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BEFORE: A Traditional Standard Operating Procedure

SOP for Microbial Testing of Drain Water

1.0 OBJECTIVE:

To lay down the procedure for Microbial testing of drain water in production area.

2.0 SCOPE:

This SOP shall be applicable to Quality Control Dept.

3.0 RESPONSIBILITY:

Microbiologist

4.0 ACCOUNTABILITY:

Sr. Manager Quality Assurance

5.0 PROCEDURE:

5.1 All drains in the production area shall be checked to monitor the effectiveness of cleaning and disinfecting agents once in a month.
5.2 Sample 100 ml of drain water from each drain and collect it in a sterile glass container with the help of previously sterilized pipette.
5.3 Following tests shall be performed on the drain water collected:
a) Total Microbial Count.
b) Absence of Pathogens.
5.4 Filter the sampled drain water through 0.45 membrane filter.
5.5 For Phenolic disinfectants, dilution of drain water with sterile distilled water and filtration through 0.45 micron is sufficient. However, whenever other types of disinfectants e.g. Quaternary ammonium compounds are used, deactivation of the same should be carried out with 0.5% Soylecithin and/or 4 % Polysorbate-20 (Tween 20), by addition of these compounds in culture media.
5.6 Wash the filter paper 5 times with sterile Normal Saline.
5.7 Inoculate the filter paper in 100 ml of Normal Saline.
5.8 Shake thoroughly (so that the contents of filter paper comes in Normal Saline).
5.9 Perform the Total Microbial Count and test for absence of Pathogens as per the standard. Count and record the results in Drain Water (Microbiological Testing) Record.
5.10 Necessary feedback shall be given to Production for corrective action, if required.

All types of information are embedded in one big paragraph, which makes finding and understanding information challenging

6.0 ABBREVIATIONS:

6.1 SOP : Standard Operating Procedure
6.2 QA : Quality Assurance
6.3 QC : Quality Control
6.4 Dept. : Department

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AFTER: A Standard Operating Procedure with Information Mapping®

Standard Operating Procedure for Microbial Testing of Drain Water

Overview

Explain abbreviations at the relevant place

Objective

This Standard Operating Procedure (SOP) provides guidelines and instructions to test drain water for microbes in the Production Area.

This testing is intended to monitor the effectiveness of cleaning and disinfecting agents. Testing shall be performed once a month.

Scope

This document applies to microbiologists in the Quality Control (QC) Department.

Accountability and responsibility

Accountability and responsibilities for this SOP are as follows:

- Accountability: Senior Manager of Quality Assurance
- Responsibilities: Microbiologists perform testing of drain water for microbes

Materials/ equipment

Before you begin the procedure, ensure you have a

Separate guidelines from the procedure to clearly dictate behaviour

- Sterile glass container
- Sterile pipette
- 0.45-micron membrane filter
- Normal Saline solution

Provide the procedure separately for quick access

Contents

This document contains the following topic.

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Procedure

Related instructions are chunked into four tasks

Tasks involved

Performing the test on drain water for microbes involves the following tasks:

- **Task 1:** Check drains and sampling drain water
- **Task 2:** Prepare the solution
- **Task 3:** Perform drain water tests
- **Task 4:** Provide feedback

Match labels to the bullets above for consistency and ease-of-navigation

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Task 1: Check drains and sampling drain water

Once a month, microbiologists do as follows:

Use a procedure table to give sequential instructions

Step	Action
1	Check all drains in the production area to monitor the effectiveness of cleaning and disinfecting agents
2	Sample 100 ml of drain water from each drain and collect it in a sterile glass container with the help of previously sterilized pipette.

Task 2: Prepare the solution

Use the table below to prepare the rinse solution.

Use a decision table to present different conditions and the corresponding actions to limit errors

If you are preparing ...	Then ...
phenolic disinfectants	• dilute drain water with sterile distilled water, and • filter through 0.45-micron filter
other types of disinfectants (e.g., quaternary ammonium compounds)	carry out deactivation of the same by adding these compounds in culture media: • 0.5% Soylecithin • 4% Polysorabate-20 (Tween20)

Continued on next page

Procedure, Continued

Task 3: Performing drain water tests

Follow the steps in the table below to test drain water for microbes.

Limit each step to one clear action

Step	Action
1	Wash the filter paper 5 times with sterile normal saline.
2	Inoculate the filter paper in 100 ml of normal saline.
3	Shake thoroughly. **Result:** The contents of filter paper come in normal saline.
4	• Perform the Total Microbial Count. • Test for Absence of Pathogens as per the standard.
5	Count and record the results in the Drain Water (Microbiological Testing) Record.

Separate the result from the action with a clear label

Task 4: Providing feedback

Provide feedback to Production for corrective action, if required.