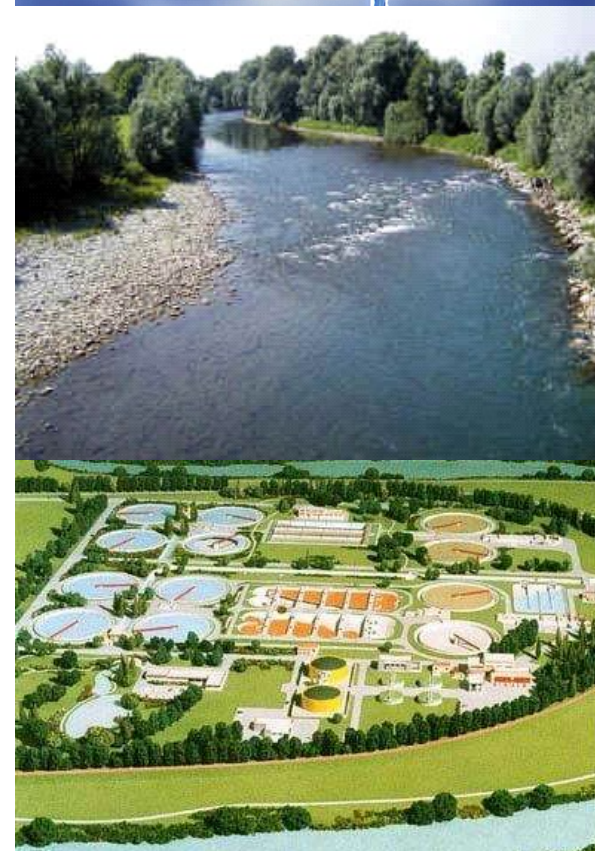# TECHNICAL DATA

MEASURING PRINCIPLE	Colorimetric (Total & Faecal Coliforms) and Fluorometric (*E. coli*)
MEASUREMENT TYPE	Fully automated, direct read, on-line discrete analyser for Presence / Absence (P/A), Time To Detect (TTD) and Multiple Tube Fermentation (MTF)
MEASUREMENT SENSITIVITY	1 CFU / 100 mL (P/A) 1.8 – 1,250 up to 17,500 MPN / 100 mL (MTF) Other measurement ranges are programmable, according to the expected concentrations and the analytical frequency
MTF MEASUREMENT FREQUENCY	Up to 12 samples / day (Range depending on customer set-up)
MTF MEASUREMENT TIME	3-18 hours depending on TC, FC and / or EC concentration
MEASURING POINTS	One, multipoint as option
OPERATOR INTERFACE	Colour graphic touch-screen 15" display
OUTPUT SIGNAL AND COMMUNICATION	Ethernet and RS232 outputs; RS485, 4-20 mA analog and digital alarm outputs as option
INPUT SIGNALS	Analysis**:** 1 digital contact with photocoupler, galvanically isolated
DIGITAL OUTPUTS	Coliform presence: 3 potential free switch SPDT General: 1 potential free switch SPDT; max load 24 AC DC 0.5 A
ALARM MESSAGES	On operator interface, Ethernet and RS-232
SAMPLE DELIVERY	Pressure: atmospheric Temperature: 10 – 35 °C Sample volume: 100 mL per analysis Sample connection: Standard silicone 2 x 4, others on request
REAGENTS	Colilert®–18, a registered trademark of IDEXX
NUMBER OF REAGENT BOTTLES	MTF version: 28, 100 mL volume each, on automatic rotating circular tray; only P/A & TTD version: up to 56
MTF DETERMINATION CUVETTES	80, 0.75 mL each on rotating circular plate
UNATTENDED TIME OF OPERATION	Depending on measurement range and frequency, minimum one month for MTF measurements
OPERATING TEMPERATURE	10 – 35 °C (Reagents up to 25°C)
MOUNTING	Stand-alone industrial cabinet
PROTECTION	IP 55
HARDWARE	Industrial PC panel with touch screen graphic display
POWER SUPPLY	12/24 Vdc; external power supply from 110/220 Vac to 12/24 Vdc included in the scope of delivery
POWER ABSORPTION	200 W
WEIGHT	30 Kg (only Analytical Platform); 100 Kg Shelter & Power Supply
DIMENSIONS	190 (H) x 80 (W) x 50 (D) cm

