Laboratory Equipment

unicorn

# Filtering Chemical Fume Hood

# Safeguard Pro
# Filtering chemical fume hood

## *Application*

Safeguard Pro filtering chemical fume hood is fully compliant with NFX 15 211: 2009, ASHRAE 110: 1995, and national standard JG/T385: 2012, and has received ISO9001 certification. This product is specifically engineered to ensure the safety of laboratory personnel during experimental operations. It effectively prevents operators from inhaling toxic, harmful, pathogenic, or unknown chemical substances, while efficiently purifying both the fume hood and the laboratory air. By providing reliable safety protection, it safeguards the well-being of laboratory personnel.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel, epoxy electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture.

※ Structural design: The corners around the cabinet body are designed with an integrated 60°R angle. The arc-shaped design makes the product overall beautiful and generous. The round-arc chamfer design around the bottom of the cabinet is convenient for daily cleaning.

※ Front panel and side panel: the front door adopts a sliding door structure design, which is convenient for weighing operation. The main material is ≥6mm acrylic board, which has excellent weather resistance, excellent chemical resistance, not easy to age, colorless and transparent, light-transmitting throughout, visually comfortable, and beautiful.

# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ Real-time temperature and humidity environment monitoring system, display temperature and humidity, set alarm parameters to ensure product safety.

※ Fan monitoring: fan system failure alarm, online adjustable fan speed, to ensure the air volume required by different chemical operations.

※ Filter saturation alarm system: The product is equipped with a double-layer filter. For organic gases, a VOC probe is equipped to monitor the saturation status of the filter. The filter sets a saturation alarm value. If it exceeds the range, it will alarm. When the concentration exceeds the set value for a long time, the filter needs to be replaced; the HEPA high -efficiency filter can be equipped with a differential pressure sensor to detect the saturation of the HEPA filter.

**Key Components for Reliable Performance**

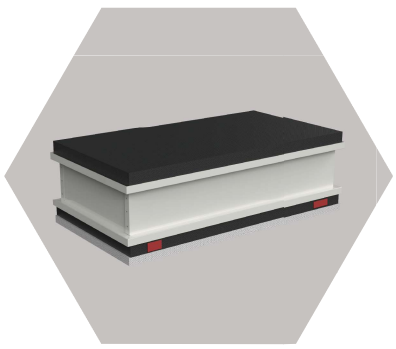
※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

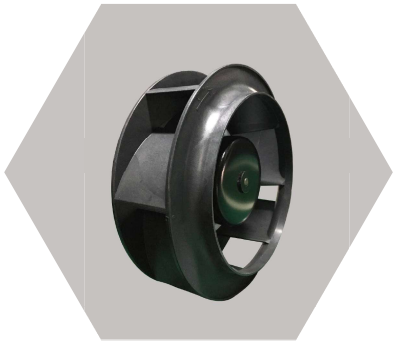
※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. It uses high-efficiency HEPA filters for particles, and the filtration efficiency reaches 99.995% for particles larger than 0.3um.

※ The power of LED lighting is equivalent to 25W fluorescent lamps. It does not generate heat, and its safety does not affect the temperature of the experimental environment. It is energy-saving, environmentally friendly and has a long service life.

**Safe and Efficient Lab Environment**

※ The fume hood has passed the requirements of OEB5 protection standard, the leakage is less than 1μg/m 3 , and the fan speed is adjustable to meet the surface wind speed requirement of 0.4 - 0.6m/s .





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

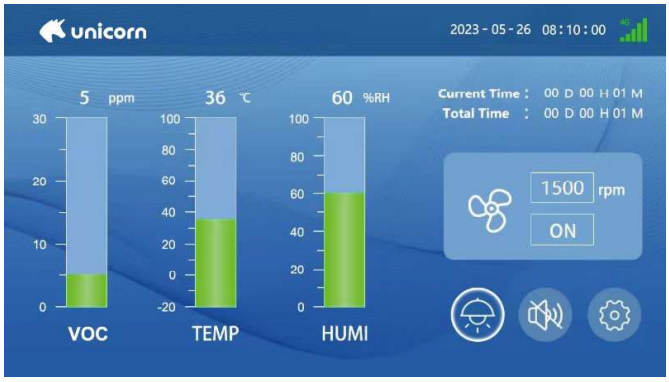
※ 5- inch large screen display, intelligent HMI human-machine interface of the Internet of Things , resolution: 1024x600, perfect visual system

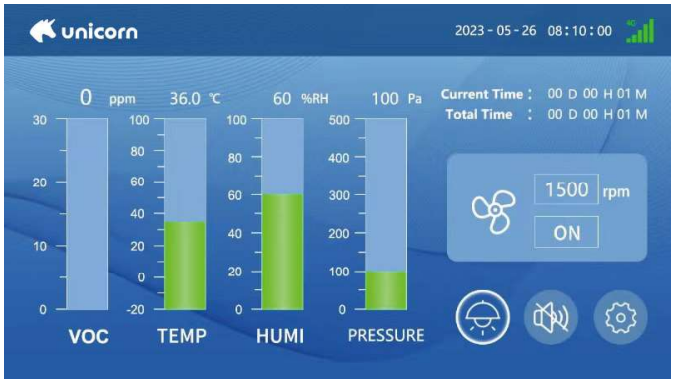
※ Support SIM card 4G communication , and the 4G communication module has a national compulsory product certification

※ Remote management can be carried out through the WeChat client , and the historical VOC data, temperature and humidity environment data can be viewed, presented in the form of curves; the historical alarm records can be checked, and the fans and alarm lights can be remotely controlled

※ Provide API interface and support third-party platform docking function

※ The software control system has passed the Software Evaluation Center and issued a test report.




