

Containment and Pharma Training



Air and Lab Products Africa (ALPA)
will be presenting **4 training courses**
February 2022 in Johannesburg.



COURSES:

HEPA filters testing - 7 February 2022

Airflow Measurement and Testing - 8 February 2022

Cleanroom Classification - 9 February 2022

MBSC / BSC testing - 10 & 11 February 2022



Presenter:

Tim Triggs

EMEA Regional
Director



For more information contact

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Physical address: 30 Summit Road Postal address: Suite 29
Blue Hills Private Bag x 2
Midrand Dainfern
1682 2055
South Africa South Africa

REGISTRATION FORM

Containment and Pharma Training presented by Tim Triggs. EMEA Director ATI.

Venue: Langhams Executive Conferencing, 1 Tamchele Ave, Beverley, Johannesburg, 2191, South Africa. <https://www.langhams.co.za/>

Delegate name: _____

Delegate surname: _____

ID/Passport nr: _____

Email: _____ Cell: _____

Company: _____

Address: _____

City: _____ Country: _____

Letter of invitation needed for Visa (**Please attach a copy of your passport to this form**) State period of stay in RSA from _____ to _____ 2022

<u>Course Name</u>	<u>Dates</u>	<u>Early bird special until 10 Jan 22</u>	<u>Cost after 10 Jan 2022</u>	<u>Amount due</u>
Hepa filter testing course	7-Feb-22	\$566	\$650	
Air flow measurement	8-Feb-22	\$566	\$650	
Clean room Classification	9-Feb-22	\$566	\$650	
BSC certification – 2 days	10&11 Feb 22	\$ 1,131	\$1,300	
			TOTAL DUE	

- The course registration includes a full day conference with lunch and snacks
- Please advise of Dietary restrictions:** _____
- Registration is not complete without full payment received. Purchase orders are not accepted. Early bird discount is only applicable if account is settled in full by 10 Jan 2022.
- Payment to be made to the following bank account with attendee's name and surname as reference:
Name of account: Air & Lab Products Africa (Pty) Ltd
USD account: 281154-USD-1057-01
Swift code: ABSA ZA JJ
- Please email this form together with proof of payment to sales@alpa.bz
- Accommodation available at Indaba Hotel on special price when you mention you are coming for the training. <https://www.indabahotel.co.za/>

Please note that if you attend this training you might feature in marketing material videos and photos



Training course HEPA FILTER TESTING

There is a requirement in all clean air and containment industries to test the HEPA filter systems that protect people, product and environment.

ISO14644-3 describes the installed filter leakage test, commonly referred to as the DOP (Dipsersed Oil Particle) test.

Being the preferred method in all industries expect microelectronics this test is global, and whilst it appears simple in fact it can be quite complex.



Our Academy for Cleanroom Testing delivers a one-day course on **testing installed HEPA filters**, using trainers who are very experienced in this industry, the most current equipment and the latest best practices.

The morning of theory will equip the delegate with great knowledge on what to test, what to test it with, when to test it, and how to test it.

The afternoon is practical, and gives the delegate confidence to set up the test equipment, connect to an installed HEPA filter system, carry out a test, and detect the leaks that we have created in test filters.

Attendance is advised for anyone in the clean air and containment industries who has a role in Engineering, testing, Quality, cleanroom validation, Operations, management, inspections, or anyone responsible for the performance of clean air facilities and equipment.

The course runs for 6-10 delegates, and a Manual and Certificate of Attendance is provided.



PRODUCT

HEPA filter Testing course

MODEL NUMBER

ACT facility PHOT-TRAIN3

Customer facility PHOT-TRAIN2

Nuclear/asbestos industry course at ACT facility NUCLEAR-TRAIN ASBESTOS-TRAIN

Nuclear/asbestos industry course at Customer facility PHOT-TRAIN2

COURSE CONTENT



Filter testing equipment
Aerosol Photometers
Aerosol Generators
Accessory equipment



Types of filter installations
Equipment variation across industry sectors

Theory of the DOP test according to ISO14644-3
Aerosol introduction
Aerosol challenge measurement
Downstream scanning and sampling



Oils used for challenge aerosol generation
PAO, Ondina, DEHS, DOP

HEPA filters
Types of filter
Manufacturing test standards EN1822 and ISO29463



DOP HEPA FILTER TESTING COURSE

Having been testing hepa filters this course explained the grey areas

This course is beneficial not only to engineers but also to clients and ultimately the end user of the clients products

If you are in the business it is a must to attend this course

It is a course that you will always learn something even if you know everything

More theory surrounding testing enhances knowledge and not just the practical side

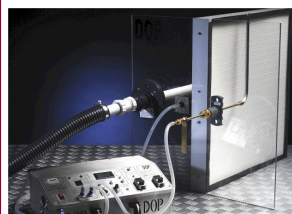
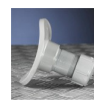
Relaxed feeling to the course with a good tutor who has good communication skills

Engineers who are working in this field MUST attend this course

Gives one an in-depth insight into practical and theoretical aspect of aerosol filter testing

Learned an incredible amount, makes you aware of latest standard and technologies

Comments from participants of DOP Training Course



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Training course AIRFLOW MEASUREMENT

Airflow measurement is critical to creating and maintaining a cleanroom or controlled environment and is a paramount requirement in applications for such industries as pharmaceutical, healthcare, nuclear, semiconductor, electronics, aerospace, automotive and laboratory sciences.

