KINGDOM OF SAUDI ARABIA

Ministry Of Health

General directorate of Health Affairs AL-Baha

Mayyara General Medical Complex

المملكة العربية السعودية

وزارة الصحة

المديرية العامة للشئون الصحية بمنطقة الباحة

مجمع ميارا الطبي العام

☐ **ADMINISTRATE POLICY & PROCEDURE (APP)**	☐ **INSTITUTIONAL POLICY & PROCEDURE (IPP)**	
	☐ **INTERDEPARTMENTAL**	☐ **INTERNAL**
TITLE	**POLICY NUMBER/V#**	
Water Quality Monitoring	MMC- DENTAL – (04) 01	
INITIATED DATE	**EFFECTIVE DATE**	**REVISED DATE**
02-08-2025	01/09/2025	01/08/2028
REPLACES NUMBER	**NO. OF PAGES**	
N/A	03	
APPLIES TO	**RESPONSIBILITY**	
Dental clinic Staff	Dental clinic Staff	

1. Policy:

1.1. This policy is a guide for all dental healthcare personnel to ensure full understanding on the best practice of treatment of water quality monitoring.

2. PURPOSE

2.1. To prevent/minimize the risk of infection in dental settings.

2.2. To promote awareness for each dental personnel in the importance of water quality monitoring.

2.3. To provide a framework for the education of dental healthcare personnel in the infection prevention and control.

3. Scope:

3.1. This policy applies to all dental healthcare personnel.

4. Roles and Responsibilities:

4.1. All healthcare workers have responsibility to conform and respect all aspects of this policy.

4.2. Managers/ department heads have a key responsibility to ensure their department functions within the parameters of the policy and that staff are trained and assessed in these issues

KINGDOM OF SAUDI ARABIA

Ministry Of Health

General directorate of Health Affairs AL-Baha

Mayyara General Medical Complex

المملكة العربية السعودية
وزارة الصحة
المديرية العامة للشئون الصحية بمنطقة الباحة
مجمع ميارا الطبي العام

5. **Definitions / Abbreviations**:

   5.1. Bacterial count: a method of estimating the number of bacteria per unit sample. The term also refers to the estimated number of bacteria per unit sample, usually expressed as colony forming units (CFUs) per square centimeter (cm2) per milliliter (mL).

   5.2. Biofilm: is an aggregate of microorganisms in which cells adhere to each other on a surface.

   5.3. Colony forming unit (CFU): the minimum number of separable cells on the surface of or in semi-solid agar medium which gives rise to a visible colony of progeny is on the order of tens of millions.

   5.4. Independent water reservoir: a container used to hold water or other solutions and supply it to handpieces and air/water syringes attached to a dental unit.

6. **Procedure:**

   6.1 For non-surgical procedures, regardless of the source water, the number of bacterial counts of non-pathogenic bacteria in the water exiting the device into the oral cavity be as low as reasonably achievable without exceeding 500 cfu/ml.

   6.2 A process should be in place to monitor the quality of waterlines regularly.

   6.3 **Procedure for Sampling Dental Unit Waterlines:**

   6.3.1 The manufacture recommendations for sampling dental unit waterlines should be strictly followed.

   6.3.2 **In the absence of the manufacture recommendations, the following should step should be applied:**

   6.3.2.1 Dental units have dental waterlines supplying several instrument hoses, three-in-one air/water syringes, patient cup-filler and cuspidor bowl rinse outlets. All these waterlines are interconnected.

   6.3.2.2 Label sterile water bottle (usually 50-100 ml tubes/bottles containing neutralizer). The labelling information should contain details of each waterline to be sampled, sender's reference, person sampling, date and time of sampling.

   6.3.2.3 Purge the 3:1 air/water syringe waterline, instrument hose waterline, patient cup filler waterline (where present) and cuspidor rinse waterline (where present) outlets of the dental unit for 2 minutes before collecting water samples.

   6.3.2.4 Aseptically open the tube/bottle and collect 50 ml of water from each outlet.

   6.3.2.5 Samples of water should also be taken from independent water reservoir bottles where used.

   6.3.2.6 Store the water between 2 and 8˚C and return to the microbiology laboratory for analysis ideally within 24 hours of collection.

   6.4. In the event that standards are not met when monitoring dental unit water (i.e., ≥ 500 CFU/mL), the following actions should be applied:

   6.4.1 The manufacture recommendations should be strictly followed.

   6.4.2 **In the absence of the manufacture recommendations, the following should actions should be applied:**

KINGDOM OF SAUDI ARABIA

Ministry Of Health

General directorate of Health Affairs AL-Baha

Mayyara General Medical Complex

المملكة العربية السعودية
وزارة الصحة
المديرية العامة للشئون الصحية بمنطقة الباحة
مجمع ميارا الطبي العام

6.4.2.1 Review work practices, waterline treatment protocols, and waterline treatment and monitoring records.

6.4.2.2 Correct any identified procedural problems, retreat the waterlines, and retest the dental unit.

6.4.2.3 If the test remains positive, a shock treatment of the waterlines may be indicated.

6.4.2.4 Many dental unit waterline product manufacturers offer guidance on initial or periodic shock treatments for the waterlines, which may include using a higher concentration of their product or an extended treatment time.

6.4.2.5 Cleaning or shocking the lines with diluted bleach (1-part household 6% bleach to 10 parts water) is another option.

6.4.2.6 In the event that a unit consistently does not meet standards (i.e., ≥ 500 CFU/mL) contact the waterline treatment product manufacturer for guidance

7. References:

7.1. CDC guidelines for infection control in dental settings, 2016.

7.2. Infection control guidelines for the college of dentistry king Saud university, 2013

8. Approved:

APPROVALS & REVIEWS:			
Prepared By	**Title**	**Date**	**Signature**
Dr. Radwa Tharwat Fathy	**Dentist**	**02-08-2025**	
Reviewed By			
Dr. Mostafa Mohammed Osman	**Quality Director**	**02-08-2025**	
Approved By			
Dr. Abdulmajeed Abdullah Saleh	**Medical Director**	**02-08-2025**	
Eng. Meshaal Hussein Alghamdi	**Executive Director**	**02-08-2025**	