Subject to change without notice

EASYCHEM COLI ONLINE

PRESENCE / ABSENCE
TIME TO DETECT AND
MULTIPLE TUBE FERMENTATION
ANALYZER FOR ON LINE DETECTION OF
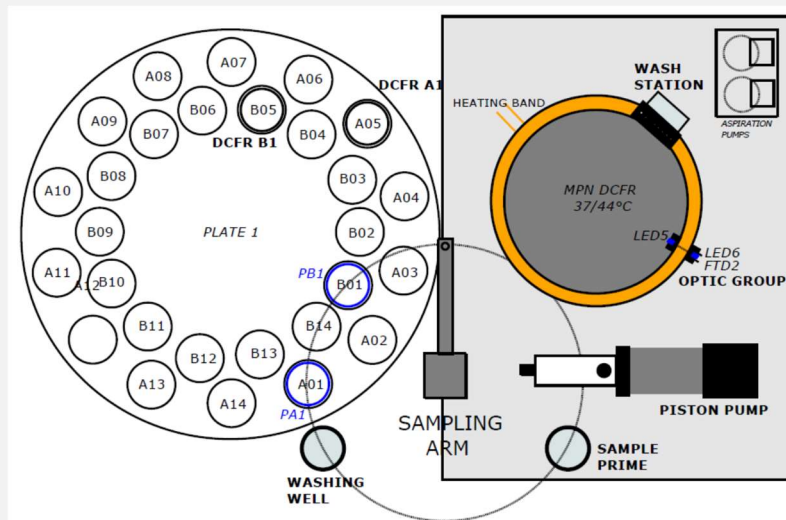TOTAL COLIFORMS, *ESCHERICHIA COLI*
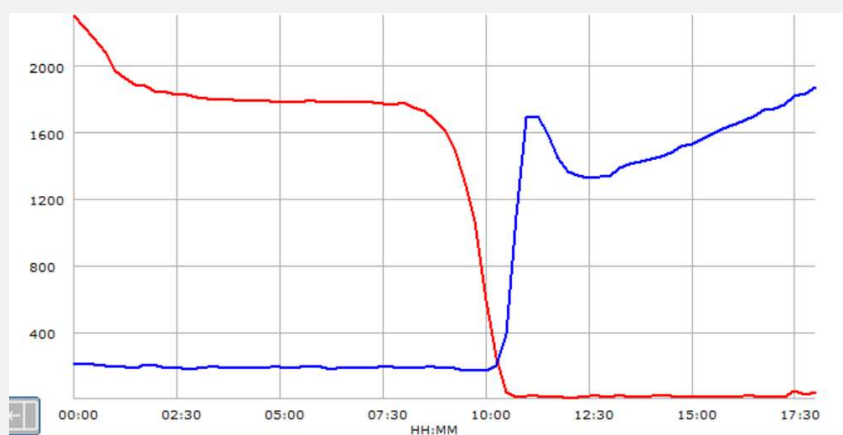AND FAECAL COLIFORMS IN WATER

COLILERT®-18 TEST

AUTOMATED STATISTICAL DETERMINATION

- **TC** and **EC** or **FC** are detected by **P/A** (Presence / Absence) and **TTD** (Time To Detect) tests that can be combined with **MTF** (Multiple Tube Fermentation) quantification, with frequency adjustable to meet customer's needs.
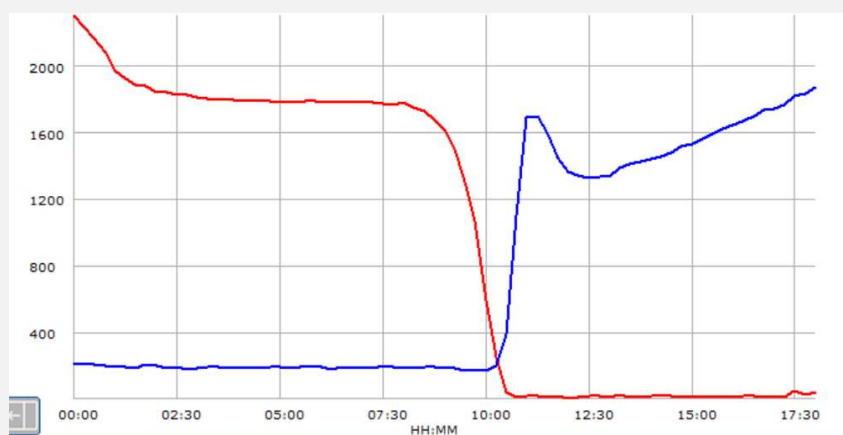
COLILERT®-18 APPROVED BY

- ISO 9308-2:2012 (EU)
- HJ 347.2-2018 (China)
- SM 9223 B-2004 (USEPA)-

COLORIMETRY   FLUORESCENCE

COMBINED COLORIMETRIC AND FLUOROMETRIC DETECTORS

- Presence of Total and Faecal Coliforms is detected by variation of the colour of the sample solution, while *E. coli* by light excitation at specific UV wavelength and related fluorometric emission.
- **TC / EC** at 35–37 ± 0.5 °C
- **FC** at 44.5 ± 0.5 °C.

