



IDEXX

Introducing IDEXX Tecta

Understanding the IDEXX Tecta system



01

The Benefits of
Automation



02

The IDEXX
Tecta System



03

Easy to Use



04

When is Tecta
Right for Your
Operation?

IDEXX Tecta

- U.S. EPA approval
- The only **rapid, automated** testing system with U.S. EPA approval
- Anywhere, anytime, by anyone





Benefits of automation

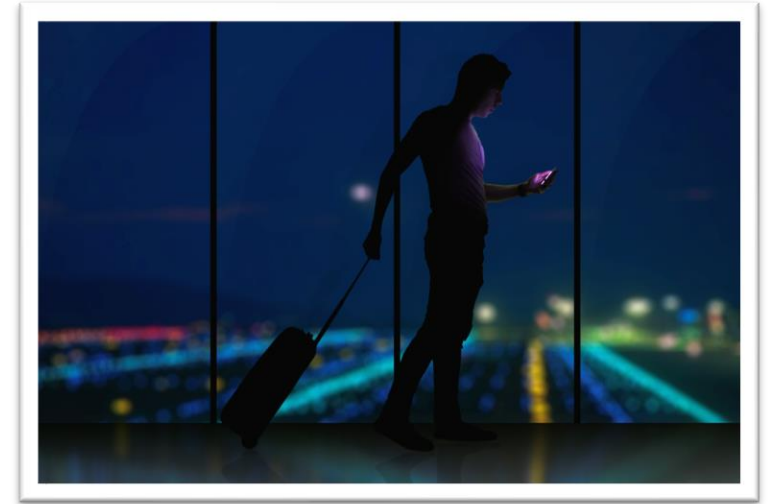
Automation introduces flexibility to your workflow



Start a test at **anytime**

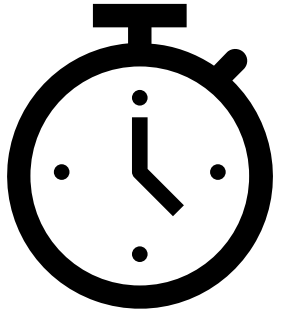


Tecta can be operated by **anyone**



Test **anywhere**

Faster test results



Results within 2-18 hours depending on the level of bacteria in the sample, with email reporting at the time of detection.



Automated reading and reporting of results

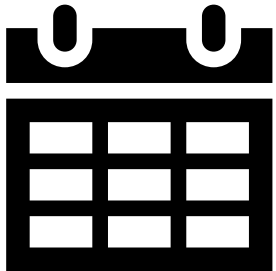


The reading and reporting of results is automated with Tecta. Samples are continuously read during the incubation period, with a positive or negative result sent immediately by email.

No visual reading of results: Remove human error, inconclusive results, and staffing/scheduling challenges.



Unlock greater productivity



Test anytime: Tecta enables Fridays, off-hours, and weekend testing.

Once tests are started, no need to come into the lab to perform visual analysis, write report, and communicate results.





The IDEXX Tecta System

Key elements of the Tecta system

- ✓ Instrument and test cartridges
- ✓ Broad menu of test and water types
- ✓ Enzymatic test method – signal extracted to polymer probe
- ✓ U.S. EPA approval (P/A testing)
- ✓ Secure data management



The Tecta System

The Instruments



The Cartridges

1. Total Coliforms and *E. coli*
2. Rapid *E. coli*
3. *Enterococcus*
4. Fecal Coliforms



Two Tecta instruments (different throughput capacity)



Tecta B16

16 concurrent tests



Conduct different test types simultaneously



Tecta B4



4 concurrent tests



Smaller footprint ideal for mobile or remote testing



A dynamic range of <1 to 10^8 CFU / 100 mL for an undiluted sample

Tectalert test cartridges



Sample ID, Lot # and Test Type Label

Tamper-proof closure

Sterile evidence closure

Embossed 100 mL fill line

Polypropylene bottle

Granular reagents & sodium thiosulfate

Polymer probe co-molded to bottle



Four types of Tectalert tests

1

- *E. coli* and total coliforms
- 35.0°C incubation
- EPA approved for drinking water*

