



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology	SOP No.:
Title: Trend Analysis of Water And Environment Monitoring	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

1.0 OBJECTIVE:

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

2.0 SCOPE:

This SOP is applicable for trend analysis of water and environment monitoring in Quality Control area.

3.0 RESPONSIBILITY:

Officer / Executive – QC

4.0 ACCOUNTABILITY:

Head – QC

5.0 PROCEDURE:

“Environment Monitoring and Water Analysis Trend shall be prepared on monthly basis.”

5.1 Open the Microsoft Office Excel sheet in computer system.

5.2 Put the Data in Microsoft Office Excel.

5.3 Select the data for preparing trend chart.

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

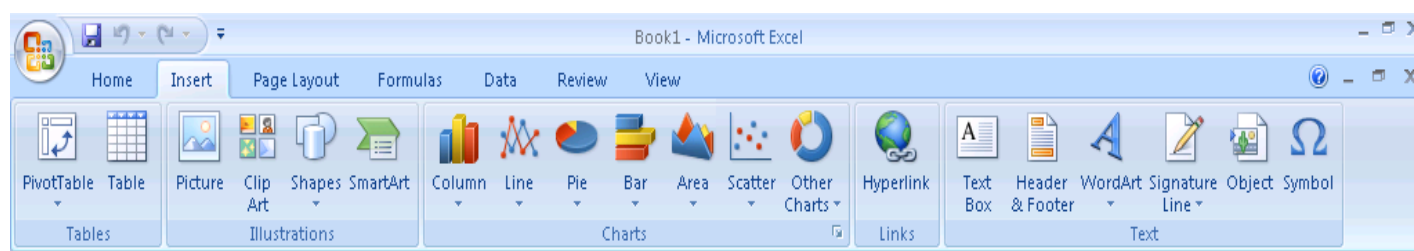


Figure-1

5.5 Click the “**Column**” icon and select “**2-D Column**” as per shown in **Figure-2**.

5.6 Choose the “**Clustered Column**” as per shown in **Figure-2**.



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

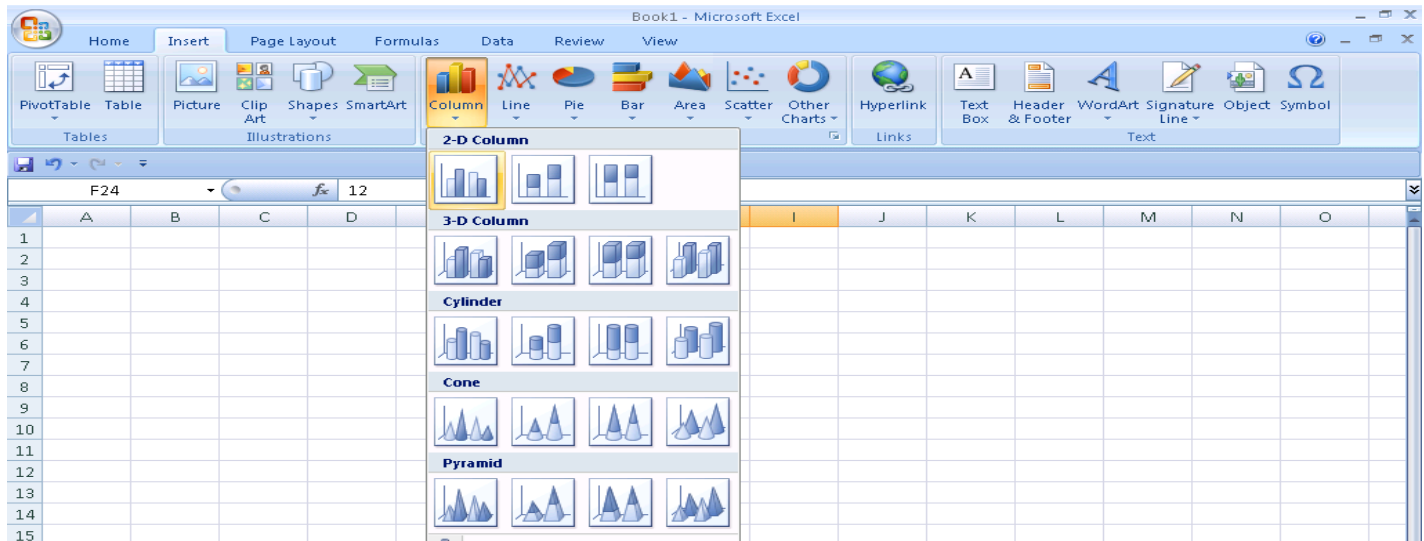


Figure-2

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

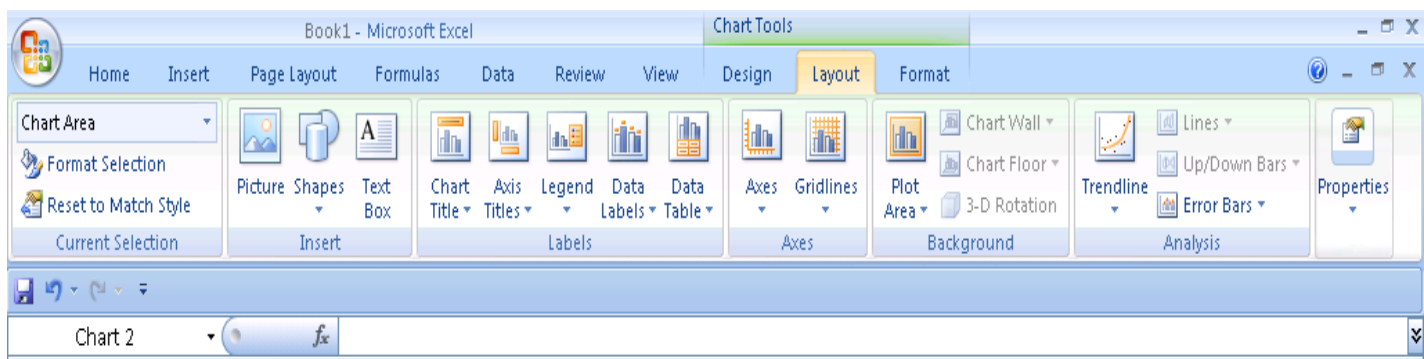


Figure-3

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

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



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

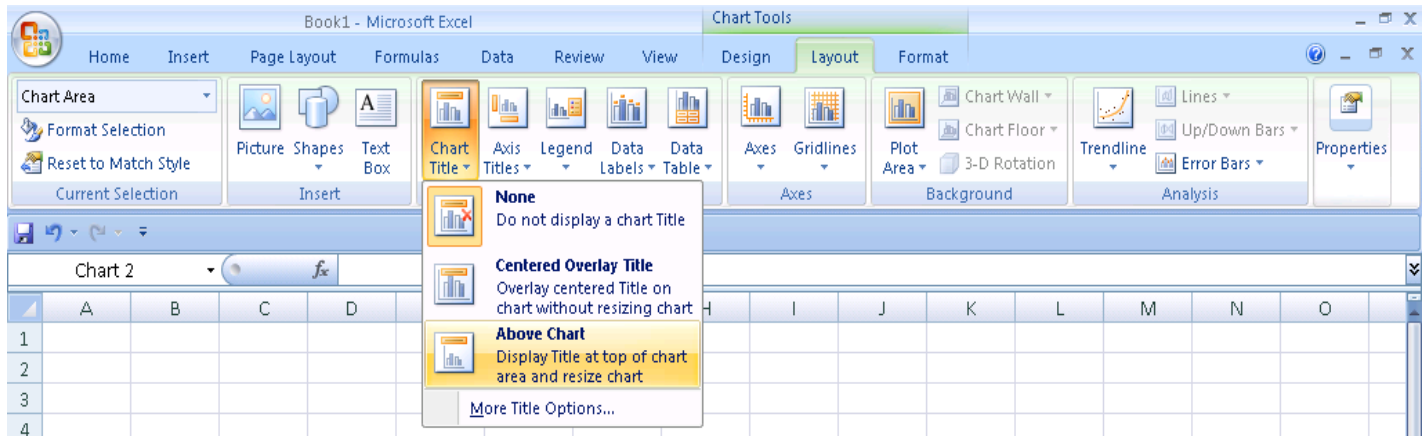


Figure-4

5.10 Write the chart title.

