	Environmental Analysis Teaching and Research Laboratory	Date: X/XX/XXXX	SOP No. X
	Standard Operating Procedure	Title: Hach DR3900	
	Approved By: TBD	Revised: February 1, 2024	

## 1. Scope and Application

1.1 The scope of this SOP is train researchers...

1.2 The applications of this SOP are for...

## 2. Summary of Method

2.1 This SOP does this...

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### **3. Acknowledgements**

### **4. Definitions**

4.1 Term1: is...

### **5. Biases and Interferences**

5.1 Biases and interferences can come from...

### **6. Health and Safety**

6.1 Describe the risk...

### **Safety and Personnel Protective Equipment**

### **7. Personnel & Training Responsibilities**

7.1 Researchers training is required before this the procedures in this method can be used...

7.2 Researchers using this SOP should be trained for the following SOPs:

- SOP01 Laboratory Safety
- SOP02 Field Safety

### **8. Required Materials and Apparati**

8.1 Item 1 w/catalog number!

8.2 Item 2

### **9. Reagents and Standards**

### **10. Estimated Time**

10.1 This procedure requires XX minutes...

## **11. Sample Collection, Preservation, and Storage**

## **12. Procedure**

### **How to do a measurement**

**12.1** Select the applicable program from the programs menu (e.g., Stored Programs, User Programs, Favorites).

**12.2** Install the cell adapter, if necessary.

**12.3** Push Start to start the program

**12.4** Prepare the blank according to the method document. Close the sample cell and clean the optical faces of the sample cell with a lint-free cloth.

**12.5** Insert the blank sample cell into the cell compartment. Make sure to install the blank sample cell in the correct and in a consistent orientation so that the results are more repeatable and precise. Refer to figure 1.

**12.6** Close the instrument cap to prevent light interferences

**12.7** Push Zero. The display shows a concentration of zero (e.g., mg/L, ABS, g/L).

**12.8** Prepare the sample. Add reagents as specified by the method document.

**12.9** Select Options; Start Timer to use the stored timers within the program.

**12.10** Close the sample cell and clean the optical surfaces of the cell with a lint-free cloth

**12.11** Insert the sample into the cell compartment. Make sure to install the sample cell in the correct and in a consistent orientation so that the results are more repeatable and precise.

**12.12** Close the instrument cap to prevent light interferences.

**12.13** Push Read. The display shows the results in the selected units.

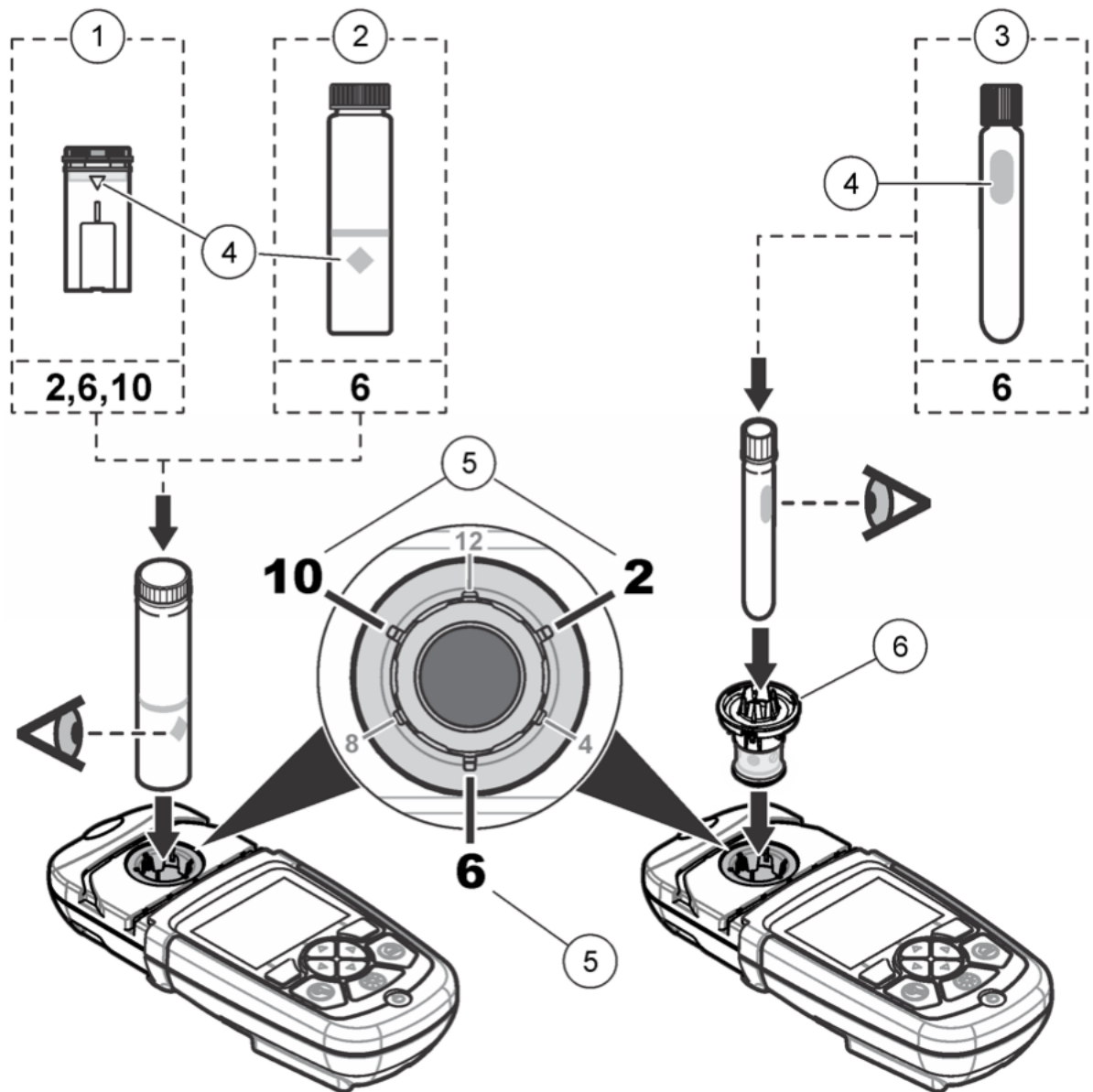
## **13. Data Analysis and Calculations**

## **14. QC/QA Criteria**

## **15. Trouble Shooting**

## **16. References**

**16.1** APHA, AWWA, WEF. (2012) Standard Methods for examination of water and wastewater. 22nd American Public Health Association (Eds.). Washington. 1360



<b>1</b> 1-cm/10-mL plastic sample cell	<b>4</b> Orientation mark
<b>2</b> 1-inch (25 mm) glass sample cell	<b>5</b> Orientation position (clockwise)
<b>3</b> 16-mm glass test vial	<b>6</b> Sample cell adapter

pp. (2014).