**Tectalert EC/TC
(CCA)**

2

- *E. coli*
- 41.5°C incubation
- 16 hours

**Tectalert EC
(ECA)**

3

- Fecal coliforms
- 44.5°C incubation

**Tectalert FC
(FCA)**

4

- *Enterococcus*
- 41.5°C incubation

**Tectalert ENT
(ENA)**

*U.S. EPA approval

The Tecta system can test three water types



Treated drinking
water

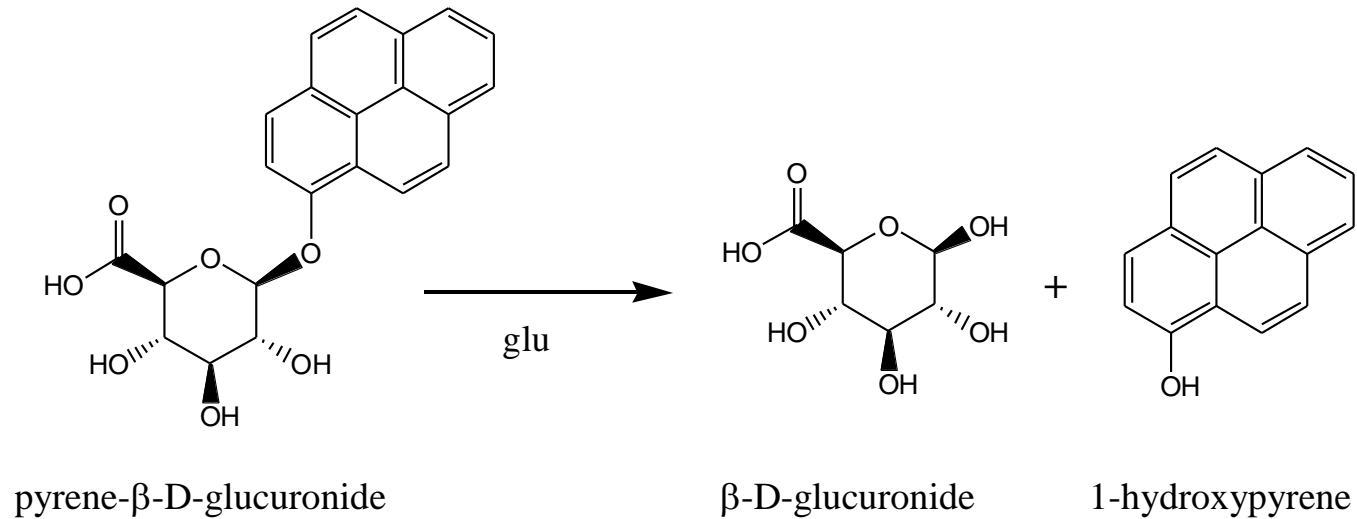


Ambient water
(surface, source,
recreational)



Wastewater

Enzymatic test method



- Same indicator enzymes as other IDEXX methods
- Hydrophobic and fluorescent markers are 'extracted' from the sample and migrate through the polymer partition
- Automated detection and notification of positive results

