

# AlgaPro TE300

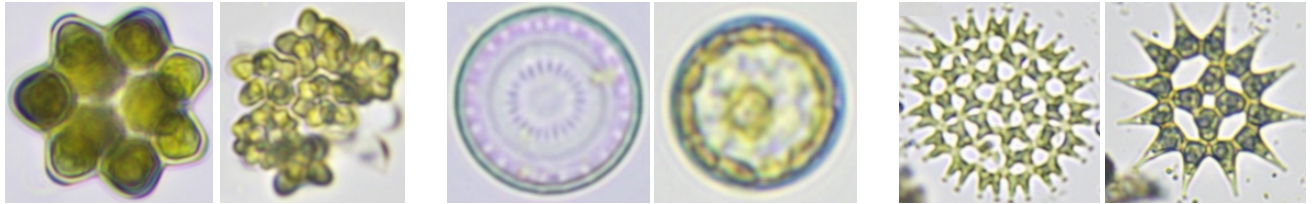


## AI Water Quality Intelligence

The AlgaPro TE300 is an AI-powered intelligent plankton monitoring system that combines automated microscopy, high-resolution imaging, and deep-learning recognition technology to identify, classify, and count plankton efficiently. With automatic objective switching, panoramic scanning, and intelligent data analysis, it provides accurate and streamlined monitoring for laboratory-based water quality and plankton research applications.

## Automatic Intelligent Detection

With automatic objective switching between multiple magnifications and multi-depth capabilities, AlgaPro TE300 enables efficient monitoring of algae and zooplankton samples while reducing manual workload and improving analysis efficiency.



*Coelastrum*

*Cyclotella*

*Pediastrum*

## High-Resolution Imaging & Analysis

The system features a 32MP industrial camera, auto-focus imaging, and layered scanning technology to produce clear high resolution images for accurate data analysis and reporting.

## AI-Powered Recognition & Data Analysis

Using deep-learning AI algorithms and expert databases, AlgaPro TE300 can identify over 150 algae genera and 50 zooplankton genera while automatically analyzing density, proportion, dominance, and other key indicators.



## Technical Specifications

Electrical Rating	• 220–240VAC, 400W
Ambient Environment	• Temperature: 0–40°C, Humidity: <90%
Computer Configuration	• Intel Core i5 or above, RTX3060 or above GPU, 32GB RAM, 1TB Storage
Display	• 18.5-inch, 16:9, 1080P IPS Display
Camera	• 32MP CMOS Industrial Camera
Monitoring Targets	• Phytoplankton & Zooplankton
Maximum Detection Capacity	• Up to 8 channels per test
Microscope Configuration	• Upright biological microscope with 40X, 20X, 10X, and 4X objectives
Sample Injection Method	• Manual sample loading
Counting Chambers	• Supports multiple counting chambers for algae, rotifers, and cladocerans
Objective Switching	• Automatic objective switching
Microscope Scanning	• XYZ micro-step motor control with multi-layer continuous auto-scanning
Recognition Field Count	• Adjustable
Recognition Method	• Deep-learning AI algorithms with expert-assisted real-time recognition
Detection Range	• $10^4$ – $10^{11}$ cells/L
Reported Data	• Species classification, biological density, biomass, dominance, etc.
Evaluation Indexes	• Shannon-Wiener Index, Margalef Richness Index, Pielou Evenness Index, Simpson Dominance Index



ZWECC is a Singapore-based technology company focused on creating innovative water technology solutions. We carry out extensive technological research to develop cutting-edge solutions that help our customers solve challenging problems in the water and environmental sector. Our smart water technology solutions have been implemented in Singapore, the US, China, Taiwan, and the Middle East and have won numerous awards.

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