Safelab Systems Ltd

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Safelab Scope of Works – Routine Testing of Laminar Flow Cabinet

The routine testing of a laminar flow cabinet (workstation either vertical or horizontal laminar flow).

Testing of a laminar flow cabinet falls under ISO 14644. Safelab's routine testing meets the requirements of ISO 14644 part one (airflows) and part three (filter and seal integrity). The DOP testing performed is also in accordance with BS EN 1822 for High Efficiency Air filters.

Please be aware that Safelab do not offer Particle Counting so we are unable to validate laminar flow equipment to ISO 14644 part two (air cleanliness).

Safelab's routine testing includes:

A review by the engineer of (where applicable):

- System commissioning report
- User manual
- Logbook
- Previous statutory report / service card
- Confirm no changes to unit, system or process since last test

The engineer will check and advise on possible containment interference factors such as:

- AHU
- Doors and windows
- Busy thoroughfares
- Equipment in unit
- Operator / process

The engineer will perform a visible inspection and check operation of unit including the following (where applicable)

- Pre-filter: Inspect and replace if possible*
- Access panels and fixings
- Glazing and panels: Seating, sealing and damage inspection
- Worktops: Seating and damage inspection
- Fan control
- Control panel operation / display
- Alarms
- Reset service counter
- Pressure gauge
- Light

The engineer will perform qualitative and quantitative airflow assessments

- Airflow measurements

The engineer will perform a filter seating & integrity challenge comprising:

- HEPA filter challenge (if present) see notes below**

A full written report, for each piece of equipment tested, will be produced by the engineer which records the results of the tests and checks performed. A copy will be e-mailed to the e-mail address provided by the point of contact or a copy of the report can be requested from Safelab by e-mailing: service@safelab.co.uk

The equipment's service record card will be updated following the thorough test and examination.

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Testing protocol details:

*** Airflow testing**
Using a calibrated vane anemometer a number (depending on unit type and size) of airflow readings are measured. These measurements are recorded and averaged to provide a quantitative performance result. The required results vary depending on the type of unit and the application.

**** Filter seating & integrity challenge** (HEPA filter)**:**
The purpose of HEPA filters is to remove at least 99.97% of airborne particles 0.3 micrometers (µm) in diameter. HEPA filters are used in various applications for the protection of end users and product. It is important to note that HEPA filters are designed to arrest very fine particles effectively, but they do not filter out gasses and odour molecules. For this the use of an activated carbon filter instead of or in addition to a HEPA filter is recommended.

A DOP (Dispersed Oil Particulate) test is conducted to detect leaks in HEPA (high efficiency particulate air) filters in their operational conditions. The test is designed to test the filter, seals and housing. In addition to testing the filter integrity it ensures that all air entering the controlled environment passes through the HEPA filtration system.

In this test a generator is used to create an aerosol which is dispersed upstream of the filter. The downstream face and seals of the filter are scanned for leaks using a calibrated photometer.

It is important to note that smoke detectors in the location will need to be isolated prior to the work commencing.

Terms and Conditions
The purchaser is deemed to accept Safelabs' standard terms and conditions which are readily accessible on our website (www.safelab.co.uk/standard_terms_conditions.htm)

Excluded from Quote (unless otherwise stated)
Replacement pre and main filters
Consumable items such as internal lights
Any additional items or works not specified
PAT Testing
Any remedial works identified at time of testing will be quoted for separately