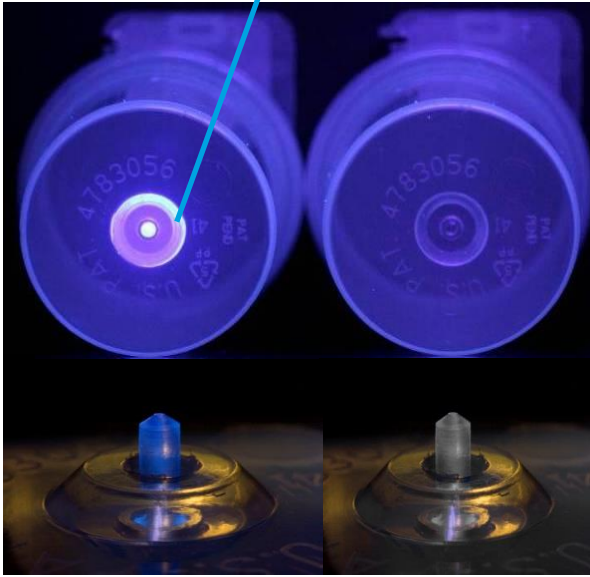


Tectalert polymer probe concentrates the fluorescent signal

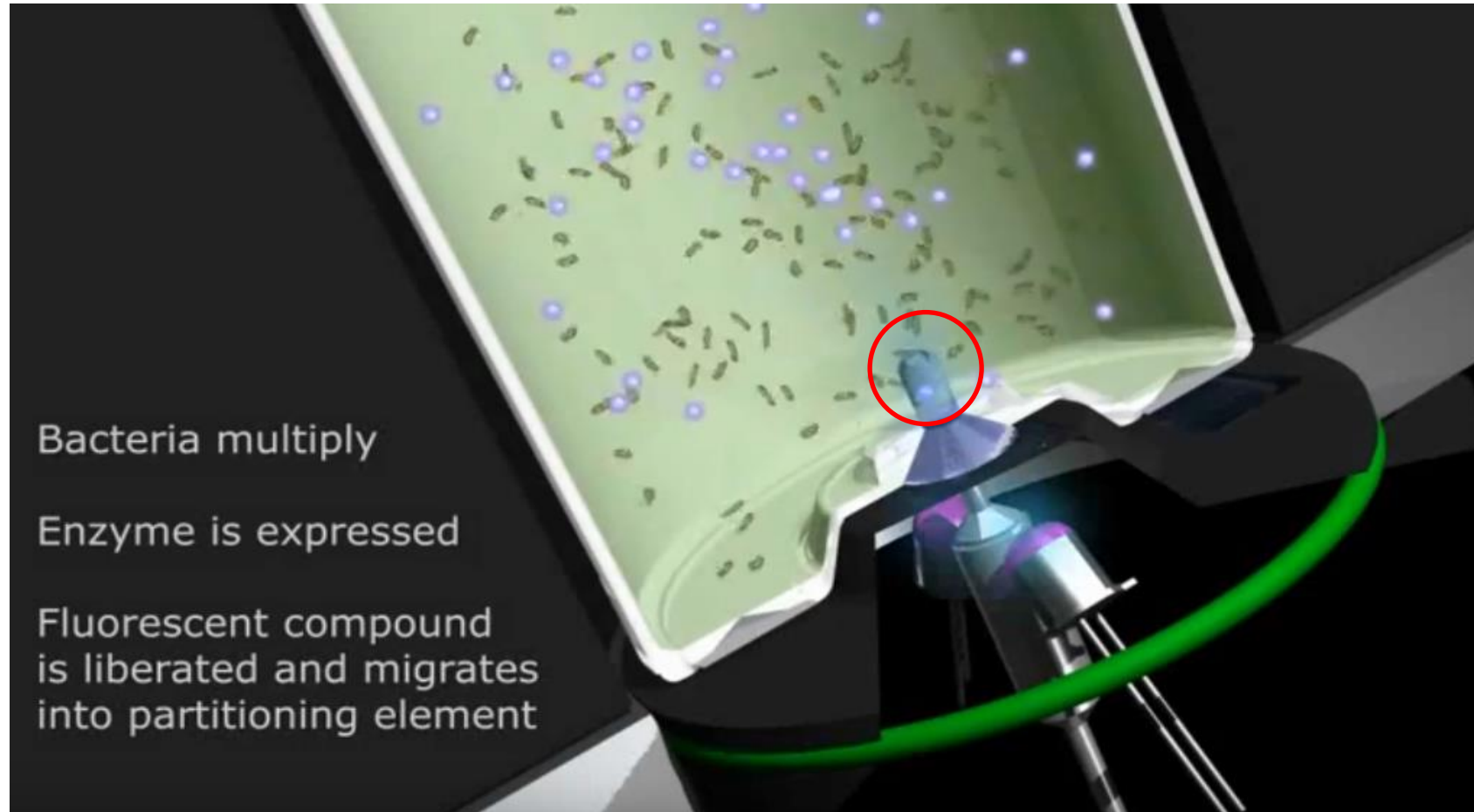


Extracting fluorescent markers outside of sample into polymer

Detection of fluorescence in polymer probe triggers the result



Patented polymer partition technology concentrates the fluorescent markers



Signal extraction reduces visual interference



Automate detection eliminates human interpretation



Sample color and turbidity do not impact test results

Dilute marine samples 1:10 for *E. coli* and enterococcus testing
(instrument will automatically adjust report for dilution factor)

U.S. EPA approval for drinking water P/A testing

“TECTA EC/TC Method” Approved by the U.S. EPA and published in the Federal Register on June 19, 2014, and updated on March 20, 2017

Approvals:

- Total Coliform Rule
- Revised Total Coliform Rule
- Groundwater Rule

Method Format:

- *E. coli* & total coliform presence/absence: 100 mL



[FR Doc. 2017-14940 Filed 7-26-17; 8:45 am]

BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION
AGENCY**

40 CFR Part 141

[EPA-HQ-OW-2017-0284; FRL-9964-78-OW]

Expedited Approval of Alternative Test Procedures for the Analysis of Contaminants Under the Safe Drinking Water Act; Analysis and Sampling Procedures