# *Advantages*

**Advanced Monitoring and Alarm System**

※ There is no need to install pipeline engineering, the installation is convenient, the exhaust gas is not discharged outside, and it is new and environmentally friendly.

※ The top can be equipped with a filter module system according to the experimental requirements to meet a variety of different experiments.

※ Advanced modular filtration technology, which can completely absorb harmful gases, particulate dust and other substances generated by filtration experiments.

※ No need to consume air-conditioning energy consumption, saving energy efficiently.

※ It can be placed on the desktop or equipped with a mobile wheel base, which is convenient and flexible , and is suitable for any complicated experimental site

## *Technical Specifications*

| Model | SP-DS900V | SP-DS1200V | SP-DS1600V |
|---|---|---|---|
| External dimensions (mm) | 900×620×1100 | 1200×620×1100 | 1600×620×1100 |
| Filter quantity | 2 sets | 4 sets | 6 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 | 370×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 | 370×396×21 |
| Air handling capacity ($m^3/h$) | 230 | 460 | 690 |
| Noise level (dBA) | 40 | 42 | 42 |
| Power supply | 220V/50Hz | 220V/50Hz | 220V/50Hz |
| Power consumption (W) | 42 | 84 | 84 |
| Current (A) | 2 | 4 | 6 |
| Fan quantity | 1 | 2 | 3 |
| Primary filter quantity | 1 | 2 | 3 |
| Display | 5-inch LCD touch screen | | |
| Control system | 1 set | 1 set | 1 set |
| VOC alarm system | 1 set | 1 set | 1 set |
| Temp. & humidity alarm | 1 set | 1 set | 1 set |
| Remote monitoring system | 1 set | 1 set | 1 set |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | | |
| Optional alarm system | Ammonia alarm<br>Formaldehyde alarm<br>HCL alarm | | |
| Optional accessories | Differential pressure monitoring<br>Support stand<br>Worktop | | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | | |

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Laboratory Equipment

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# Filtering Chemical Storage Cabinet

# Safeguard Pro
# Filtering Storage Cabinet

## *Application*

Safeguard Pro Filtering storage cabinet series is specially designed for the storage of toxic and harmful chemicals, applicable to various fields and types of chemicals. It can store most of the chemicals used in the laboratory, purify the toxic gas in the cabinet, and purify the laboratory air 24 hours a day, which is highly efficient and environmentally friendly.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel plate, epoxy resin electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture.

※ Door panel: The main material is ≥ 4 mm acrylic board, which has excellent weather resistance, excellent chemical resistance, is not easy to age, is translucent, visually comfortable, and beautiful.

※ Shelves: One-piece formed PP tray, anti-acid and alkali, adjustable in height, and the anti-leakage capacity of each tray is 4.5 L.

※ Shelf hook: It is made of one-piece PC transparent material, which has strong corrosion resistance and can bear more than 120kg .

※ Structural design: The corners around the cabinet are designed with an integrated 60 ° R angle , and the arc-shaped design makes the product overall beautiful and generous.

※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

# *Product Features - Continued*

**Safety locks**

※ Locks: Non-contact radio frequency access control card reader is used, with card configuration function, which can be set for single and double people to unlock; flexible configuration of card reader parameters, to achieve card key, card number output format, NFC mode, etc., can provide WG26/ WG34/WG66, TTL, RS232, RS485 communication interface.

**Advanced Monitoring and Alarm System**

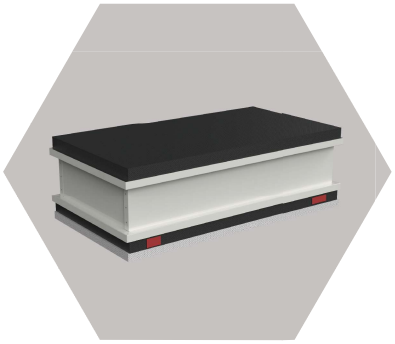
※ The real-time temperature and humidity environment monitoring system displays real-time temperature and humidity, and sets alarm parameters to ensure product safety.

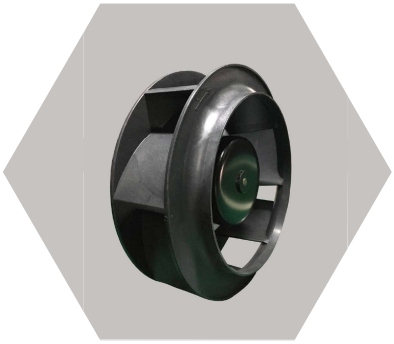
※ Fan monitoring: fan system failure alarm, online adjustable fan speed, to ensure the storage requirements of different chemical quantities.

※ Filter saturation alarm system: The product is equipped with a double-layer filter. The VOC probe monitors the saturation status of the filter. The filter sets the saturation alarm value. If it exceeds the range, it will alarm. When the concentration exceeds the set value for a long time, the filter needs to be replaced.

**High-Efficiency Filtration System for Optimal Air Quality**

※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. For particle filters, high-efficiency HEPA filters are used, and the filtration efficiency for particles larger than 0.3um is up to 99.995%.





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ 5- inch large screen display, intelligent HMI human-machine interface of the Internet of Things , resolution: 1024x600, perfect visual system.

※ Support SIM card 4G communication, and the 4G communication module has a national compulsory product certification

※ Remote management can be carried out through the WeChat client , and the historical VOC data, temperature and humidity environment data can be viewed, presented in the form of curves; the historical alarm records can be checked, and the fans and alarm lights can be remotely controlled.

