

Document Number: MIC10310	
Version No: 2.0	Page: 1 of 4
Distribution: Microbiology Specimen Processing	
Effective: 12 May, 2017	
Date Reviewed: 12 May, 2017	
Next Review: 12 May, 2019	
Status: APPROVED	

Document Name:
Water Testing – Colilert -18

Approved By:
Jennifer G. Daley Bernier, A/ Manager, Laboratory Services

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"> Store at 2-25°C away from light

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.

Document Name: Water Testing – Colilert -18	Document Number: MIC10310	
	Version No: 2.0	Page: 2 of 4
	Effective: 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

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: 01/08/2017 9:19:00 AM

PROCEDURE INSTRUCTIONS:

Step	Action
Performing Total Coliform and <i>E. coli</i> Water Testing	
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"> • It must then be viewed under the UV light for the presence of <i>E.coli</i> • Add WKLDC using the keypad while on the PACOL media line
11	Results are definitive at 18-22hrs <ul style="list-style-type: none"> • Positives observed BEFORE 18hrs are valid • Negatives observed AFTER 22hrs are valid
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) Report: “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) Report: “TOTAL COLIFORM: present, E.COLI: absent” * Positive TOTAL COLIFORM drinking water samples (with the exception of private residences) must have the result phoned to the EHO on call 867-445-8761 * Log the call into the Call Box
Equally Yellow or Greater than comparator Positive UV fluorescence	Positive for Coliforms and <i>E.coli</i> (Colilert P/P) Report: “TOTAL COLIFORM: present, E.COLI: present” * 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 * Log the call into the Call Box

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
30	19-Jul-2017	Added call notification for water samples positive for Total Coliforms	L. Steven

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.