

## COLOR REFERENCE KIT

CHLORINE, FREE,	0 - 1.99 ppm
CHLORINE, TOTAL,	0 - 1.99 ppm
BROMINE,	0 - 4.49 ppm
OZONE,	0 - 1.39 ppm
CHLORINE DIOXIDE,	0 - 3.79 ppm

(For Verification of Instrument Performance of C401, C301, C201, C103, C104, and C105 Colorimeters)

FOR LABORATORY USE ONLY

Read Material Safety Data Sheet

**NOT SUITABLE FOR INSTRUMENT CALIBRATION**

DO NOT OPEN VIALS

Store in a dry place at 10° - 25 °C

**KEEP AWAY FROM LIGHT**

## INSTRUCTIONS

**Important:** The COLOR REFERENCE KIT is solely intended for verification of performance of instruments designed to measure Free Chlorine using the DPD Free reagent for 10 ml sample, Total Chlorine, Bromine, Ozone and Chlorine Dioxide using the DPD Total reagent for 10 ml sample.

**Do not use these color references for instrument calibration.**

Use these color references only on the specified instruments.

### Part A. INITIAL VALUE DETERMINATION

#### (Instrument specific)

**Important:** The actual value of each color reference is instrument specific. Follow the instructions below to record the initial readings of the color references. Please refer to the instructions manual of the meter for instrument use and specifications.

**Caution:** The procedure to determine the initial values of Color References is valid only on an instrument that has been factory calibrated or fully calibrated with laboratory control standards as stated in instrument's instructions manual.

1. Ensure all vials are clean, dry and absent of any marks or finger-prints. Wipe all vials with a lint-free cloth or a soft tissue before use.
2. Select the desired test parameter (e.g. Chlorine Free, Bromine, Chlorine Dioxide, Ozone, etc) as stated in instrument instructions manual.
3. Insert the BLANK vial into the colorimeter ensuring proper alignment of the ▼ mark on the vial with the ▲ mark on the instrument.
4. Press the **ZERO** key of the instrument to perform the blanking.
5. Remove the BLANK vial from the meter.
6. Select one of the vials containing a Color Reference marked COLOR REF1, COLOR REF2, or COLOR REF3.
7. Place a color reference into the colorimeter ensuring proper alignment of the ▼ mark on the vial with the ▲ mark on the instrument.
8. Press the **READ/ENTER** key and then record the instrument reading.
9. Repeat steps 6 – 8 for all color references in the kit. The initial values should correspond within the stated tolerance limits. Please refer to the Specifications of the Color Reference Kit for details.

*Note: For easy reference please record the initial readings of all color references together with Lot Number and Expiry Date, colorimeter model and serial number in logbook.*

## **Part B. INSTRUCTIONS FOR QUALITY CONTROL**

1. On an instrument for which the initial values have been recorded, please perform steps 1 – 5 of Part A. Instructions for Initial Value Determination.
2. Select one of the vials containing a Color Reference marked COLOR REF1, COLOR REF2, or COLOR REF3.
3. Place a color reference into the colorimeter ensuring proper alignment of the ▼ mark on the vial with the ▲ mark on the instrument.
4. Press the READ/ENTER key and then record the current instrument reading.
5. Repeat steps 2 – 4 for all color references in the kit. The current values should correspond within the stated tolerance limits to the initial values recorded for that particular instrument.

*Note: Record the current instrument reading in a logbook together with the initial readings of all color references, Lot Number and Expiry Date, colorimeter model and serial number.*

*Note: The use of this COLOR REFERENCE KIT is valid only with the specified instruments. All these instruments are pre-calibrated during manufacture. If the instrument calibration changed during normal use, please refer to the instrument's instructions manual or contact your dealer.*

### **SPECIFICATIONS**

	<b>Test Value/Tolerance</b>	<b>Initial Reading/Date</b>
<b>Chlorine, Free</b>		
COLOR REF 1 ...	0.25 ± 0.05 ppm	.....
COLOR REF 2 ...	1.08 ± 0.09 ppm	.....
COLOR REF 3 ...	1.62 ± 0.13 ppm	.....
<b>Chlorine, Total</b>		
COLOR REF 1 ...	0.24 ± 0.05 ppm	.....
COLOR REF 2 ...	1.06 ± 0.09 ppm	.....
COLOR REF 3 ...	1.60 ± 0.13 ppm	.....
<b>Chlorine Dioxide</b>		
COLOR REF 1 ...	0.48 ± 0.10 ppm	.....
COLOR REF 2 ...	2.05 ± 0.17 ppm	.....
COLOR REF 3 ...	3.08 ± 0.25 ppm	.....
<b>Bromine</b>		
COLOR REF 1 ...	0.54 ± 0.11 ppm	.....
COLOR REF 2 ...	2.39 ± 0.20 ppm	.....
COLOR REF 3 ...	3.61 ± 0.29 ppm	.....
<b>Ozone</b>		
COLOR REF 1 ...	0.16 ± 0.04 ppm	.....
COLOR REF 2 ...	0.72 ± 0.06 ppm	.....
COLOR REF 3 ...	1.08 ± 0.09 ppm	.....

*Note: The measured values and the stated tolerances of all of the above color references are valid only on the specified instruments.*

*Note: The validity of the specifications and the expiry date are applicable only if proper storage of COLOR REFERENCE KIT and instrument used are observed. Dirty and/or scratched vials may lead to readings outside the specified range(s).*

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