※ The data connection between the intelligent control system and the intelligent card swiping system realizes the integration of monitoring data and door opening data through a set of systems.

※ Provide API interface and support third-party platform docking function.

※ The software control system has passed the Software Evaluation Center and issued a test report.

※ Optional 7-inch screen, equipped with dual VOC monitoring, one probe to monitor filter saturation, and one probe to monitor indoor air quality. At the same time, it has the management function of hazardous chemicals, realizing the management of chemical inventory list, and can support the list display of no less than 100 kinds of chemicals. The list includes serial number, chemical name, quantity, unit, etc.; inventory can be added and deleted on the device side . Operations such as subtraction and modification; data synchronization to the cloud background server; WeChat client can check the current inventory list.

## *Technical Specifications*

| Model | SP-ES800 | SP-ES800Plus |
|---|---|---|
| External dimensions (mm) | 800×548×1960 | 800×548×1960 |
| Internal dimensions (mm) | 797×450×1493 | 797×450×1493 |
| Cabinet volume ($m^3$) | 0.55 | 0.55 |
| Storage capacity | 160 bottles (500ml) | 160 bottles (500ml) |
| Filter quantity | 2 sets | 2 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 |
| Air handling capacity ($m^3/h$) | 230 | 230 |
| Shelves quantity | 8 pieces | 8 pieces |
| Shelf loading | >70kg/ ㎡ | >70kg/ ㎡ |
| Noise level (dBA) | 40 | 40 |
| Power supply | 220V/50Hz | 220V/50Hz |
| Power consumption (W) | 42 | 42 |
| Current (A) | 2 | 2 |
| Fan quantity | 1 | 1 |
| Primary filter quantity | 1 | 1 |
| Display | 5-inch LCD | 7-inch LCD |
| Control system | 1 set | 1 set |
| VOC alarm system | 1 set | 2 set |
| Temp. & humidity alarm | 1 set | 1 set |
| Remote monitoring system | 1 set | 1 set |
| Cabinet lock | Smart type | Smart type |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | |
| Optional alarm system | Acid-base box | |
| Optional accessories | Differential pressure monitoring<br>Support stand<br>Worktop | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | |

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Laboratory Equipment

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# Secure weighing station

# Safeguard Pro
# Secure Weighing Station

## *Application*

Safeguard Pro Secure weighing station complies with NFX 15 211:2009 standard (certified by ANSI Z 9.5-201), ASHRAE 110:1995 standard and national standard JG/T385:2012 standard, and has passed ISO9001 certification. The product is specially designed to protect the safety of laboratory personnel in the experimental operation, which can prevent the operator from inhaling some toxic, harmful, pathogenic or unknown toxic chemical substances during the experiment, and efficiently purify the fume hood and the laboratory. air, providing safety protection for laboratory personnel.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel plate, epoxy resin electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture. Structural design: The corners around the cabinet are designed with an integrated 60°R angle, and the arc- shaped design makes the product overall beautiful and generous.

※ The bottom of the cabinet is designed with circular arc chamfers around it, which is convenient for daily cleaning.

※ Front panel and side panel: the front door adopts a sliding door structure design, which is convenient for weighing operation. The main material is ≥6mm acrylic board, which has excellent weather resistance, excellent chemical resistance, not easy to age, colorless and transparent, light-transmitting throughout, visually comfortable, and beautiful.

# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ Real-time temperature and humidity environment monitoring system, display temperature and humidity, set alarm parameters to ensure product safety.

※ Fan monitoring: fan system failure alarm, online adjustable fan speed, to ensure the air volume required by different chemical operations.

※ Filter saturation alarm system: The product is equipped with a double-layer filter. For organic gases, it is equipped with a VOC probe to monitor the saturation status of the filter. The filter sets a saturation alarm value. If it exceeds the range, it will alarm. When the concentration exceeds the set value for a long time, the filter needs to be replaced; the HEPA high -efficiency filter is equipped with a differential pressure sensor to detect the saturation of the HEPA filter.

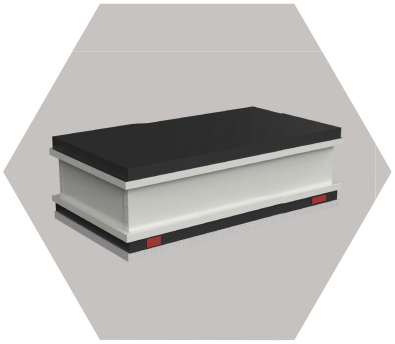
**High-Efficiency Filtration System for Optimal Air Quality**

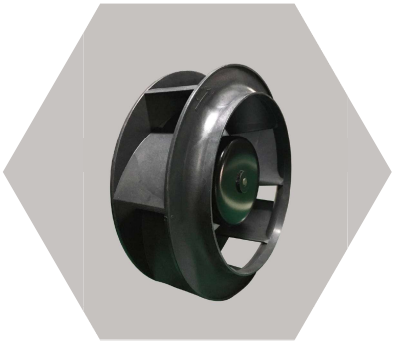
※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. It uses high-efficiency HEPA filters for particles, and the filtration efficiency reaches 99.995% for particles larger than 0.3um.

**Key Components for Reliable Performance**

※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

※ The power of LED lighting is equivalent to 25W fluorescent lamps. It does not generate heat, and its safety does not affect the temperature of the experimental environment. It is energy-saving, environmentally friendly and has a long service life.