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

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

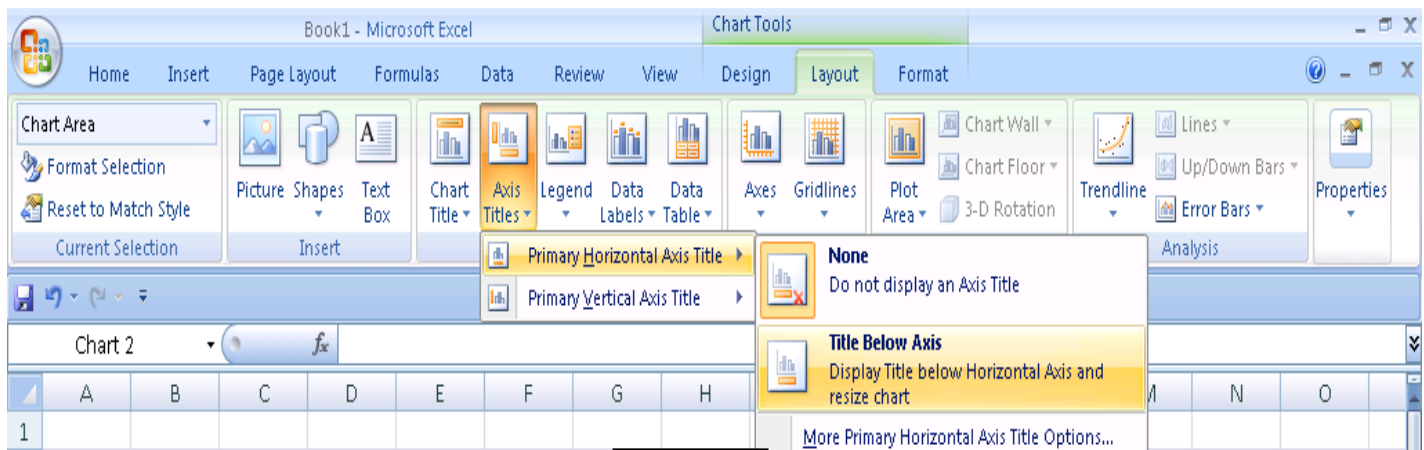


Figure-5

5.13 Write the “Date” in Title Box.

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

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



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

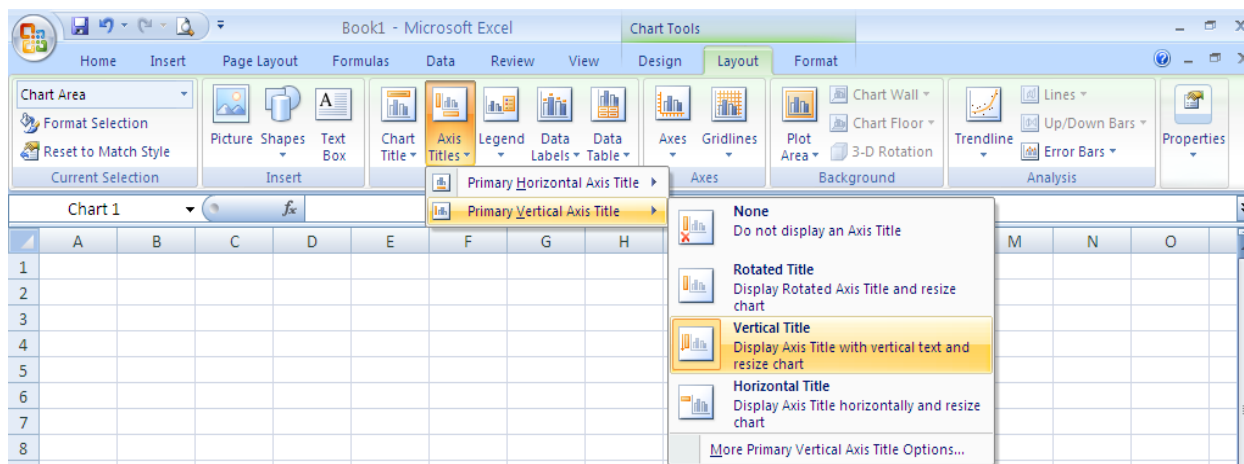


Figure-6

5.16 Write “cfu” in the Title Box.

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

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

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

5.20 Paste (“**Ctrl + V**” key) and adjust the chart in **Annexure-III**, Titled “**Microbial Count Trend Chart of Environmental Monitoring**”.

5.21 Doing same activity for water trend preparation and Paste (“**Ctrl + V**” key) and adjust the table and chart in **Annexure-II**, Titled “**Microbial Count Trend Table and Chart of Water Analysis**”.

6.0 REFERENCES:

Not Applicable

7.0 ANNEXURES:

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure-I	Microbial Count Trend Table of Environmental Monitoring	
Annexure-II	Microbial Count Trend Table and Chart of Water Analysis	
Annexure-III	Microbial Count Trend Chart of Environmental Monitoring	

ENCLOSURES: SOP Training Record



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

8.0 DISTRIBUTION:

- Controlled Copy No. 01 Quality Assurance Department