Legislative requirements such as ISO14644-3 describe the requirements for these tests but there are many variations and a wide range of instruments to use to perform the tests.

Our Academy for Cleanroom Testing delivers a one-day course on **Airflow Measurement**, using trainers who are very experienced in this industry, the most current equipment and the latest best practices to advise on compliance to ISO14644-3, and other regulatory Guides and Standards.

The morning of theory will equip the delegate with great knowledge on cleanroom and equipment designs, airflow principals, units of measurement, types of instruments, and the testing required.

The afternoon is for practical work, and gives the delegate confidence to set up test equipment, and make measurements for the various tests required on Cleanrooms and clean air cabinets. The afternoon end with a written examination.

Attendance is advised for anyone in the clean air and containment industry who has a role in Engineering, testing, QA, validation, Operations, or management of Cleanrooms.

The course runs for 6-10 delegates, and a Manual is provided.
A Certificate is provided for successful examination and/or attendance.



PRODUCT

Airflow Measurement course

PART NUMBER

ACT facility AIRMEAS-TRAIN

Customer facility AIRMEAS-TRAIN2

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COURSE CONTENT

Terminology used in Cleanrooms and controlled environments

Filter types and grades that deliver clean air

Standards - ISO14644-3 and GMP

Design principles of Cleanrooms and clean air cabinets

Instrumentation used for airflow measurement and testing

- Pitot tubes
- Anemometers
- Flowhoods
- Manometers
- Gauges
- Flowmeters
- Smoke Generators

Test frequency and criteria - for ISO and GMP

Test methods

- Velocity (with vane and thermal anemometer)
- Volume measurement and calculation
- Pitot traverse
- Airflow patterns and visualisation

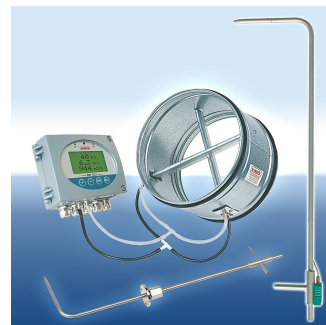
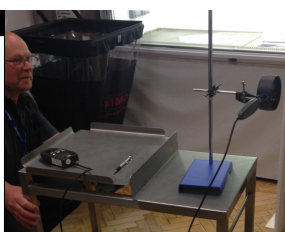
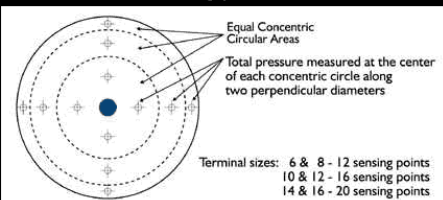


FIGURE 1



Training course CLEANROOM CLASSIFICATION

There is a requirement in all cleanrooms and controlled environments to sample the airborne particle numbers and sizes for determining classification to ISO14644-1.

Other regulated industries such as Pharmaceutical and life sciences requires testing for GMP classification, and monitoring for control, following the same procedures.

Particle counting is more complex due to changes in the Standards and the technology used in Particle Counters.

Our Academy for Cleanroom Testing delivers a one-day course on **Cleanroom Classification**, using trainers who are very experienced in this industry, the most current equipment and the latest best practices to advise on compliance to ISO14644-1 and other regulatory Guides and Standards.

The morning of theory will equip the delegate with great knowledge on the types of cleanroom and clean air devices, the instrumentation to use and the functions, and then how to test for classification.

The afternoon is either examination (for ICEB Particle Counting accreditation) or practical demonstration (for ACT attendance certificate). Each gives the delegate confidence in choosing the correct instrument, setting it up for use, operating it, and interpreting the results that it provides.

Attendance is advised for anyone in the cleanroom industry who has a role in Engineering, testing, Quality, cleanroom validation, Operations, management, inspections, or anyone responsible for the performance of clean air facilities and equipment.

The course runs for 6-10 delegates, and a Manual is provided. An ICEB accreditation Certificate or a Certificate of Attendance is provided depending on the course type.