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ 5- inch large screen display, intelligent HMI human-machine interface of the Internet of Things , resolution: 1024x600, perfect visual system

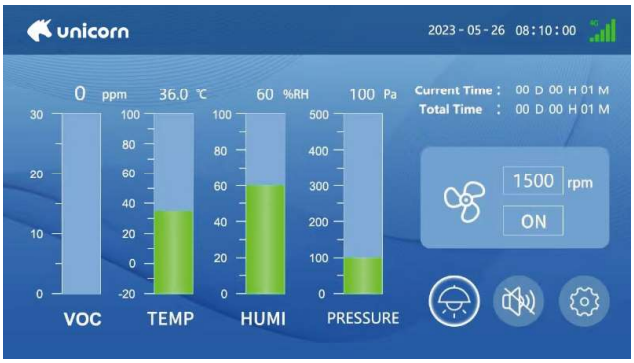
※ Support SIM card 4G communication , and the 4G communication module has a national compulsory product certification

※ Remote management can be carried out through the WeChat client, and the historical VOC data, temperature and humidity environment data can be viewed, presented in the form of curves; the historical alarm records can be checked, and the fans and alarm lights can be remotely controlled

※ The data connection between the intelligent control system and the intelligent card swiping system realizes the integration of monitoring data and door opening data through a set of systems.

※ Provide API interface and support third-party platform docking function.

※ The software control system has passed the China Software Evaluation Center and issued a test report.



## *Technical Specifications*

| Model | SP-DS900VW | SP-DS1200VW | SP-DS1600VW |
|---|---|---|---|
| External dimensions (mm) | 900×620×1100 | 1200×620×1100 | 1600×620×1100 |
| Filter quantity | 2 sets | 4 sets | 6 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 | 370×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 | 370×396×21 |
| Air handling capacity ($m^3/h$) | 230 | 460 | 690 |
| Noise level (dBA) | 40 | 42 | 42 |
| Power supply | 220V/50Hz | 220V/50Hz | 220V/50Hz |
| Power consumption (W) | 42 | 84 | 84 |
| Current (A) | 2 | 4 | 6 |
| Fan quantity | 1 | 2 | 3 |
| Primary filter quantity | 1 | 2 | 3 |
| Display | 5-inch LCD touch screen | | |
| Control system | 1 set | 1 set | 1 set |
| VOC alarm system | 1 set | 1 set | 1 set |
| Temp. & humidity alarm | 1 set | 1 set | 1 set |
| Remote monitoring system | 1 set | 1 set | 1 set |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | | |
| Optional alarm system | Ammonia alarm<br>Formaldehyde alarm<br>HCL alarm | | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | | |

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Laboratory Equipment

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# Filtering Chemical Fume Hood

# EnviroShield
# Filtering chemical fume hood

## *Application*

EnviroShield filtering chemical fume hoods ES-DS series complies with NFX 15 211: 2009 standard, ASHRAE 110: 1995 standard and Chinese national standard JG/T385: 2012 standard, and has passed ISO9001 certification. The product is specially designed to protect the safety of laboratory personnel in the experimental operation. It can prevent the operator from inhaling some toxic, harmful, pathogenic or toxic chemical substances during the experiment, and efficiently purify the fume hood and the laboratory air, providing safety protection for laboratory personnel.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel plate, epoxy resin electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture.

※ Front panel and side panel: The main material is ≥6mm acrylic panel, which has excellent weather resistance, excellent chemical resistance, is not easy to age, is colorless and transparent, and the whole body is light-transmitting, visually comfortable, and beautiful.

# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ Real-time temperature and humidity environment monitoring system, display temperature and humidity, set alarm parameters to ensure product safety.

※ Fan monitoring: Fan system failure alarm, online adjustable fan speed, to ensure the air volume required by different chemical operations.

※ Filter saturation alarm system: The product is equipped with double-layer filters and double VOC probes. One probe monitors the indoor air quality, and the other probe monitors the saturation status of the filter. If the set value is exceeded for a long time, the filter needs to be replaced.

**Key Components for Reliable Performance**

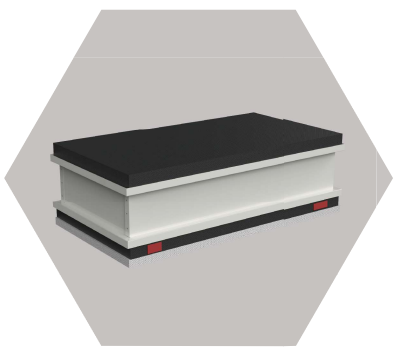
※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

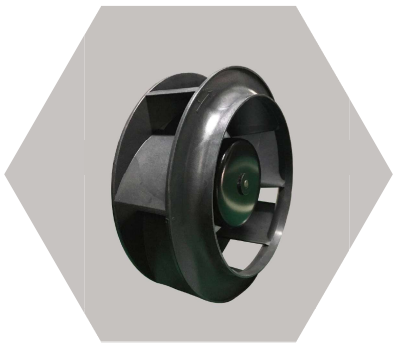
※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. It uses high-efficiency HEPA filters for particles, and the filtration efficiency reaches 99.995% for particles larger than 0.3um.

※ The power of LED lighting is equivalent to 25W fluorescent lamps. It does not generate heat, and its safety does not affect the temperature of the experimental environment. It is energy-saving, environmentally friendly and has a long service life.

**Durable Countertops**

※ Epoxy resin countertops have excellent chemical stability, super corrosion resistance, good impact resistance without damage, excellent high temperature resistance, one piece through the core, long service life, no delamination, no expansion, no cracks.





