

# Comparison of ISO 16900-1 Test methods for Determination of Total Inward Leakage (CAN# 93902JS)

## Objectives

- Compare the total inward leakage test methods proposed by ISO 16900-1 (draft) using the same respirators and the same subjects
- Evaluate the applicability of the methods to inward leakage testing requirements as part of possible revisions to 42 CFR Part 84

## Applicable Standards

- ISO 16900-1, ISO 17420-1 and 2 (drafts)
- 42 CFR Part 84

## Key Partners

- ISO, NIOSH, OSHA, European Standards Organizations

## Stakeholders

- Respiratory Protection Standards Organizations
- Respirator manufacturers
- Respirator users

## Project Scope (all years)

- Measure the total inward leakage using test agents including sodium chloride (NaCl), and corn oil as specified in the ISO 16900-1
- Compare the inward leakage measured by the two methods

## FY17 Milestones

- Q1. Analyze TIL data for FFPI, N95, P100 and elastomeric half-facepiece respirators
- Q2. Measure TIL for full facepiece respirators with NaCl and corn oil aerosols in the test chambers
- Q3. Measure TIL for PAPRs with NaCl and corn oil aerosols in the test chambers
- Q4. Measure TIL for PAPRs with NaCl and corn oil aerosols in the test chambers

## Outputs (completed and/or planned)

- Submit a manuscript to peer-reviewed journal

## Outcomes (completed and/or planned)

- Support the respiratory protective devices performance standards ISO 17420-1 and 2 (drafts)
- The results from the study will provide information on which method(s) can be used for NIOSH inward leakage testing