

# SVVSA-3000

Static-Volumetric Vapor Sorption Analyzer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## ►► Configuration comparison

Parts	3200C	3100C	3100B
Evaporators	1	1	1
Vapor Sorption Station	1 (1/0.1 Torr)	1 (1/0.1 Torr)	1 (10 Torr)
Micropore Analysis Station	1 (1/0.1 Torr)	NO	NO
Pressure Sensors	7	5	4
Cold Trap	1	2	2
Preparation Bit	NO ( Can be prepared in situ)	1	1
Thermostatic Water Bath	1 (0 - 50 °C)	1 (0 - 50 °C)	1 (0 - 50 °C)
Dewar flask (1L)	2	NO	NO
Dewar flask (3L)	1	2	2
Test Range of Pore Diameter	One corrosion-resisting pump	One corrosion-resisting pump, and One mechanical pump	One corrosion-resisting pump (or One mechanical pump)
Molecular Pump	1	1	NO

## ►► Features

Preparation of adsorbate by evaporator.

Use stainless steel and thermostatic control module as manifold.  
Constant temperature range: room temperature to 50°C.

Effective cold trap system prevents vapor from polluting vacuum pump and environment.

FFKM (Perfluoroelastomer) O rings for banner sealing performance.

## ►► Applications

Measurements of BET surface area and pore size distribution.

Measurements of various gas and steam adsorption isotherms.

Testing of isosteric heat of adsorption.

Determination of selective adsorption coefficient.

## ►► Main Parameters

Parts	3200C	3100C	3100B
Testing Principle	The static volumetric method		
Data Features	BET surface area: $\geq 0.01 \text{ m}^2/\text{g}$ Mesopore: 2 - 500 nm (BJH) Micropore: 0.35 - 2 nm (t-plot, DR, MP,DA, HK ,SF)		
Physical Adsorbate	N <sub>2</sub> , Ar, Kr, CO <sub>2</sub>		
Vapor Adsorbate	Carbon monoxide, ammonia, and a substance that is liquid at room temperature.(Except corrosive, hyper-toxic, hazardous gas)		Same as Vapor 3200C and Vapor 3100C, but p <sub>0</sub> is greater than 1KPa
Physical Adsorption Temperature	77K, 87K		
Vapor Adsorption Temperature	0 - 50°C		
Steam Recovery	Cold trap in analysis station	Double cold trap in analysis and pretreatment station	
Pretreatment	Vacuum in-situ pretreatment	Separate preposition and vacuum in-situ pretreatment	

## ►► Essential Parameters

<b>Evaporator</b>	Phase of adsorbate transforming from liquid to gas by evaporator in room temperature, implements test requirements
<b>Adsorption Pressure</b>	$P/P_0$ is less than 1 ( $P_0$ is saturated vapor pressure of adsorbate in adsorption temperature)
<b>Vacuum Pump</b>	Special corrosion – resistant two stage rotary vane vacuum pump, molecular pump
<b>Pressure Sensor</b>	1000 Torr, 10 Torr, 1Torr
<b>Sorption Temperature</b>	-196°C is provided by liquid nitrogen in low temperature Dewar flask; 0 - 50°C is provided by thermostatic water bath.
<b>Number of Gas Inlet</b>	Providing separate gas intakes according to customer requirements. (Number of intakes is multiples of 4).
<b>Gas Recovery</b>	Effective cold trap system prevents from polluting vacuum pump and environment by vapor.
<b>Pretreatment</b>	Vacuum in –situ pretreatment, temperature $\leq 400^\circ\text{C} \pm 1^\circ\text{C}$ .

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



## About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

## Our Products & Technologies



UV/VIS  
Spectro 2080+  
Double Beam



Infra FTIR



Optima Gas  
Chromatograph  
3007



Optima Gas  
Chromatograph  
2979 Plus



Flash  
Chromatograph



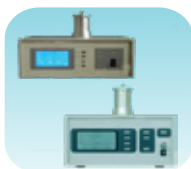
Atomic Absorption  
Spectrophotometer



Liquid Partical  
Counter



Optical Emission  
Spectrophotometer



DSC/TGA



Semi Auto Bio  
Chemistry Analyzer



HEMA 2062  
Hematology  
Analyzer



Micro Plate  
Reader/Washer



URINOVA 2800  
Urine Analyzer



Total Organic  
Carbon 3800



Fully Automated  
CLIA



NOVA-2100  
Chemistry Analyzer



PCR/Gradient PCR/  
RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system

## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



# Analytical Foundation

1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



**HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)**

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

W. [www.analyticalgroup.net](http://www.analyticalgroup.net)  
[www.hplctechnologies.com](http://www.hplctechnologies.com)  
[www.multiplelabs.com](http://www.multiplelabs.com)  
[www.ais-india.com](http://www.ais-india.com)

Sales & Support Offices:  
across the country :  
Distributors & Channel  
partners World Wide