Protective Clothing and Masks Leakage Tester GT-RA08A

pplication:

To test protective clothing against solid airborne particles including radioactive contamination.

The machine use "inward leakage in %", ratio of the concentration of contaminant in the ambient atmosphere to the concentration of the contaminant in the suit, to evaluate the quality of protective clothing.

Key Specification

Model	GT-RA08A	
Environmental Requirement	Working temperature	(20±5)℃
	Humidity	≤60%
	Used space	≥4000×5000×3000mm, water in/drain pipe, room with good ventilation
Walked-in Testing Room	Inner effective size	1800mm×1500mm×2100mm(L×W×H)
	Outer size of testing room	1950mm×1650mm×2500mm(L×W×H)
	Control cabinet	700mm×700mm×1600mm(L×W×H)
Environmental Analog detection system	Particle aerosol concentration	(10±1) mg/mPP3
	Aerodynamics size distribution of particle	(0.02~2)μm
	Mass median diameter	About 0. 6μm
	Concentration variation in effective space	≤10%
	Occurrence amount	≥100L/min
Particle Concentration Detector	2 sets	
	Dynamic range	(0.001~200)mg/m3
	accuracy	±1%
	response time	≤500 ms
Horizontal Pedal Drive Test-bed	Running speed	(5±0.5)km/h
Other Accessories	Air duct circulation and maintenance of cleaning equipment	

A standard aerosol of sodium chloride particles is generated inside a test chamber in which a test subject, wearing the protective suit under test, carries out a predetermined sequence of test exercises. The inward leakage at each sampling position inside the suit is measured by means of flame photometry.We use following indicator to judge the quality of protective clothing.

- L_{ijmn}: inward leakage for a given test subject (i),suit(j),exercise (m) and sampling position (n)
- C_{ijmn}: concentration of aerosol measured at the sampling point inside the suit for a give test subject(i), suit(j(, exercise(m) and sampling position(n)
- LS: total inward leakage per suit (average over all exercises and sampling positions)
- LH: total inward leakage per human test subject (average over all exercises, sampling positions and suits worn by that test subject)
- LE: total inward leakage per exercise (average over all suits and sampling positions)
- Lp: total inward leakage per sampling position (average over all suits and exercises)
- LEP: total inward leakage per sampling position and per exercise (average over all suits)

- : mean total inward leakage (average over all test subjects, suits, exercises and sampling positions)

Controlling & Analysis system
1.Protective Clothing Against Solid Airborne Particles Tester Central control console, computer programmed control, prompting experiment process;

2.Monitoring test data automatically, calculating individual test inward leakage rate, total inward leakage rate, average inward leakage automatically, output testing result in various way.