ANALYTICAL PREPARATION

- Open the COLILERT®-18 blisters and pour the reaction powder inside the 100 mL vessels given with Easychem coli test kit.
- Close the bottles using a silicone membrane and specially perforated caps provided as standard accessories and place them inside the sample carousel.
- At the end of each batch measurement session, the 28 (or 56) bottles shall be manually removed from the analyser and properly disposed.
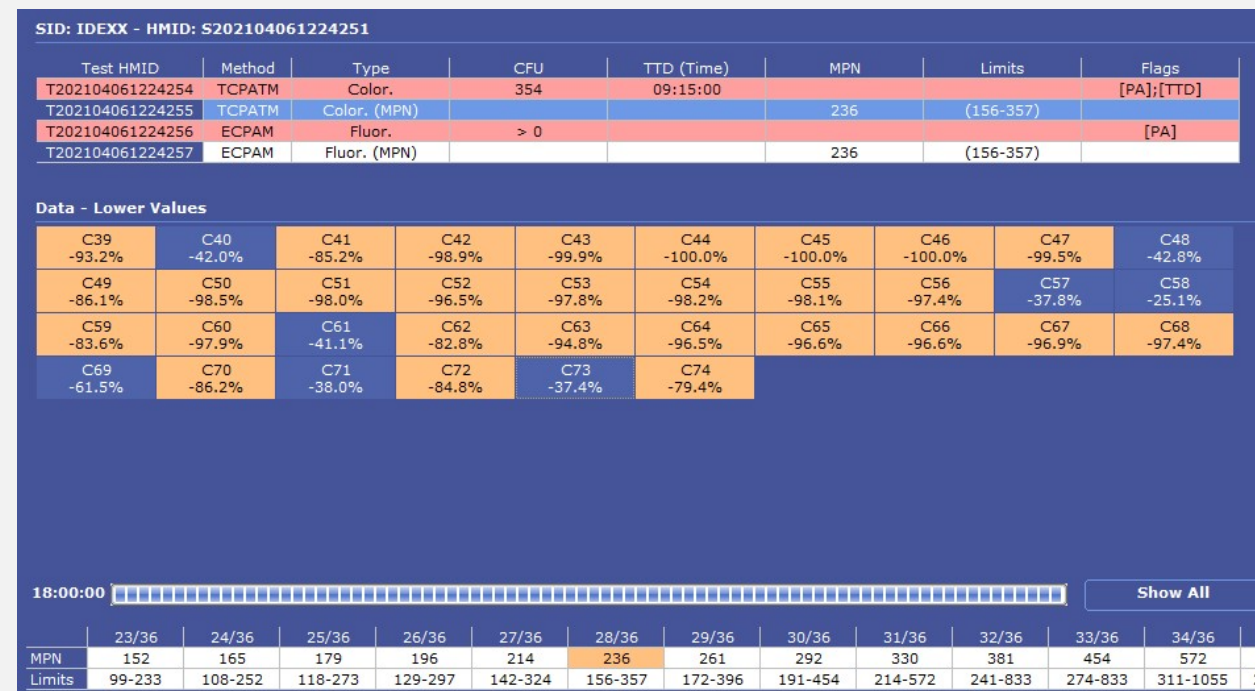
SELECTABLE TECHNIQUES

- Presence/Absence (P/A).
- Time To Detect (TTD) using Most Probable Number (MPN).
- Multiple Tube Fermentation (MTF) using Most Probable Number (MPN).

AVAILABLE MODELS

- Full P/A (TC+EC or FC) combined with TTD (TC or FC) – 56 sample positions (100 mL)
- P/A (TC+EC or FC), TTD (TC or FC) – 28 sample positions (100 mL) plus MTF (TC+EC or FC)
- Full MTF (TC+EC or FC) – 1 to 12 simultaneous samples, according to requested range.

EASYCHEM COLI ONLINE ANALYZER

TOUCH SCREEN DISPLAY

FEATURES/BENEFITS

- Up to 60 days unattended autonomy for **MTF** detection
- Up to 56 samples autonomy with automated **P/A** detection
- **MTF** detection by selectable measurement ranges
- **TTD** event detection for **TC** and/or **FC**
- Automated cuvette sterilisation ensuring long term use
- Automated generation of local and remote alarms through Ethernet or optional GPRS/3G remote connection
- Long term unattended operation

EASY TO INSTALL

- Delivered only after a successful final test.
- Provided ready for installation, with a spare set for start-up operations.

MAIN APPLICATION FOR BACTERIA DETECTION

- Water Treatment Plants (Drinking Water)
- Surface Waters (Environmental and Bathing Water)
- Wastewater Treatment Plants (Influents and Effluents)

ROBUST AND RELIABLE

- Designed for industrial and environmental online applications
- Ensures the highest level of robustness in the electronics, mechanics and hydraulics components.

COMPARING EASYCHEM COLI WITH QUANTITRAY

- A log comparison between norm-referenced manual test Quantitray® 2000 and the automated analysis executed with Easychem coli is shown on the left.