STANDARD OPERATING PROCEDURE

Department: Engineering	**SOP No.:**
Title: Calculation of No. of Air Changes Per Hour	**Effective Date:**
Supersedes: Nil	**Review Date:**
Issue Date:	**Page No.:**

1.0   OBJECTIVE:

To lay down a procedure for calculation of no. of air changes.

2.0   SCOPE:

This SOP is applicable to all Air Handling Units (AHU)

3.0   RESPONSIBILITY:

Technician / Engineer.

Head of Department - Engineering

4.0   PROCEDURE:

4.1   Switch 'On' the AHU.

4.2   Measure the velocity (in FPM) of airflow across each filter provided in cubicle as per Air Velocity Measurement SOP.

4.3   Calculate the filter area (in ft^2).

4.4   Calculate the actual discharge of airflow through the filter as follows:

Air Flow Discharge (CFM) = Velocity of air across filter (FPM) X filter area (ft^2).

Total Air Flow Discharge (CFM) = Air Flow Discharge x No. of Filters.

4.5   Calculate the volume (ft^3) for which air changes to be calculated.

4.6   Calculate the no. of air changes per hour as follows:

$$\text{No. of Air Changes Per Hour} = \frac{\text{Total air flow discharge (CFM)} \times 60}{\text{Volume (ft}^3)}$$

5.0   ANNEXURE (S):

Nil

6.0   REFERENCE (S):

	PHARMA DEVILS	
	ENGINEERING DEPARTMENT	

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SOP : Air velocity measurement

SOP : Preparation, approval, distribution control, revision and destruction of Standard Operating Procedure (SOP).

7.0   ABBREVIATION (S) / DEFINITION (S):

AHU   : Air Handling Unit

FDV   : Forced Draft Ventilation.

CFM   : Cubic Feet Per Minute.

Ft   : Feet

REVISION CARD

S.No.	REVISION No.	REVISION DATE	DETAILS OF REVISION	REASON (S) FOR REVISION	REFERENCE CHANGE CONTROL No.
1	00	----	----	New SOP	----