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ 7-inch large screen display, IoT intelligent HMI human -machine interface, resolution: 1024x600, perfect visual system

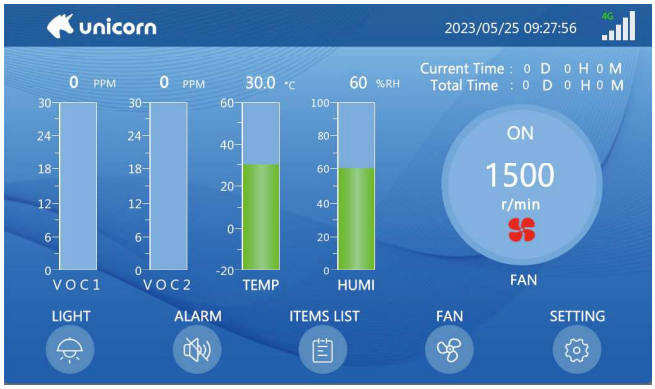
※ Support SIM card 4G communication , 4G communication module has national compulsory product certification

※ It has the function of managing the chemicals in operation, and can support the list display of no less than 100 kinds of chemicals. The list includes serial number, chemical name, quantity, unit, etc.; the list can be added, Operations such as deletion and modification; data synchronization to the cloud background server; WeChat client can check the list of chemicals currently in use.

※ Remote management can be performed through the WeChat client, and historical VOC data, temperature and humidity environment data can be viewed, presented in a curve; historical alarm records can be checked, and fans, lighting, and alarm lights can be remotely controlled.

※ API interface can be provided to support third-party platform docking function.

※ The software control system has passed the test report issued by National Software Evaluation Center.




**Advanced Monitoring and Alarm System**

※ There is no need to install pipeline engineering, the installation is convenient, the exhaust gas is not discharged outside, and it is new and environmentally friendly.

※ The top can be equipped with a filter module system according to the experimental requirements to meet a variety of different experiments.

※ Advanced modular filtration technology, which can completely absorb harmful gases, particulate dust and other substances generated by filtration experiments.

※ No need to consume air-conditioning energy consumption, saving energy efficiently.

## *Technical Specifications*

| Model | ES-DS800 | ES-DS1000 | ES-DS1275 | ES-DS1600 |
|---|---|---|---|---|
| External dimensions (mm) | 800×620×1245 | 1000×620×1245 | 1275×620×1245 | 1600×620×1245 |
| Internal dimensions (mm) | 781×574×934 | 781×574×934 | 1256×574×934 | 1581×574×934 |
| Filter quantity | 4 sets | 4 sets | 6 sets | 6 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 | 370×395×50 | 370×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 | 370×396×21 | 370×396×21 |
| Average airflow speed(m/s) | 0.4-0.6 | 0.4-0.6 | 0.4-0.6 | 0.4-0.6 |
| Air handling capacity (m³/h) | 230 | 230 | 690 | 690 |
| Noise level (dBA) | 40-52 | 40-52 | 40-52 | 40-52 |
| Power supply | 110V-240V | 110V-240V | 110V-240V | 110V-240V |
| Frequency | 50-60Hz | 50-60Hz | 50-60Hz | 50-60Hz |
| Power consumption (W) | 42 | 42 | 110 | 110 |
| Current (A) | 2 | 2 | 2 | 2 |
| Fan quantity | 1 | 1 | 3 | 3 |
| Primary filter quantity | 2 | 2 | 3 | 3 |
| Display | 7-inch LCD touch screen | | | |
| Control system | 1 set | 1 set | 1 set | 1 set |
| VOC alarm system | 1 set | 1 set | 1 set | 1 set |
| Temp. & humidity alarm | 1 set | 1 set | 1 set | 1 set |
| Remote monitoring system | 1 set | 1 set | 1 set | 1 set |
| Epoxy resin countertop | 1 set | 1 set | 1 set | 1 set |
| Illumination | LED×1 | LED×1 | LED×1 | LED×1 |
| Operating hole | Trapezoidal | Trapezoidal | Trapezoidal | Trapezoidal |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | | | |
| Optional alarm system | Ammonia alarm<br>Formaldehyde alarm<br>HCL alarm | | | |
| Optional accessories | Anemometer<br>Support stand<br>Worktop | | | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | | | |

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Laboratory Equipment

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# Filtering Chemical Storage Cabinet

# EnviroShield
# Filtering Storage Cabinet

## *Application*

EnviroShield filtering storage cabinet ES-G series is specially designed for the storage of toxic and harmful chemicals, and is suitable for various fields and types of chemicals. It can store most of the chemicals used in the laboratory, purify the toxic gas in the cabinet, and purify the laboratory air 24 hours a day, which is highly efficient and environmentally friendly.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel plate, epoxy resin electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture.

※ Door panel: The main material is ≥6mm acrylic board, which has excellent weather resistance, excellent chemical resistance, is not easy to age, colorless and transparent, light-transmitting throughout, visually comfortable, and beautiful.

※ Laminate: One-piece formed PP tray, anti-acid and alkali, adjustable height, optional uniform perforated galvanized laminate.

※ Anti-acid and alkali leakage drawer: polypropylene PP liner, corrosion-resistant, to prevent the leakage of liquid spilled when the reagent bottle is broken.

※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

# *Product Features - Continued*

**Safety locks**

※ Locks: Non-contact radio frequency access control card reader is used, with card configuration function, which can be set for single and double people to unlock; flexible configuration of card reader parameters, to achieve card key, card number output format, NFC mode, etc., can provide WG26/ WG34/WG66, TTL, RS232, RS485 communication interface.

