



Title: Procedure for De-Chlorination in Potable Water

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	1 of 4

1.0 OBJECTIVE

The purpose of this SOP is:

- 1.1 To describe the procedure for De chlorination in Potable water.

2.0 SCOPE

- 2.1 This SOP is applicable for the procedure for operation of used for dosing of de-chlorination agent pumps at

3.0 RESPONSIBILITY:

- 3.1 The Maintenance Operator shall be responsible:

- 3.1.1 Responsible for operation of the dosing pumps
- 3.1.2 Responsible for preparation of sodium bisulphate solution.

- 3.2 The Maintenance Engineer shall be responsible:

- 3.2.1 Responsible for assurance of proper working of the system.
- 3.2.2 Responsible for take corrective action if any operational deviation observed.

4.0 ACCOUNTABILITY

Head –Engineering Services

4.1 PROCEDURE: SOLUTION PREPARATION:

- 4.1.1 Take 1 kg. Sodium bisulphate in chemical dosing tank and add 20 liters water.
- 4.1.2 Mix the solution well.

4.2 STARTING PROCEDURE:

- 4.2.1 Switch ON the chemical dosing pumps.



Title: Procedure for De-Chlorination in Potable Water

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	2 of 4

4.2.2 Adjust the frequency and stroke length knob in the dosing pump to get on-line de chlorination dosing @ 1 ppm.±0.2

4.2.3 Check the ppm level at the discharge of the pump by using chlorine analysis test kit.

4.3 CALCULATION FOR DE CHLORINATION SOLUTION FLOW RATE TO GET 1PPM DOSE RATE:

4.3.1 EXAMPLE:

Flow rate of the bore well : 10m³/hr.
De chlorination dose required : 1ppm.
Concentration of de chlorination solution in the chemical tank : 5%.

$$\text{De chlorination solution flow rate (lph)} = \frac{\text{Flow rate of bore well (m}^3\text{/hr)} \times \text{dose required (ppm)}}{10 \times \text{concentration of de chlorination solution in the tank (\%)}$$

4.4 DOSING PUMP FREQUENCY AND STROKE LENGTH ADJUSTMENTS TO GET THE SPECIFIED FLOW RATE:

4.4.1 EXAMPLE:

capacity of the electronic dosing pump : 1.00 lph
i.e.) 100% stroke length and 100% frequency gives a flow of : 1.00 lph

Assume that the required flow rate is 0.5 lph. Therefore to get the required flow rate, adjust the stroke length to 50% and keep the frequency of dose on 100% for better dosing into the water.

4.5 METHOD FOR DETERMINATION OF RESIDUAL FREE CHLORINE BY EASY TEST KIT:

4.5.1 Take 25 ml of chlorinated water in easy test jar.

4.5.2 Add half a micro-spoon (80-90 mg) of Reagent –A.

4.5.3 If pink colour appears free chlorine is present in the sample. If not appear free chlorine is



Title: Procedure for De-Chlorination in Potable Water

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	3 of 4

absent in the sample.

4.5.4 Adds Reagent –B drop by drop till the pink color is discharged. Shake the jar after the addition of each drop.

4.5.5 Count the number of drops while adding. Each drop of Reagent B=0.1 ppm of chlorine. (The discharge of pink colour should be taken as the end point).

5.0 ANNEXURES:

Annexure –I: Performance record of De chlorination in potable water.

6.0 References (S)

Nil

7.0 Glossary

SOP	:	Standard Operating procedure
No.	:	Number
mg	:	Milligram.
%	:	Percentage.
ppm	:	Parts Per Millions.
lph	:	Lacs Per Hour.
m ³ /hr	:	Meter ³ / hour.



PHARMA DEVILS

ENGINEERING DEPARTMENT

Title: Procedure for De-Chlorination in Potable Water

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
Review Date:		Page No.	4 of 4

ANNEXURE-I

Date	Solution prepared at (Hrs)	Dosing rate (ppm)	Dosing pump ON/OFF	Dosing of meta by sulphate	Remarks	Operator's sign.	Engineers Sign.

NOTE: Record the following parameters on daily basis.

Dosing rate
1ppm +/- 0.2

PPM: Parts Per Million.