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

Results are available as both P/A and quantification

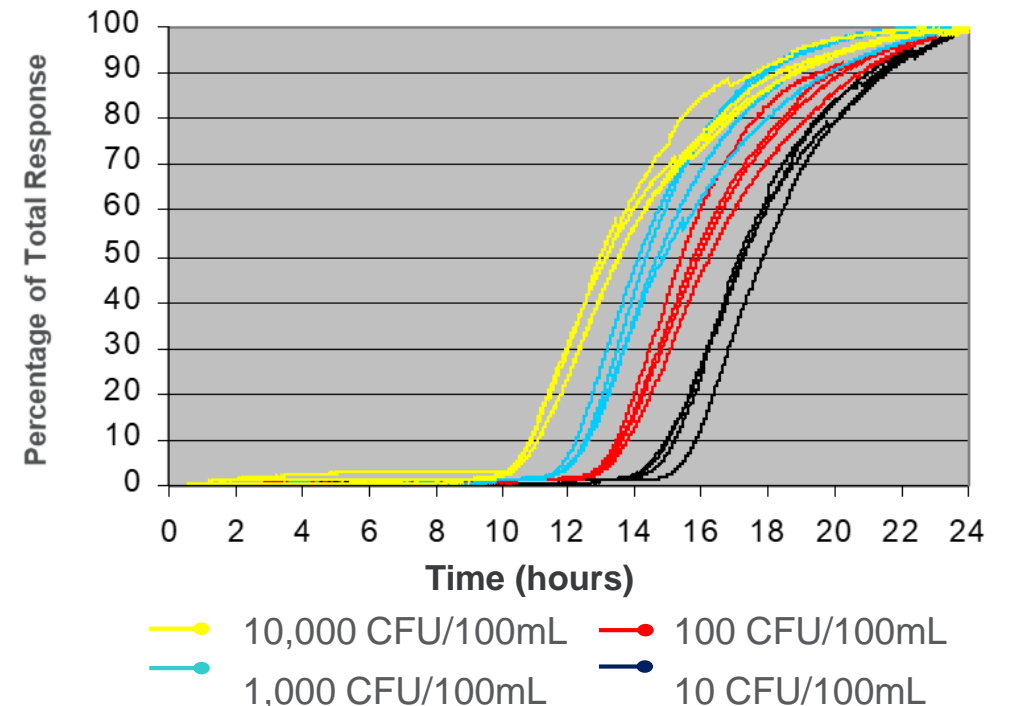
Presence/Absence

- U.S. EPA approval (TC/EC in drinking water)
- Any signal indicates target bacteria growth
- TC/EC tests provides simultaneous detection of *E. coli* and total coliforms in one test cartridge



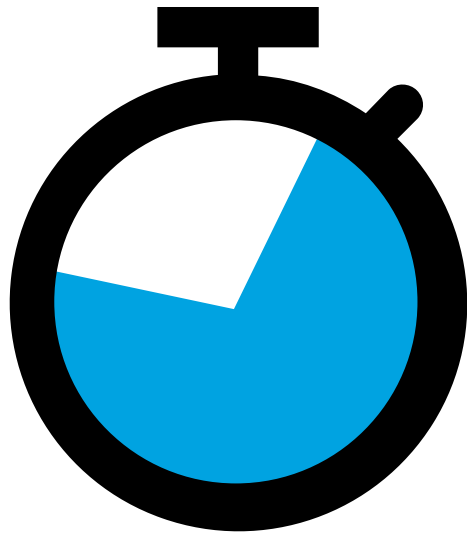
Quantification

- Signal onset provides time to detection (TTD)
- TTD statistically related to bacteria count

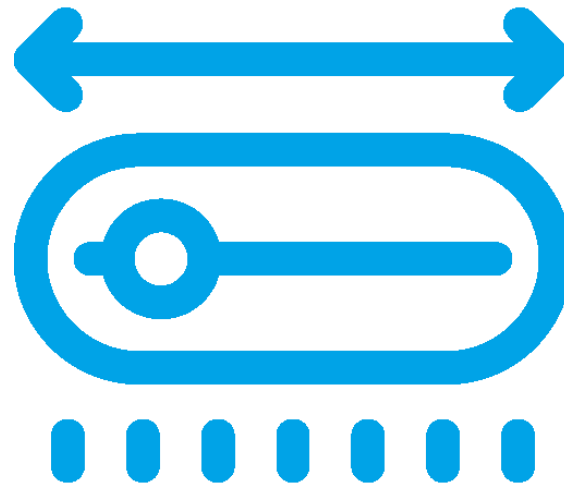


Advantages of continuous monitoring with Tecta

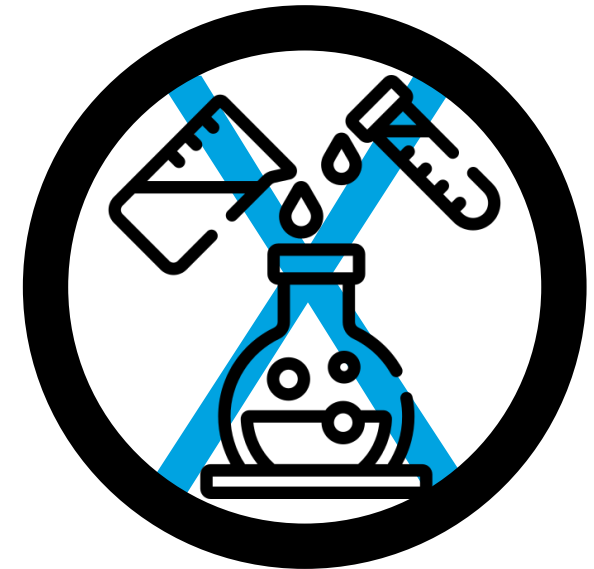
Total coliform and *E. coli* results available between **2 to 18 hours**