**Advanced Monitoring and Alarm System**

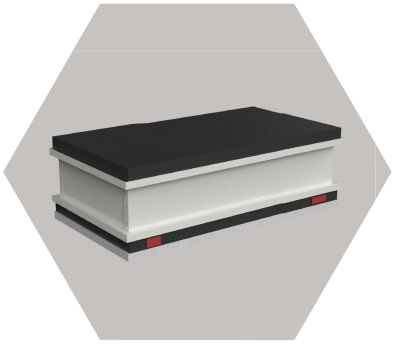
※ The real-time temperature and humidity environment monitoring system displays real-time temperature and humidity, and sets alarm parameters to ensure product safety.

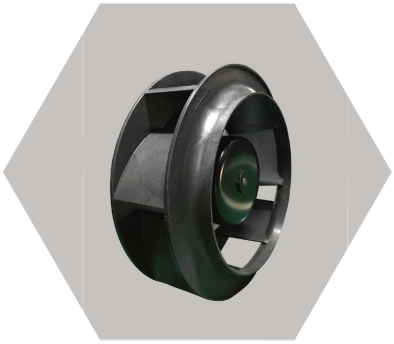
※ Fan monitoring: fan system failure alarm, online adjustable fan speed, to ensure the storage requirements of different chemical quantities.

※ Filter saturation alarm system: The product is equipped with a double-layer filter. The VOC probe monitors the saturation status of the filter. The filter sets the saturation alarm value. If it exceeds the range, it will alarm. When the concentration exceeds the set value for a long time, the filter needs to be replaced.

**High-Efficiency Filtration System for Optimal Air Quality**

※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. For particle filters, high-efficiency HEPA filters are used, and the filtration efficiency for particles larger than 0.3um is up to 99.995%.





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ 7-inch large screen display, IoT intelligent HMI human -machine interface, resolution: 1024x600, perfect visual system.

※ Support SIM card 4G communication , 4G communication module has national compulsory product certification

※ It has the management function of hazardous chemicals, realizes the management of chemical inventory list, and can support the list display of no less than 100 kinds of chemicals. The list includes serial number, chemical name, quantity, unit, etc.; inventory can be carried out on the equipment side Add, delete, change and other operations; data synchronization to the cloud background server; WeChat client can check the current inventory list.

※ Remote management can be carried out through the WeChat client, and historical VOC data, temperature and humidity environment data can be viewed, presented in the form of curves; historical alarm records can be checked, and fans and alarm lights can be remotely controlled.

※ API interface can be provided to support third-party platform docking function.

※ The software control system has passed the China Software Evaluation Center and issued a test report.

## *Technical Specifications*

| Model | ES-G800 | ES-G1600 | ES-G819 |
|---|---|---|---|
| External dimensions (mm) | 800×510×2070 | 1600×510×2070 | 819×350×772 |
| Internal dimensions (mm) | 797×475×1604 | 1594×475×1604 | 816×338×520 |
| Storage capacity | 160 bottles (500ml) | 320 bottles (500ml) | 48 bottles (500ml) |
| Filter quantity | 2 sets | 4 sets | 2 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 | 185×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 | |
| Air handling capacity ($m^3/h$) | 220 | 220 | 75 |
| Shelves quantity | 8 pieces | 16 pieces | 2 pieces |
| Shelf loading | >70kg/ ㎡ | >70kg/ ㎡ | >70kg/ ㎡ |
| Noise level (dBA) | 40 | 40 | 40 |
| Power supply | 220V/50Hz | 220V/50Hz | 220V/50Hz |
| Power consumption (W) | 42 | 42 | 40 |
| Current (A) | 2 | 2 | 2 |
| Fan quantity | 1 | 1 | 1 |
| Primary filter quantity | 1 | 1 | 1 |
| Display | 7-inch LCD | 7-inch LCD | 7-inch LCD |
| Control system | 1 set | 1 set | 1 set |
| VOC alarm system | 1 set | 1 set | 1 set |
| Temp. & humidity alarm | 1 set | 1 set | 1 set |
| Remote monitoring system | 1 set | 1 set | 1 set |
| Cabinet lock | Flat lock + PP padlock | | |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | | |
| Optional alarm system | Ammonia alarm<br>Formaldehyde alarm<br>HCL alarm | | |
| Optional accessories | Acid-base box | | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | | |

