specified in all commonly cited standards is offered - national and international standards, military and civil. Integrity, flexibility, speed and reliability are core values of Proqares and its employees.

Proof of reliability.