



## STANDARD OPERATING PROCEDURE

<b>Department:</b> Microbiology	<b>SOP No.:</b>
<b>Title:</b> Trend Analysis of Environment Monitoring	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

### 1.0 OBJECTIVE:

To lay down a procedure for trend analysis of environment monitoring.

### 2.0 SCOPE:

This SOP is applicable for trend analysis of environment monitoring in Microbiology Section of Quality Control area.

### 3.0 RESPONSIBILITY:

Officer / Executive – Microbiology

### 4.0 ACCOUNTABILITY:

Head – QC

### 5.0 ABBREVIATIONS:

Ltd	Limited
ML	Microbiology Laboratory
No.	Number
QA	Quality Assurance
QC	Quality Control
SOP	Standard Operating Procedure

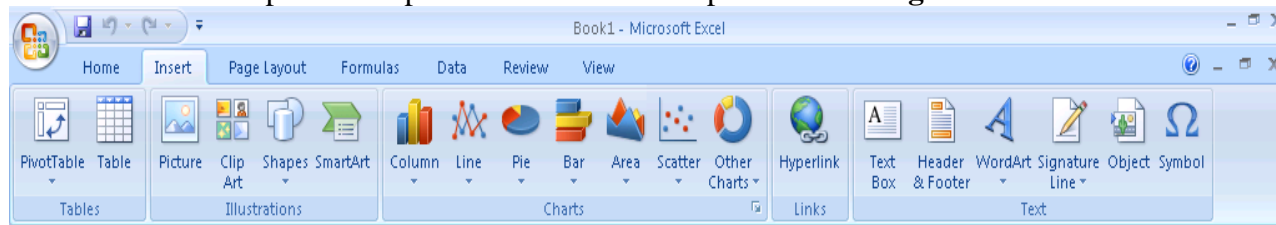
### 6.0 PROCEDURE:

6.1 Open the Microsoft Office Excel sheet in computer system.

6.2 Put the Data in Microsoft Office Excel.

6.3 Select the data for preparing trend chart.

6.4 Click the “Insert” option on top side of excel sheet as per shown in **Figure-1**.



**Figure-1**

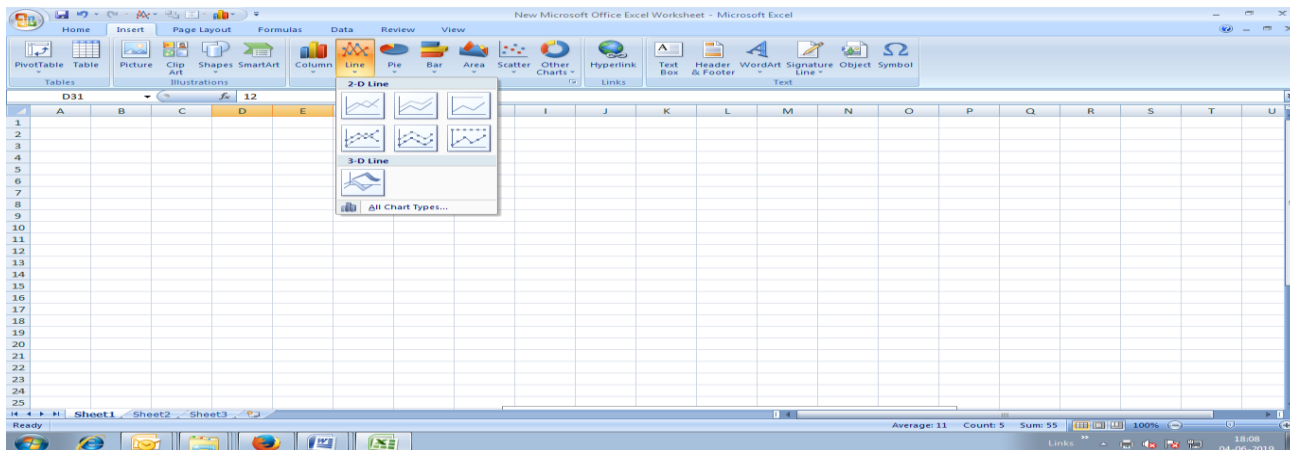
6.5 Click the “Line” icon and select “3-D Line” as per shown in **Figure-2**.