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Laboratory Equipment

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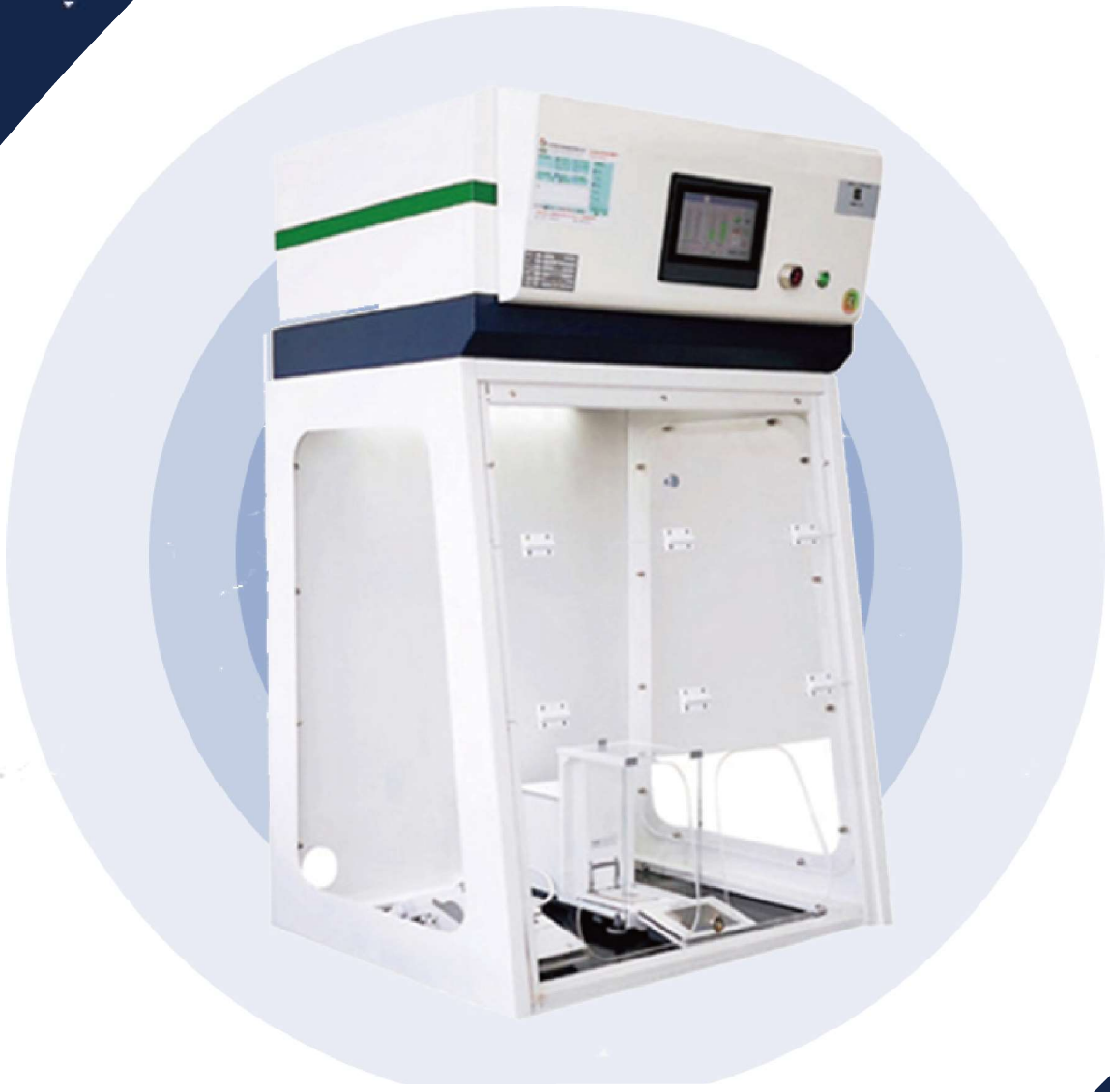
# Secure weighing station



# EnviroShield
# Secure Weighing Station

## *Application*

EnviroShield Secure weighing station weighing station complies with NFX 15 211:2009 standard (certified by ANSI Z 9.5-201), ASHRAE 110:1995 standard and national standard JG/T385:2012 standard, and has passed ISO9001 certification. The product is specially designed to protect the safety of laboratory personnel in the experimental operation, which can prevent the operator from inhaling some toxic, harmful, pathogenic or unknown toxic chemical substances during the experiment, and efficiently purify the fume hood and the laboratory air, providing safety protection for laboratory personnel.

## *Product Features*

**Durable and Aesthetic Design**

※ Metal parts: main material ≥1.2mm galvanized steel plate, epoxy resin electrostatic spraying, covered with durable anti-chemical lead-free coating, maintain high finish and minimize the impact of corrosion and moisture.

※ Front panel and side panel: The main material is ≥6mm acrylic panel, which has excellent weather resistance, excellent chemical resistance, is not easy to age, is colorless and transparent, and the whole body is light-transmitting, visually comfortable, and beautiful.

# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

※ Real-time temperature and humidity environment monitoring system, display temperature and humidity, set alarm parameters to ensure product safety.

※ Fan monitoring: Fan system failure alarm, online adjustable fan speed, to ensure the air volume required by different chemical operations.

※ Filter saturation alarm system: The product is equipped with double-layer filters and dual VOC probes. One probe monitors the indoor air quality, and the other monitors the filter saturation status. If the set value is exceeded for a long time, the filter needs to be replaced.

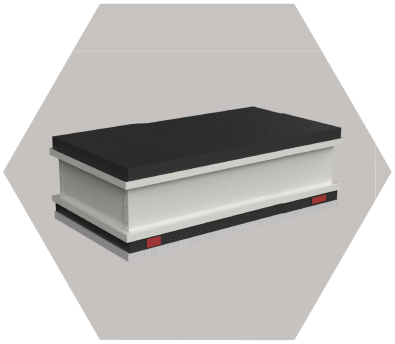
**High-Efficiency Filtration System for Optimal Air Quality**

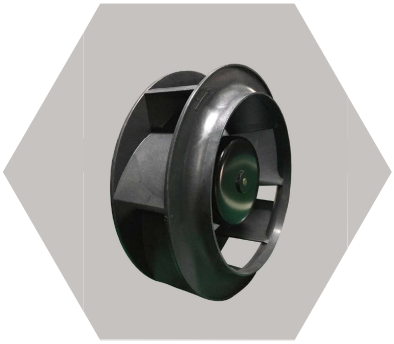
※ The high-efficiency filtration system selects the arrangement and distribution according to the size of the particles, follows the ASTM standard, effectively targets acid gases and organic gases, and has strong adsorption capacity. It uses high-efficiency HEPA filters for particles, and the filtration efficiency reaches 99.995% for particles larger than 0.3um.

