



# ZiP Water and Environmental Testing

Water quality and environmental testing for infectious agents and markers of sewage or faecal contamination can be important tools for the management of waterways, sewage flows, stormwater and urban infrastructure. When a water source is identified or is thought to be contaminated, operations are undertaken to decontaminate the water. These expensive and laborious operations can be more efficient when guided by spatially-precise real-time testing.

The ZiP-P2 water and environmental test system (test and instrument platform) provides a portable and deployable solution to current centralised laboratory testing that delays responses. The system utilises rapid (10-20 mins), high sensitivity molecular diagnostic detection of amplified DNA and RNA that is comparable to PCR. The system is intended for field testing and enables directed sampling, source trace investigations and rapid response.

## ZiP Water and Environmental Test Kits

ZiP water and environmental tests kits are supplied as single-use packages that are suitable for room-temperature storage. The current test menu includes:

- *Bacteroides dorei* – in supply
- *E. coli* – in supply
- *Giardia* – scheduled for release
- *Cryptosporidium* – scheduled for release



## ZiP-P2 Instrument & External Quality Controls

- Tests are performed on the ZiP-P2 instrument. Operation is easy and intended for minimally trained operators.
- The instrument has quality control systems that include self-tests and at-the-time-of-use verification of test materials using external quality control materials.



ZiP-P2 Portable Instrument



Test Cartridge Package,  
Room Temperature Storage



External Quality Control Material

## Intended Use

The ZiP water and environmental test system allows field operations teams to undertake high quality molecular testing of water sources on-site, with minimal sample processing steps and rapid time-to-result (10-20 minutes). This removes the requirement for centralised laboratories, associated costs and time-delays.

## Semi-Quantitative Test Results

Test results are provided in a semi-quantitative format. A positive or negative result is reported alongside the relative level of target analyte in the sample (Figure 1, Not Detected to High). When utilising spatial and temporal sampling strategies, this enables field operation teams to:

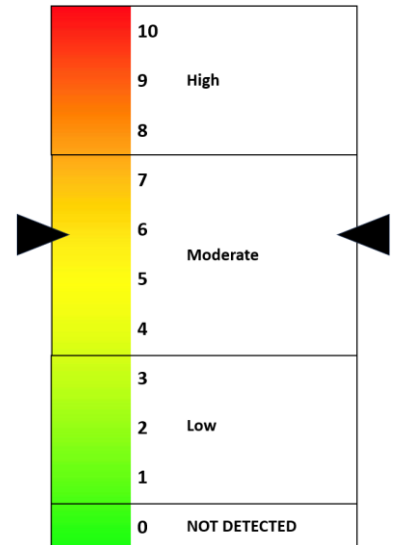
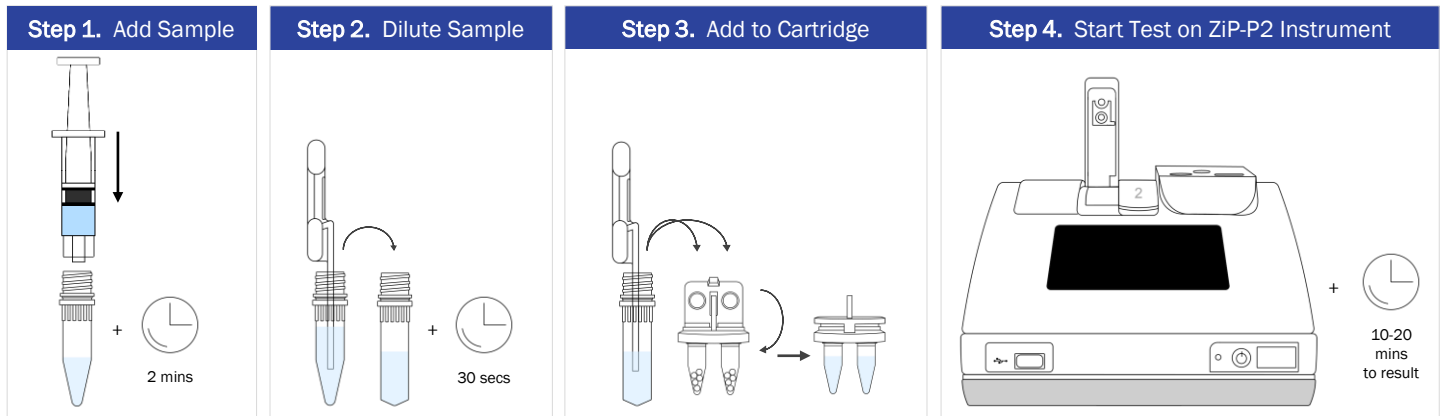
1. Track the extent and range of contamination.
2. Use semi-quantitative outputs to guide source investigations.
3. Verify and report the impact of mitigations.

## QMS, Instrument Check and QC

The ZiP water and environmental test system supports self-test and QC (Quality Control) workflows to confirm correct operation of instruments and reagents. ZIP supports critical supplier information for QMS processes including ISO-13485 certification and supply agreement.

## Simple Workflow

The ZiP water and environmental test system provides a simple self-contained 20-minute test workflow for up to 2 tests.



**Figure 1.**  
Semi-Quantitative Result Reporting Example

## Ordering Information

Product Code	Product Name
<b>ZiP Water and Environmental Tests – suitable for 10 tests</b>	
P003646	ZiP-Bactx-P2 ( <i>Bacteroides dorei</i> Test)
P003765	ZiP-E.Coli-P2 ( <i>E. Coli</i> Test)
<b>External Quality Control Materials – suitable for 5 tests</b>	
P003711	ZiP-Bactx Positive Control Kit
P003766	ZiP-E.Coli Positive Control Kit
<b>Instrument and Peripherals</b>	
P002736	ZiP-P2 Instrument
P002951	External Barcode Scanner
P002941	ZiP-DEMO-P2 Training Box

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Laboratory Equipment Safety,  
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