6.6 Choose the “Line with markers” as per shown in **Figure-2**.



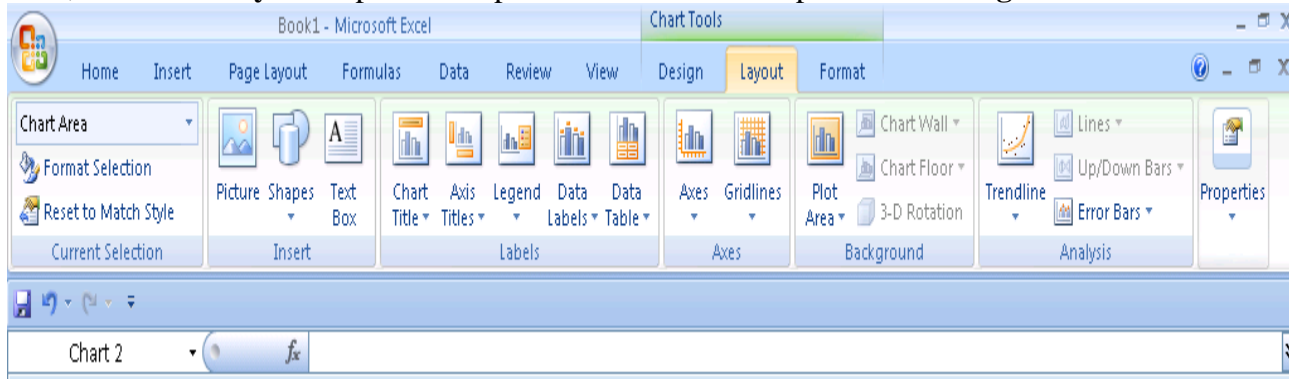
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**Figure-2**

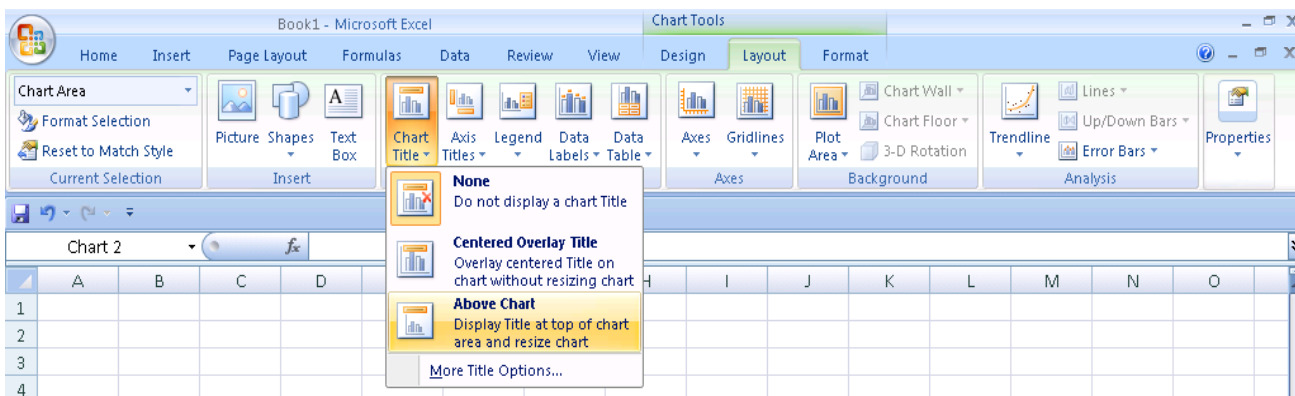
6.7 After, click the **“Layout”** option on top side of excel sheet as per shown in **Figure-3**.



**Figure-3**

6.8 Click the **“Chart Title”** icon as per shown in **Figure-4**.

6.9 Select the **“Above Chart”** sub icon as per shown in **Figure-4**.



**Figure-4**



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6.10 Write the chart title.