Quantitation range from **1 CFU/100mL** to **10⁸ CFU/100mL**



No dilutions required for most samples if results are under **10⁸ CFU/100mL**

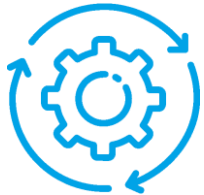


Secure and convenient data management

- Objective test report filed and secured for all samples
- Reports can be saved to USB or emailed with a CSV attachment



100% Objective



Automated



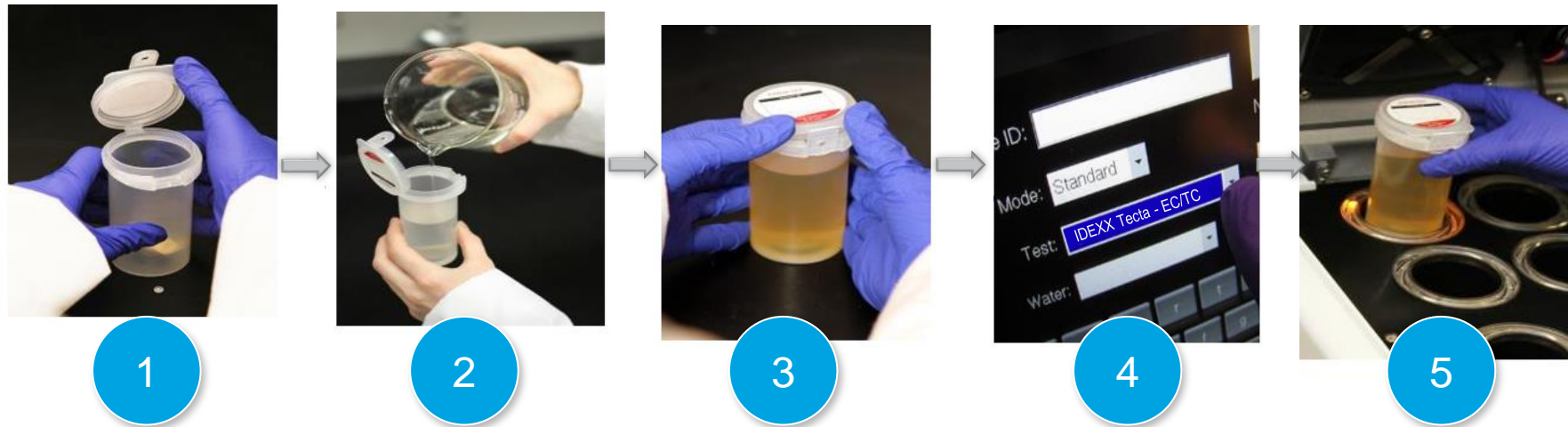
Secure





Easy to use

Simple, fast, and easy



**Easiest and fastest method available to conduct a test by
anyone, anywhere, at any time**

New test menu requires just a few inputs to start testing

- 1) Enter Sample ID
- 2) Select Test Cartridge Type
- 3) Select the Water Type

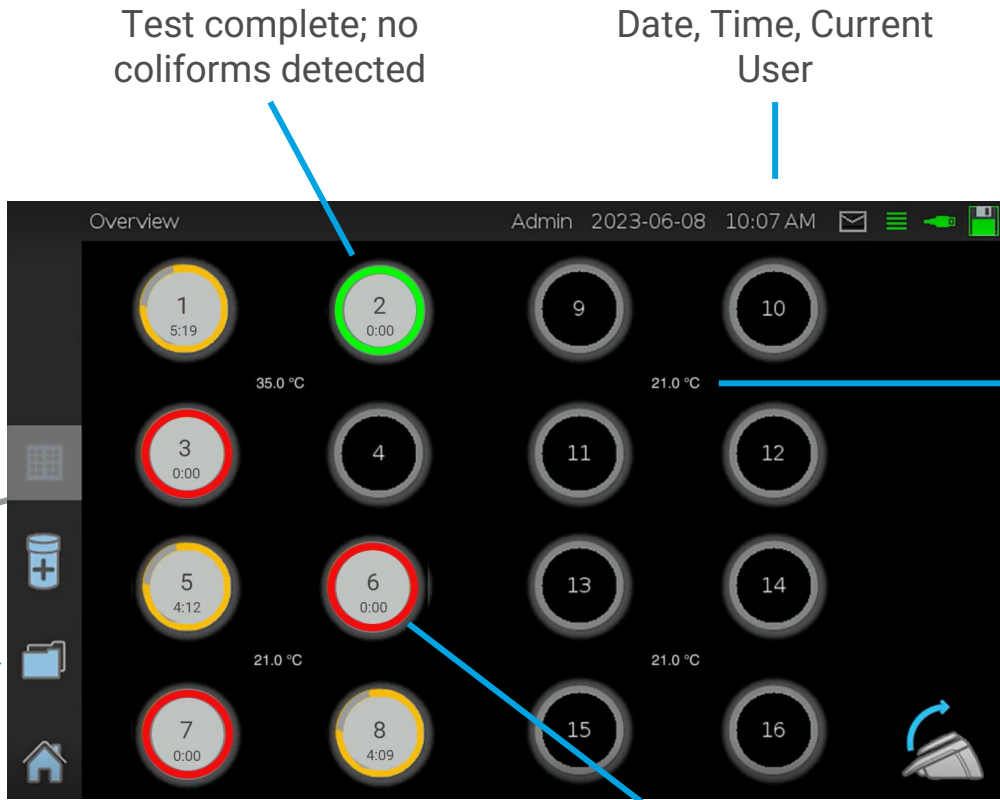
The screenshot displays the IDEXX test menu interface on a handheld device. The screen is dark with white text and input fields. Three steps are highlighted with blue circles:

- 1) Enter Sample ID: A text input field for the sample ID.
- 2) Select Test Cartridge Type: A dropdown menu showing "IDEXX Tecta -EC/TC".
- 3) Select the Water Type: A dropdown menu showing "Drinking".

Other visible elements include:

- A numeric keypad (1-16) on the right side.
- A keyboard at the bottom of the screen.
- Buttons for "Reset", "Remove All", and "Add" on the right side.
- A "Location" dropdown menu with a "New" input field and a "+" button.
- A "Sample Size" dropdown menu showing "100" and "ml".
- A "Mode" dropdown menu showing "Standard".
- A "Water" dropdown menu showing "Drinking".
- A "Sample ID" input field.
- A "Location" dropdown menu.
- A "New" input field with a "+" button.
- A "Sample Size" dropdown menu showing "100" and "ml".
- A "Mode" dropdown menu showing "Standard".
- A "Water" dropdown menu showing "Drinking".
- A "Reset" button.
- A "Remove All" button.
- An "Add" button.

Simple user interface



Test complete; no coliforms detected

Date, Time, Current User

Instrument sub-system status symbols

Estimated water temperature, displayed in four positions

Main icons

Test complete; coliforms detected

Test in progress; results not yet indicated

Test reports include comprehensive test information

Subject: ***Complete: Chamber1Task CCA/EC Present; TC Present

TECTA-B16 (2.2.3) Report

Sample ID: Raw Water

Collection Time: 2019-04-18 17:53:50

Stored: Unknown

Location: 001

Test Start Time: 2019-04-18 17:53:50

Target Temperature (C): 35.3

Actual Temperature (C): 35.41 @ 3:00 | 35.29 @ 9:00 |

Data File: XPDS00277.2019-04-18_17.53.50_Chamber1_TIME.pds

Build: 22320150304

Test Result: TECTA-CCA-EC/TC

E. coli Result: **Present**

EC Detect Time: 12h31m27s || Quantity: 1CFU/100 ml

[EC-35.5 Default Calibration rev. 1.0]

Total Coliform Result: **Present**

Total Coliform Detect Time: 12h26m19s || Quantity: 33CFU/100 ml

[TC-35.5 Default Calibration rev. 2.0]

XPDS00340.2019-12-11_16.46.06_Chamber1_r... (2K)

Sample ID and details

Incubation temperature

Automatic temperature records

Test type selected

Presence / absence

Detection time and quantity of cells

CSV attachment



When is Tecta the right solution
for your operation?