- Controlled Copy No. 02 Quality Control Department
- Master Copy Quality Assurance Department

9.0 ABBREVIATIONS:

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

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

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



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

ANNEXURE-I

MICROBIAL COUNT TREND TABLE OF ENVIRONMENTAL MONITORING/ WATER ANALYSIS

Sampling Area:

Class:

Location →			
Date			
Min →			
Max →			
Average →			

Settle Plate Limit:

Alert limit	Action limit	Limit

REMARK: Trend analysis of environment monitoring by settle plate is within limit/out of limit.

	Prepared By Microbiologist	Checked By Executive Microbiologist	Approved By Manager QC
Sign			
Date			



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

ANNEXURE-II MICROBIAL COUNT TREND TABLE AND CHART OF WATER ANALYSIS

MICROBIAL COUNT TREND TABLE:

Sampling Point No. :

Location :

Date				
CFU				
Alert Limit				
Action Limit				
Limit				

MICROBIAL COUNT TREND CHART:

Remark: Trend analysis of Environment Monitoring by Settle Plate is within limit / out of limit.

	Prepared By Microbiologist	Checked By Executive Microbiologist	Approved By Manager QC
Sign			
Date			



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Trend Analysis of Water And Environment Monitoring

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

ANNEXURE-III

MICROBIAL COUNT TREND CHART OF ENVIRONMENTAL MONITORING

