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1.0 OBJECTIVE:
To lay down a procedure for Operation of Air Sampler.

2.0 SCOPE:
This SOP is applicable for Operation of SAS 180 Air Sampler (Make: **International** pbi, Model: **SAS180**) & Hi Media Air Flow Air Sampler (Make: **Hi Media**, Model: **LA 881**) in Microbiology Section of Quality Control Laboratory.

3.0 RESPONSIBILITY:
Officer / Executive - Microbiologist

4.0 ACCOUNTABILITY:
Head – QC

5.0 PROCEDURE:
5.1 Procedure for Operation of SAS 180 Air Sampler

5.1.1 Press **"ON/OFF"** black switch to switch **"ON"** the instrument, a ten seconds visual display will appear displaying the following information:

- INTERNATIONAL PBI
- S/N XXXX
- PRESS ARROWS
  FOR NEW MENU SELECTION
- S.SAS 100L or S.SAS 180L
- ID XXXX
- SITE XXXX
- START FOR XX
- DD/MM/YY-HH/MM

5.1.2 There are 6 modes as follows in SAS 180:

- STANDARD MODE
- USER MODE
- PROGAM MODE
- DELAY MODE
- MULTI MODE
- UTILITY MODE

5.1.3 Press down (▼) arrow for menu selection to modify other pre- set parameters. Press **"ENTER"** for selection of Standard Mode when it appears on the display.

5.1.4 Standard Mode: Indicates the Air Sampler can be set to select one of eight fixed standard sampling volumes. The display will show the following message:

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STANDRAD MODE
DD/MM/YY- HH/MM

5.1.5 Press down (▼) arrow to select one of the eight volumes (10, 20, 30, 50, 100,200,500, and 1000) suppose 1000 is selected and Press **"ENTER".** Display will show:

START FOR 1000
DD/MM/YY- HH/MM

5.1.6 **USER MODE**: Press down (▼) arrow for selection of User Mode and press **"ENTER"** to enter into the program. Select existed sampling volume other than selected eight volumes. Press **"ENTER"** for the confirmation of chosen figure.

5.1.7 **PROGRAM MODE**: Press down (▼) arrow for selection of Program Mode and press **"ENTER"** to enter into the program. With Program Mode select sampling volume other than selected eight volumes and press **"ENTER".**

5.1.8 **DELAY MODE**: Press down (▼) arrow for selection of Delay Mode and press **"ENTER"** to enter into the program. With Delay Mode program to delay instrument start. Using up (▲) and down (▼) arrows select delay time (maximum 20 minutes) and press **"ENTER".**

5.1.9 **MULTI MODE**: Press down (▼) arrow for selection of Multi Mode and press **"ENTER"** to enter into the program. With the help of this program extend the time of sampling with the purpose of obtaining a more representative environmental sample "in actual operating conditions". (eg. 1000 liters in ten runs of 100 liters at five minute interval) Display shows the following parameters:

5.1.10 **INTERVAL TIME:** Press up (▲) and down (▼) arrows for selection of interval time (05, 10, 15, 20, 25, and 30) and press "ENTER".

5.1.11 **NUMBER OF RUNS:** Press up (▲) and down (▼) arrows for selection of no. of runs (2, 10, 15, 20) and press "ENTER".

5.1.12 **SINGLE RUN:** Press up (▲) and down (▼) arrow for selection of run volume and press "ENTER".

5.1.13 **TOTAL VOLUME:** his shows the volume of air to b aspirated at the end of the cycles. Check if it corrects volume. If not, push "CLEAR" and start again from the beginning and press "ENTER".

5.1.14 **UTILITY MODE:** Press down (▼) arrow to reach Utility Mode and press "ENTER". In this program the following sub menus are listed:

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5.1.15 SET TIME: Press up (▲) and down (▼) arrows for setting of time and date and press "ENTER" after every selection. Press "ENTER" and check the display for checking date and time.

5.1.16 SAMPLING SITE: The site identification should be changed for samples taken at different sites especially if the results are to be printed. Press up (▲) key to select the first letter or number (1 to 9 an A to Z). Press "ENTER" and repeat selection for 2, 3 and 4 letter or number.

5.1.17 IDENTIFY: Press up (▲) key to select the first letter or number (1 to 9 an A to Z). Press "ENTER" and repeat selection for 2, 3 and 4 letter or number.

5.1.18 LANGUAGE: By default it is set English. No change in this setting.

5.1.19 DISPLAY RECORD: The last 32 samples are memorized in the file **"DISPLAY RECORD".** Each sample is identified in chronological date order and shows the date, time, operator, site and volume of air sampled. Press **"ENTER"** to enter into the Display record sub menu. Press up (▲) and down (▼) arrows for selection of required data. If data has not been inserted h display will show?