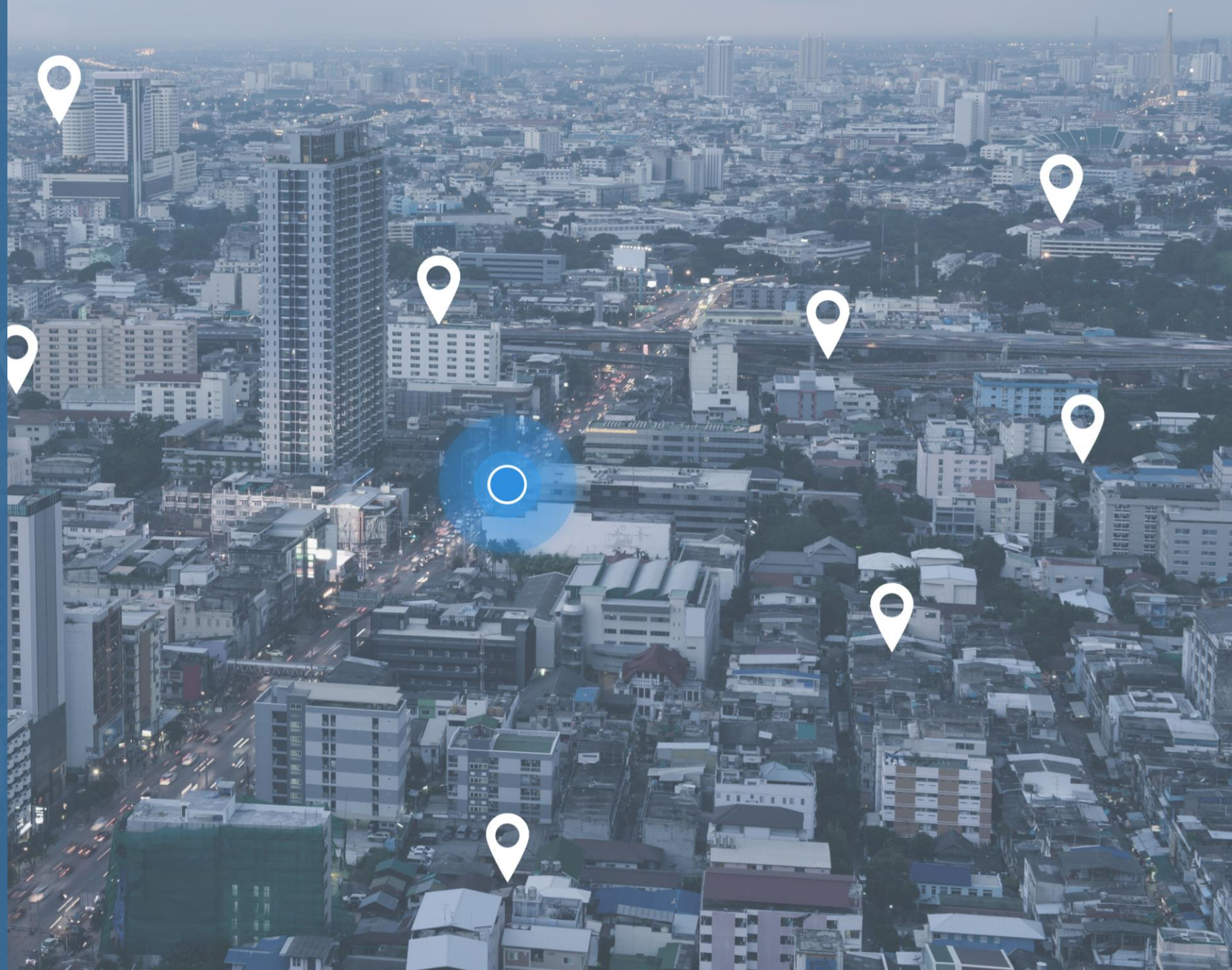
Construction testing
or emergency
samples (water main
break, boil water
notice, etc.)





