## Aerosol Monitor for STACK

Measurable Gas Velocity in Stack: Up to 10 m/s Dilution ratio: Typical 40:1 Operation Temp. range: ~ 200°C



- ✓ Isokinetic sampling probe that responds to various gas velocities in stack
- ✓ Particle dilution at high temperature and high particle concentration without particle loss
- ✓ Long-term measurement through periodic automatic pipe cleaning
- ✓ Suitable for measuring at wet stack

## Portable Scanning Mobility Aerosol Spectrometer (P-SMAS) ✓ Hassle-free installation and operation

- Total sampling flow rate : 1 lpm

· Aerosol size resolution : 164 ch/decade

· Working fluid : Water (de-ionize or distilled)

· Touch-screen control for stand-alone operation

·WiFi, USB(2.0), USB(3.0), HDMI, LAN, micro-SD

• Aerosol measurement size range : 9.31 – 294 nm

- Aerosol flow : 0.12 lpm

· Neutralizer : soft X-ray

· Windows<sup>™</sup> based

· GPS (Optional)

✓ easy to carry

· Sampling flow

[APS-2490]



# **ART PLUS**

# AEROSOL RESEARCH AND TECHNOLOGY PLUS

A company that makes clean air, ART Plus develops and manufactures environmental measuring systems for indoor and outdoor based on PM (Particulate Matter) monitoring, control, and reduction technologies. We practices corporate sustainability management through innovative technologies and services.

Large Particle Generator 0.1~10um, 50~55lpm KCl/NaCl

Others \*

[AKG-1791]



> 5x10<sup>4</sup> CFU/m<sup>3</sup>

~2ml/min, ~50 lpm





**IPA Conditioner** < 15 Pa within 1min. ISO 16890-4, SPS-KACA002-132:2021 Simplified Gas Sensor Performance Evaluation System Analytical gases:  $NO_2, CO_2, CO_3, O_3$ 

\*Design SMART CITY **Construction SMART CITY** corresponding to 'FINE DUST' \*Construct fine dust information collection/reduction system

~100ppm@30m<sup>3</sup> test chamber

Acetic acid, Acetaldehyde, NH<sub>3</sub>,

H<sub>2</sub>CO, Toluene

\*Develop big data platform corresponding to fine dust

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      Government Awards.
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# Air Filter Performance Evaluation System \*\*

Model	Evaluations	Applications		
CF-2010W, CF-1916W	ISO 11155-1 (Particulate Filtration), ISO 11155-2 (Gas Adsorption)	Automobile cabin air filter		
MF-1712W	ISO 16890, ASHRAE52.2	Ventilations/ Air Conditioner		
HF-1711W	EN1822-5 HEPA/ULPA Filter Collection Efficiency	Semiconductor and high-tech industrial process,		
HF-1710W	EN1822-4 Leakage rate and Pressure Loss	Air cleaners		
BF-1713W	Bacterial material collection efficiency	Medical, Pharmaceutical, Animal Testing, Specific purpose construction ventilation, and Air cleaners		
LF-1918W	KACA Air Cleaner fine dust maintain capacity test (proposed)	Air filter life expectancy evaluations		



# Dust Sensor Performance Evaluation System

Model	Туре	System Features & Benefits
ADT-1782 (ADT-1786)	Batch type	<ul> <li>Optimized for dust sensor development and performance research</li> <li>Capable of providing customized system for fine dust product for mass production facility</li> <li>Average aerosol concentration deviation &lt; ±15 %</li> </ul>
ADT-1783	Continuous flow type	$\cdot$ Optimized to determine dust sensor performance evaluation and specific conditions coincide $\cdot$ Complies to Korea Air Cleaning Association SPS-C KACA 0027-7269 fine dust sensor test evaluation standard $\cdot$ Average aerosol concentration deviation < $\pm 15$ %
ADT-1785	Changes in T&H environmental Conditions	$\cdot$ Optimized to determine dust sensor performance evaluation and reliability evaluation $\cdot$ Capable of testing at the following condition: -40°C ~ 85°C, 15% ~ 85% (@25°C, Non-condensing) $\cdot$ Average aerosol concentration deviation < $\pm$ 15%
ADT-1983	Batch type	· Used for determining performance class of fine dust simple measuring device · Exclusively for Ministry of Environment 'notification(2019-14)' repeatability test procedure · Average aerosol concentration deviation < $\pm 10$ %
ADF-2090	Portable (on-site evaluation)	<ul> <li>Possible on-site inspection of Fine dust(PM2.5)senor</li> <li>Enable to check whether maintaining quality of performance level(class) as notification (2019-14)of Korean Ministry of Environment</li> </ul>