**Key Components for Reliable Performance**

※ PSC fan imported from the United States, 24 volts, stable performance, ultra-quiet, no spark static.

※ The power of LED lighting is equivalent to 25W fluorescent lamps. It does not generate heat, and its safety does not affect the temperature of the experimental environment. It is energy-saving, environmentally friendly and has a long service life.





# *Product Features - Continued*

**Advanced Monitoring and Alarm System**

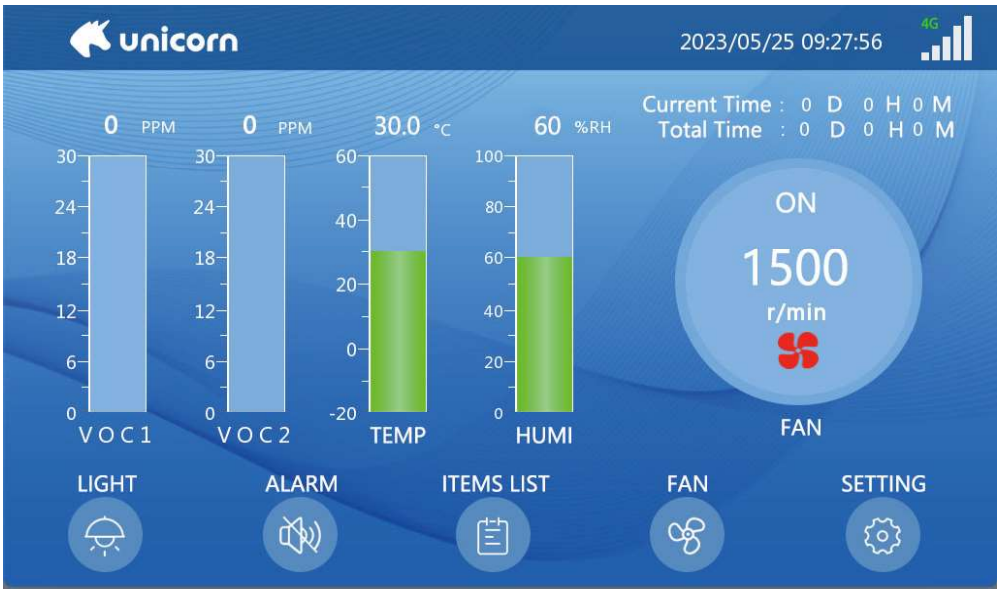
※ 7-inch large screen display, IoT intelligent HMI human -machine interface, resolution: 1024x600, perfect visual system

※ Support SIM card 4G communication, 4G communication module has national compulsory product certification

※ It has the function of managing the chemicals in operation,and can support the list display of no less than 100 kinds of chemicals. The list includes serial number, chemical name, quantity, unit, etc.; the list can be added, Operations such as deletion and modification; data synchronization to the cloud background server; WeChat client can check the list of chemicals currently in use.

※ Remote management can be performed through the WeChat client, and historical VOC data, temperature and humidity environment data can be viewed, presented in a curve; historical alarm records can be checked, and fans, lighting, and alarm lights can be remotely controlled

※ API interface can be provided to support third-party platform docking function.



## *Technical Specifications*

| Model | ES-DW800 | ES-DW1000 | ES-DW1275 | ES-DW1600 |
|---|---|---|---|---|
| External dimensions (mm) | 800×620×1245 | 1000×620×1245 | 1275×620×1245 | 1600×620×1245 |
| Internal dimensions (mm) | 781×574×934 | 981×574×934 | 1256×574×934 | 1581×574×934 |
| Filter quantity | 4 sets | 4 sets | 6 sets | 6 sets |
| Filter size (mm) | 370×395×50 | 370×395×50 | 370×395×50 | 370×395×50 |
| Primary filter size (mm) | 370×396×21 | 370×396×21 | 370×396×21 | 370×396×21 |
| Air handling capacity ($m^3/h$) | 230 | 230 | 690 | 690 |
| Noise level (dBA) | 40-52 | 40-52 | 40-52 | 55 |
| Power supply | 110-220V/50-60Hz | 110-220V/50-60Hz | 110-220V/50-60Hz | 110-220V/50-60Hz |
| Power consumption (W) | 42 | 42 | 42 | 110 |
| Current (A) | 2 | 2 | 2 | 2 |
| Fan quantity | 1 | 1 | 3 | 3 |
| Primary filter quantity | 2 | 2 | 3 | 3 |
| Average airflow speed (m/s) | 0.4-0.6 | 0.4-0.6 | 0.4-0.6 | 0.4-0.6 |
| Illumination | 1 LED lamp | 1 LED lamp | 1 LED lamp | 1 LED lamp |
| Display | 5-inch | 5-inch | 7-inch | 7-inch |
| Control system | 1 set | 1 set | 1 set | |
| VOC alarm system | 1 set | 1 set | 1 set | |
| Temp. & humidity alarm | 1 set | 1 set | 1 set | |
| Remote monitoring system | 1 set | 1 set | 1 set | |
| Optional filter | OG: organic filter<br>AG: Inorganic filter<br>AM: Ammonia fitler<br>FO: Formaldehyde filter<br>HEPA H14: High efficiency HEPA filter | | | |
| Optional alarm system | Ammonia alarm<br>Formaldehyde alarm<br>HCL alarm | | | |
| Certificate | ISO9001, ISO14001, ISO45001, CE | | | |

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