Evening, weekend,
and holiday testing

At remote or satellite
locations to reduce
sample transport
time





Operational testing
at the treatment
plant

On-site testing of
recreational water
such as beaches or
lakes





Sick days,
retirements, and
other staffing
challenges

Hard-to-reach
locations such as
mines, military
bases, or cruise
ships





Thank you



Appendix

General Tour Video



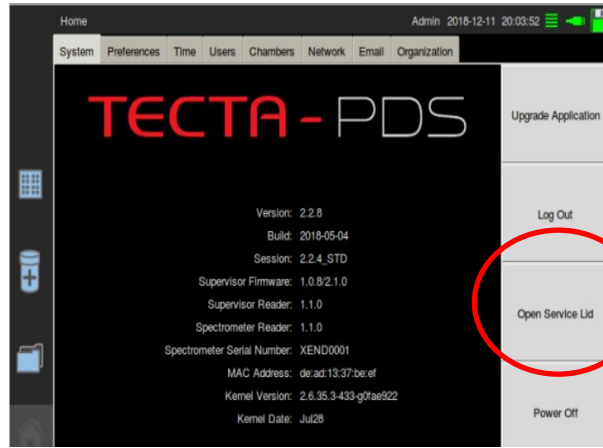
Preparing A Test Video



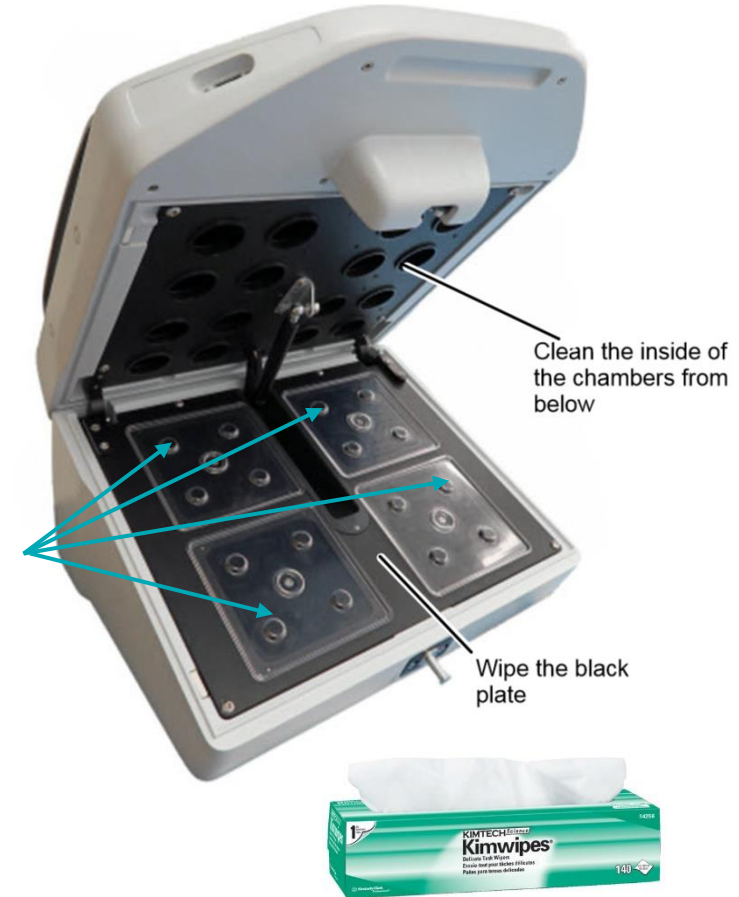
How It Works Video



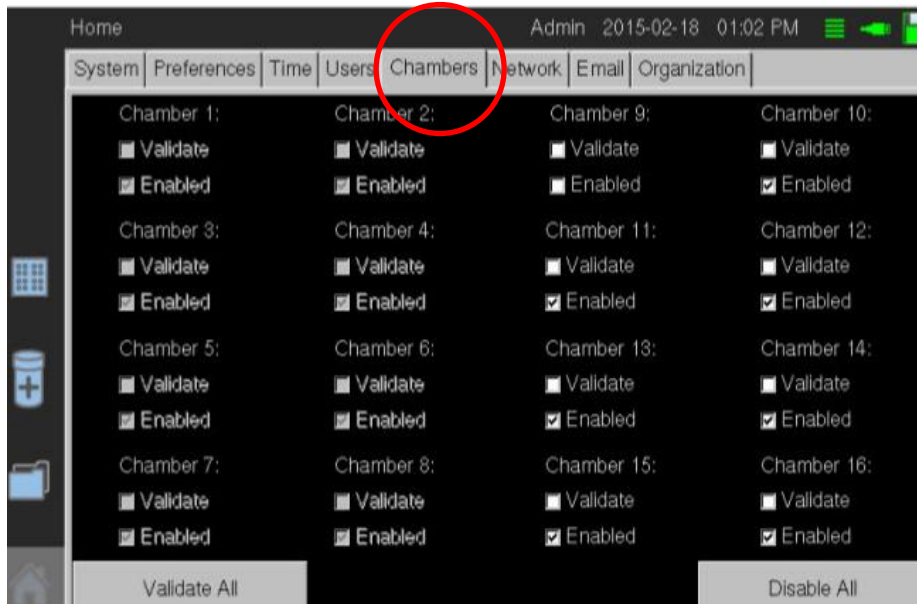
Easy Cleaning to Maintain



- Open service lid
- Clean the 4 optical cover plates & nubs with non-bleach disinfection wipes and dry with Kimwipes



Optical Validation QC



Pass



Fail



Chamber Disabled

- Once/month or once/week if heavy user. 20 minutes to validate all 16 chambers.
- Pass/Fail result based on built-in QC parameters (delta offset & peak delta %).
- Failed chamber optical validation usually indicates cleaning of the plastic optical cover plate is needed. Then re-validate.

Easy Maintenance & QC

Recommended Maintenance and Service Schedules

The following are recommended maintenance and service schedules for your TECTA instrument. Lab practices may dictate different intervals or activities.

Maintenance Activity	Recommended Interval
Cleaning / Disinfection	1 week or immediately after spills.
Optical Validation	1 month or more frequently if use and cleaning is more frequent
Optical Covers (B4 and B16 Rev.2 instruments only)	2 years (if required)
Thermal Validation (WI-056)	1 year or as dictated by lab practices

Easy Navigation and USB Connectivity

- 2 USB ports to connect devices.
- Can use finger, stylist, mouse, bar-code reader, and keyboard to navigate the touchscreen and enter data.



Minimal Lab Space Required

TECTA-B16 Size:

Height:	347 mm / 14 inches
Maximum height (open for cleaning):	628 mm / 25 inches
Width:	480 mm / 19 inches
Depth (front to back):	623 mm / 25 inches

TECTA-B4 Size:

Height:	275 mm / 11 inches
Maximum height (open for cleaning):	525 mm / 21 inches
Width:	305 mm / 12 inches
Depth (front to back):	486 mm / 18 inches