# Mask Performance Evaluation System \*

Model	Evaluations				Applications		
ARE-1651	KOREA Ministry of Food and Drug Safety(MFDS)'s Guideline for Health Mask Standards			Mask Inhal	Mask Inhalation resistance evaluation test		
AML-1652				Mask leak i	Mask leak rate performance evaluation test		
BFET-1853	ASTM F2101	Safety(N	nistry of Food and Drug IFDS) 's Guideline for Health Mask Standards	Bacterial fi	Bacterial filtration efficiency evaluation test		
MDF-2034	16 CFR part 1610			Flammabil	Flammability Test		
MBP-2038	ASTM F1862	KOREA Ministry of Food and		Synthetic b	Synthetic blood penetration resistance test		
MDP-2030	MIL-M-3695 4C 4.4.1.2	Drug Safety(MFDS) 's Guideline for Medical Mask Standards	Mask differ	Mask differential pressure test			
PFE-2037	ASTM F2299			Particle Filt	Particle Filtration Efficiency Measurement		
MBR-2031	EN149, KOREA Ministry of employment and labor 'safety certification notice' annex4 dust mask performance criteria			Mask inhal	Mask inhalation & exhalation resistance evaluation test		
MCD-2032				CO <sub>2</sub> Concer	CO <sub>2</sub> Concentration evaluation test inside the face		
MDT-2038	EN149			Mask dural	Mask durability preconditioning test		
MLP-2035				Mask Artifi	Mask Artificial lung preconditioning test		
MCT-2033	-				Clogging test		
VF-2021TS	Apply with the standa methods for quas			Cough dro	Cough droplet simulating environment virus filter test		
[ARE-1651]	[BFET-1853]	P-2038]	[MLP-2035]	[MBR-2031]	[VF-2021TS]		
[ARE-1651]	[BFET-1853] [MB	P-2038]	[MLP-2035]	[MBR-2031]	[VF-2021TS]		

[MDP-2030] [MCD-2032]

#### ₽ **Air Cleaner Performance evaluation System**

· Applicable regulations : KS A ISO 1996-2:8, SPS-C KACA 0027-7269, SPS-KACA002-132:2021, KS C 9304:10.2, KS C 9326, GB, AHAM, JEM etc.

• Test item : Purifying ability, Fine dust removal efficiency, Fine dust reduction durability, Fine dust removal ability, Toxic gas purification ability, Toxic gas removal efficiency, Toxic gas reduction durability, Ozon generation concentration



#### BioAerosol-to-Liquid Sampler (BALS-100)

Sample Suction Flow: 250 lpm (1.63 m/s) Bacteria Collection Efficiency: 90% Virus Collection Efficiency : 85% Concentration Ratio : Approx.4.0 x 10<sup>5</sup>



✓ Real-time High-speed Liquid Collection and Data Calculations

- ✓ Excellent Collection Efficiency from Nano size(nm)
- ✓ Practical Use of Antigen-antibody (Rapid kit) or PCR Analysis
- ✓ High Survival Rate and Coverage in Collection Solution
- ✓ Compact Size

✓ Set Test Condition to Suit User Environment

[ADT-1783]

[ADT-1785]







#### BioAerosol Detection Device (BADD-10)

- Sampling Flow: 15 lpm
- Collection Efficiency: >90% (>1 µm)
- Cut-off Diameter: < 100 nm (66.6 % @ 100 nm)



- ✓ Quickly distinguish between FUNGI & BACTERIA in just 20 min.
- ✓ Continuous measurement for up to 200 min.
- ✓ Real-time microbial RLU, CFU graph
- ✓ Check remote pollution levels with data cloud service