**SAMPLE REQUIREMENTS FOR THE DETECTION AND QUANTIFICATION OF MICRO-ORGANISMS USING THE COLILERT-18 TEST**

**Introduction**

Colilert-18 simultaneously detects total coliforms and *Escherichia coli* in water. It is based on IDEXX’s proprietary Defined Substrate Technology (DST). When total or faecal coliforms metabolize Colilert-18’s DST nutrient-indicator, ONPG, the sample turns yellow. When E. coli metabolize Colilert-18’s DST nutrient-indicator, MUG, the sample also fluoresces. Colilert-18 can simultaneously detect these bacteria at 1 cfu/100 mL within 18 hours even with as many as 2 million heterotrophic bacteria per 100 mL present.

**Scope**

This Standard Operating Procedure (SOP) describes the sample requirements and preparation for detection of the presence/absence of Total coliforms; faecal coliforms and *Escherichia coli* and for quantification of these organisms.

**Sample submission arrangements**

* Samples will only be accepted from Monday to Thursday.
* Please submit samples by latest 11:00 am for same day analysis and to obtain the results the following day.
* Please arrange for analysis prior to submitting samples by sending an email to jcolling@sun.ac.za and vmoonsamy@sun.ac.za.

**Sampling for Biological Contaminants**

* At least 500 mL sample (e.g. drinking water) is required for analysis.
* If possible, samples must be sent to the laboratory on the day of collection or shipped on an overnight delivery (<24h after sampling).
* Collect samples in clean sterile or boiled glass/plastic bottles with a lid, which are clearly labelled. Keep the container closed until it will be filled.
* Do not rinse bottles with sample before collection.
* Take care not to contaminate the inside and cap of the bottle when collecting your sample.
* Fill the sample bottle, leaving one inch headspace.
* Cap bottle immediately and place in a cooler box with ice (<4°C, do not freeze) for delivery to the laboratory.
* Remember to fill in and send the BIOGRIP\_Colilert-18 sample submission template to jcolling@sun.ac.za and vmoonsamy@sun.ac.za which can be found on our [website](http://www.sun.ac.za/english/faculty/science/CAF/Pages/BIOGRIP%20Sample-Requirements.aspx).