5.1.20 PRINT: The sampler should be connected to the printer by connecting cable and press **"ENTER"**. The data will be printed in chronological order, sample number, day, month, year, hour, site, liters of aspirated volume.

5.1.21 AUTO SWITCH OFF: Don't use this parameter.

5.1.22 CLEAR RECORD: Press **"ENTER"** to enter into the **"CLEAR RECORD"** sub menu. This option is used to delete all the data memorized in the "Display Record". Press **"ENTER"** to delete all data.

5.1.23 After about five seconds the display will show **"UTILITY MODE"** and all memorized data is deleted.

5.1.24 MODE: If interval time, number of runs and single run is selected in Multi Mode then use this mode. Press **"ENTER"** to select Mode and by pressing down (▼) select Multi Mode and press **"ENTER".**

5.1.25 Press Clear key to reach the main menu. The display will show the following message:

START FOR 1000
DD/MM/YY- HH/MM

5.1.26 Now push **"START"** button to start the aspiration cycle as desired.

5.1.27 After sampling the display comeback to main menu and show the following message:

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START FOR 1000
DD/MM/YY- HH/MM

5.1.28 Record the operation details in **Annexure-I**, Titled **"Air Sampler Operation Record"**.

5.2 **Procedure for Operation of Hi Media Air Flow Air Sampler**

5.2.1 Press **"ON"** yellow switch to switch **"ON"** the instrument, a ten seconds visual display will appear displaying the following information:

- Hi Media Air Flow
- Samplings Type
- Press Start/Prog
- For Programme PRESS PRG Switch
- For Sampling Types

5.2.2 There are 3 modes as follows for Sampling Types:
- Manual
- Programmed seq
- Programmed

5.2.3 **MANUAL** Press ENTER KEY for menu selection to modify other pre- set parameters. Press up (▲) and down (▼) arrows for selection of flow/rate per min. press **"ENTER".**

5.2.4 **PROGRAMMED SEQ** Press ENTER KEY for menu selection to modify other pre- set parameters. Press up (▲) and down (▼) arrows for selection of Volume. Press **"ENTER"** then flow rate, press **"ENTER"** for selection of no. of seq., press **"ENTER"** for selection of seq. repeat delay & delay Start.

5.2.5 **PROGRAMMED** Press ENTER KEY for menu selection to modify other pre- set parameters. Press up (▲) and down (▼) arrows for selection of Volume. Press **"ENTER"** then flow rate, press **"ENTER"** for selection of no. of seq., press **"ENTER"** for selection of seq. repeat delay & delay Start.

5.2.6 Press **"SET"** yellow switch the instrument, the display will show the following message.

Set Date & Time
Press ENTER

View Samples
Press ENTER

Delete Memory
Press ENTER

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Battery Level
Press ENTER

Reset System
Press ENTER

PID Setting
Press ENTER

Calibration Flow
Press ENTER

Calibration Batt
Press ENTER

Press up (▲) and down (▼) arrows for selection of desirable Parameter and press **"ENTER".** For eg. Set Date & Time- Dt./Mnth/Year and press **"ENTER".**

5.2.7 **CLEAR RECORD:** Press **"ENTER"** to enter into the **"CLEAR RECORD"** menu. This option is used to back in any function to main Screen.

5.2.8 Now push **"START"** button to start the aspiration cycle as desired.

5.2.9 After sampling the display comeback to main menu and show the following message:

Samplings Type
Press Start/Prog

5.2.10 Record the operation details in **Annexure-I**, Titled **"Air Sampler Operation Record"**

6.0 **REFERENCES:**
Instruction Manual

7.0 **ANNEXURES:**

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure – I	Air Sampler Operation Record	

ENCLOSURES: SOP Training Record

8.0 **DISTRIBUTION:**
- Controlled Copy No. 01   Quality Assurance

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- Master Copy   Quality Assurance Department

9.0   ABBREVIATIONS:

SOP	Standard Operating Procedure
No.	Number
QA	Quality Assurance
Ltd.	Limited
QC	Quality Control
ID No.	Identification Number

10.0   REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Details of Changes	Reason for Change	Effective Date	Updated By

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ANNEXURE – I
AIR SAMPLER OPERATION RECORD

Instrument ID No.:

Make   :   **Model:**

S.No.	Date	Purpose	Name of the Area	Operation		Done By Sign & Date	Checked By Sign & Date	Remarks
				From	**To**			