

**Document Name:**

Water Testing – Colilert -18

**Approved By:**

Jennifer G. Daley Bernier, A/ Manager, Laboratory Services

Status: **APPROVED**

**PURPOSE:**

Colilert-18 detects the presence of coliforms as well as *E.coli*. The reagent powder contains the nutrient-indicators ONPG and MUG. When the ONPG is metabolized by coliforms, the sample will turn yellow. If *E.coli* is also present, MUG is metabolized and the sample fluoresces under a UV light.

**SAMPLE INFORMATION:**

Type	Water
Volume	100mL minimum
Storage Requirements	48hrs if refrigerated 2-8°C
Criteria for rejection and follow up action	>48hrs

**REAGENTS and/or MEDIA:**

Type	Colilert-18 kit by IDEXX
Storage Requirements	<ul style="list-style-type: none"> <li>Store at 2-25°C away from light</li> </ul>

**NOTE:** This is a controlled document for internal use only. Any documents appearing in paper form are not controlled and should be checked against electronic version prior to use.

<b>Document Name:</b> Water Testing – Colilert -18	<b>Document Number:</b> MIC10310	
	<b>Version No:</b> 2.0	Page: 2 of 5
	<b>Effective:</b> 12 May, 2017	

**SUPPLIES:**

- UV lamp
- Colilert Presence/Absence Comparator

**SPECIAL SAFETY PRECAUTIONS:**

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials or cultures.

- Lab gown must be worn when performing activities with potential pathogens.
- Gloves must be worn when direct skin contact with infected materials is unavoidable.
- Eye protection must be used where there is a known or potential risk of exposure to splashes.
- All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC).
- The use of needles, syringes, and other sharp objects should be strictly limited.

**QUALITY CONTROL:**

Performed per shipment or lot number

- Please refer to QC Procedure **MIC60400 Water QC**
- A TQC order is automatically generated when new kit is entered into TQC to record the QC results

<b>NOTE:</b> This is a controlled document for internal use only. Any documents appearing in paper form are not controlled and should be checked against electronic version prior to use.	
FILENAME: MIC10310WaterTestingColilert18PRO.docx	Print Date: 12/05/2017 1:22:00 PM

**PROCEDURE INSTRUCTIONS:**

Step	Action
<b>Performing Total Coliform and <i>E. coli</i> Water Testing</b>	
1	Accession waters and generate labels
2	Label requisition and sample containers
3	If HPC or Endotoxin Testing is also required – they must be performed prior to the addition of the Colilert-18 reagent
4	Pour off excess water until the volume is ~100mLs
5	Incubate at 35°C for 1 hour – write the time of day on one of the water vessels
6	Add Colilert-18 reagent powder to each water vessel – look for a blue flash – if seen this indicates excessive chlorine and the test is invalid.
7	Shake to mix well.
8	Incubate for 18-22 hrs. at 35°C (included in the 18hrs is the 1 hour pre-incubation period)
9	Compare each water sample against the Colilert Presence/Absence Comparator
10	If the sample is equally or more yellow than the comparator – it is considered POSITIVE for coliforms <ul style="list-style-type: none"> <li>• It must then be viewed under the UV light for the presence of <i>E.coli</i></li> <li>• Add <b>WKLDC</b> using the keypad while on the PACOL media line</li> </ul>
11	Results are definitive at 18-22hrs <ul style="list-style-type: none"> <li>• <b>Positives</b> observed <b>BEFORE 18hrs</b> are valid</li> <li>• <b>Negatives</b> observed <b>AFTER 22hrs</b> are valid</li> </ul>
12	See below for interpretation and reporting

**INTERPRETATION AND REPORTING:**

IF	THEN
Less yellow than comparator	Negative for Coliforms and <i>E.coli</i> (Colilert A/A) <b>Report:</b> “TOTAL COLIFORM: absent, E.COLI: absent”
Equally Yellow or Greater than comparator No UV fluorescence	Positive for Coliforms, Negative for <i>E.coli</i> (Colilert P/A) <b>Report:</b> “TOTAL COLIFORM: present, E.COLI: absent”
Equally Yellow or Greater than comparator Positive UV fluorescence	Positive for Coliforms and <i>E.coli</i> (Colilert P/P) <b>Report:</b> “TOTAL COLIFORM: present, E.COLI: present”  <ul style="list-style-type: none"> <li>* <b>Positive <i>E.coli</i> drinking water samples (with the exception of private residences) must have the result phoned to the EHO on call 867-445-8761</b></li> <li>* <b>Log the call into the Call Box</b></li> </ul>

**REFERENCES:**

- IDEXX. (2011). Colilert-18 Test Kit.

**REVISION HISTORY:**

REVISION	DATE	Description of Change	REQUESTED BY
1.0	31Dec2013	Initial Release	A.Darrach
1.1	31Mar2016	Reviewed – Minor Formatting Changes	C. Russell
2.0	12-May-2017	Reviewed and revised; Reagent storage requirements added; Formatted for new header; New document number assigned (old number MIC52630)	L. Steven

**Document Name:**  
Water Testing – Colilert -18

**Document Number:** MIC10310

**Version No:** 2.0

Page: 5 of 5

**Effective:** 12 May, 2017

 Invalid signature

X 

---

Jennifer G. Daley Bernier, R.T. (CSMLS)  
A/ Manager, Laboratory Services  
Signed by: Jennifer G. Daley Bernier

**NOTE:** This is a controlled document for internal use only. Any documents appearing in paper form are not controlled and should be checked against electronic version prior to use.

FILENAME: MIC10310WaterTestingColilert18PRO.docx

Print Date: 12/05/2017 1:22:00 PM