PRODUCT

Cleanroom Classification course

PART NUMBER

**Non-examined at ACT facility
PCOUN-TRAIN3**

**Examined at ACT facility
PCOUN-TRAIN3+
PCOUN-TRAINEX**

**Non-examined at Customer facility
PCOUN-TRAIN2**

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COURSE CONTENT



Applications for Particle Counting to ISO14644-1 and ISO14644-2

Types of cleanroom and clean air devices

The range of portable Particle Counters

The types of Particle Monitoring System

The ISO14644 family of Standards

Particle Counters and counting particles

Principals of a Particle Counter

Counting technique

Particle size classification

Classification method for Cleanrooms

Sample numbers

Sample locations

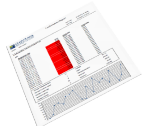
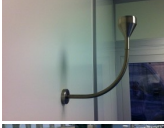
Sample volume

Sample time

Data collection and interpretation

Data reporting

ISO Class determination



MICROBIOLOGICAL SAFETY CABINET TESTING COURSE

AN OVERVIEW

Microbiological Safety Cabinets (MBCs) are extensively used in containment applications throughout industries such as pharmaceutical, healthcare, nuclear, and laboratory sciences.

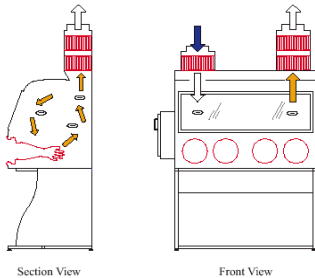
Legislative requirements together with the European Biotechnology Standards and British Standards for safety cabinets make it vital that all those responsible for efficient and safe working of containment systems are familiar with both the theory and practice of their operation, performance and testing.



Our Academy for Cleanroom Testing offers a two-day training course on Microbiological Safety Cabinet Testing. The extensive content is suitable for those with no experience wishing to learn about the technology, and also for those with some knowledge but wishing to deepen their understanding. It covers the following topics:

MODULE 1—SAFETY CABINET TECHNOLOGY

- HEPA filter
- Room Air
- Potentially contaminated air
- HEPA Filtered air
- Positive pressure
- Negative pressure



- ◆ Basic structures (Class I, II and III)
- ◆ Air flow regimes
- ◆ Filters and fans
- ◆ Handling and ergonomics
- ◆ Instrumentation and alarms

MODULE 2—SAFETY CABINET OPERATION

- ◆ Applications and process needs
- ◆ Installation and utilities
- ◆ Operation and conduct
- ◆ Clothing and PPE
- ◆ PPM and Maintenance



MODULE 3—SAFETY CABINET VALIDATION

- ◆ Standards and Guidelines for MBSCs
- ◆ Documentation and Validation
- ◆ Test equipment
- ◆ Testing
- ◆ How to specify an MBSC



PRODUCT

Training Course:

Microbiological Safety Cabinet Testing

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CLEANROOM TESTING LTD
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MODULE 4 DECONTAMINATION AND TESTING

- ◆ VHP and formaldehyde decontamination
- ◆ HEPA filter testing
- ◆ Airflow measurement
- ◆ Containment testing (OPF)
- ◆ Particle Counting

MODULE 5 GENERAL DISCUSSION

- ◆ Questions and Answers
- ◆ Your Applications and Issues
- ◆ Specific Topics (by request)

MODULE 7 OPTIONAL WRITTEN TEST (DAY 2)

- ◆ A selection of short questions will be provided, designed to gauge understanding of the course contents.

THE PRACTICAL APPLICATION (DAY 2)

A Class II MBSC and an isolator will be available for practical simulations and attendees will be encouraged to put their theoretical knowledge into practice under the guidance of the tutor. Limited to ten people.

REQUIREMENTS FOR THE COURSE

Delegates need no prior working with microbiological safety cabinets but an appreciation of controlled environments or facilities would be an advantage.

If it is run on a customer's site the following are required:

- ◆ An LCD projector and flip chart, a room for theory training
- ◆ A safety cabinet for testing, and test equipment (depending upon location)

WHO SHOULD ATTEND

The course will be of value both to those already involved with safety cabinet applications and testing to prove compliance.

It can be attended by those in engineering, facilities, maintenance, processing and operations QA/QC, commissioning and validation, health and safety, planning and management.

All attendees will receive a CD manual and a Certificate of Attendance. Successful examination results (optional) will receive an "Exam Pass" Certificate.

MODULE 6 (DAY 2) PRACTICAL AND "HANDS ON"

- ◆ Operation of MBSCs
- ◆ HEPA filter testing
- ◆ KI Discus testing
- ◆ Airflow measurement
- ◆ Particle counting



REFERENCE MATERIALS

- ◆ EN12469 - Microbiological Safety Cabinets
- ◆ NSF49 - USA standard for safety cabinets
- ◆ ISO14644 Part 1 and 3
- ◆ ACDP guidelines