6.11 After, click “Axis Titles” icon as per shown in **Figure-5**.

6.12 Click the “Primary Horizontal Axis Title” sub icon and select the “Title below Axis” as per shown in **Figure-5**.

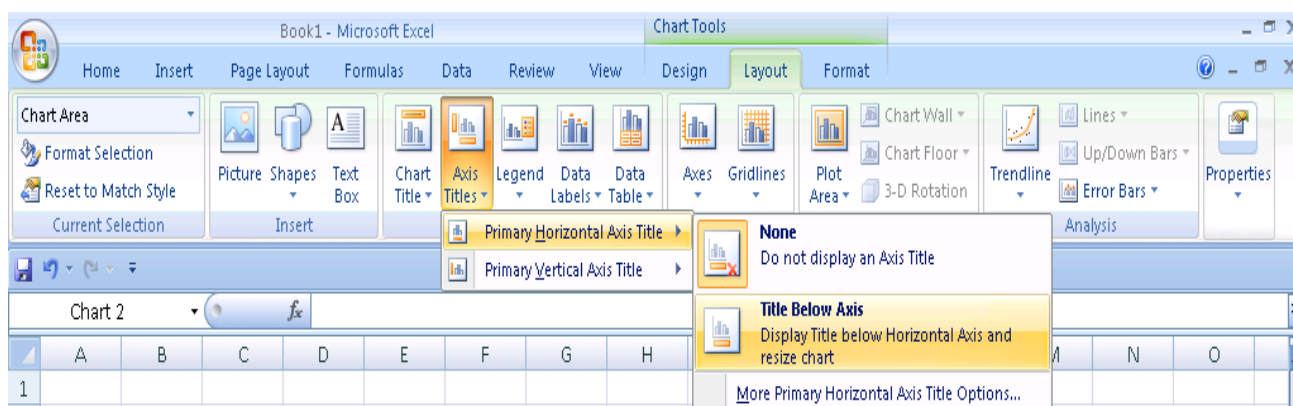


Figure-5

6.13 Write the “Date” in Title Box.

6.14 Again click the “Axis Title” icon as per shown in **Figure-6**.

6.15 Click the “Primary Vertical Axis Title” sub icon and select the “Vertical Title” as per shown in **Figure-6**.

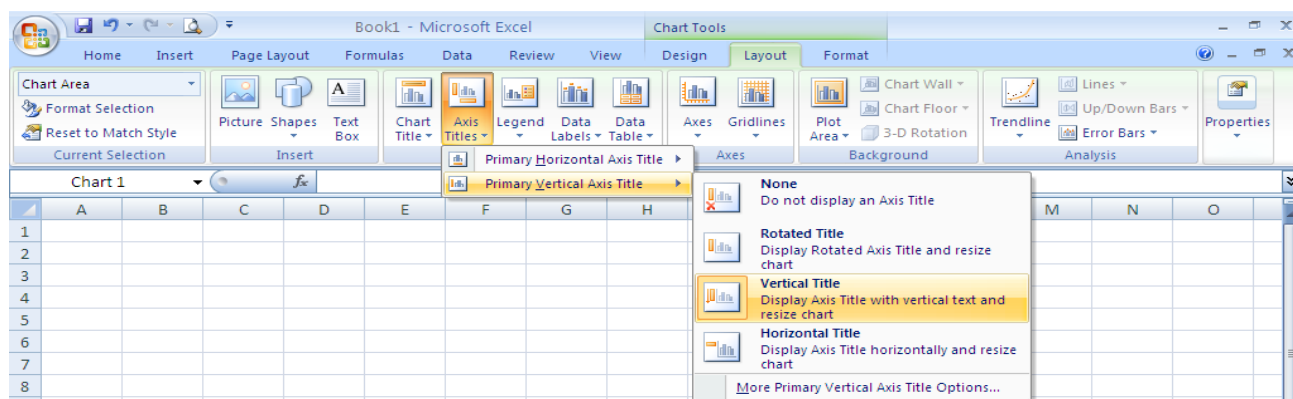


Figure-6

6.16 Write “cfu” in the Title Box.

6.17 Select the table and click the “Ctrl + C” key for Copy in Keyboard.

6.18 Paste (“Ctrl + V” key) and adjust the table in **Annexure-I**, Titled “**Microbial Count Trend Table of Environmental Monitoring**”.

6.19 Select the trend chart and click the “Ctrl + C” key for Copy in Keyboard.



**PHARMA DEVILS**  
MICROBIOLOGY DEPARTMENT

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**6.20** Paste (“Ctrl + V” key) and adjust the chart in **Annexure-I, “Trend Chart of Environmental Monitoring”**.

**6.21** Frequency of trend preparation of Environment Monitoring is monthly and frequency to prepare trend is six monthly for frequency to perform environment monitoring; once in a two month.

**7.0 ANNEXURES:**

<b>ANNEXURE No.</b>	<b>TITLE OF ANNEXURE</b>	<b>FORMAT No.</b>
Annexure-I	Microbiological Environmental Monitoring Trend	

**ENCLOSURES:** SOP Training Record.

**8.0 DISTRIBUTION:**

- Controlled Copy No. 01                      Quality Assurance
- Controlled Copy No. 02                      Microbiology
- Master Copy                                      Quality Assurance

**9.0 REFERENCES:**

Not Applicable.

**10.0 REVISION HISTORY:**

**CHANGE HISTORY LOG**

<b>Revision No.</b>	<b>Change Control No.</b>	<b>Details of Changes</b>	<b>Reason for Change</b>	<b>Effective Date</b>	<b>Updated By</b>



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**ANNEXURE-I**

**MICROBIOLOGICAL ENVIRONMENTAL MONITORING TREND**

**SAMPLING LOCATION GRADE:**

**METHOD:**

**SAMPLING AREA:**

**PERIOD:**

Date↓ Plate Code →				
<b>Min →</b>				
<b>Max →</b>				
<b>Average →</b>				

<b>Limit:</b>		
<b>Alert limit</b>	<b>Action limit</b>	<b>Limit</b>

**TREND CHART OF MICROBIOLOGICAL MONITORING**

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**Remark:** Trend analysis of Environment Monitoring is within limit / out of limit.

<b>Prepared By QC</b>	<b>Checked By QC</b>	<b>Checked By QA</b>	<b>Approved By QC</b>
<b>DATE</b>	<b>DATE</b>	<b>DATE</b>	<b>DATE</b>