Algapro™



An AI-based automatic phytoplankton identification and counting technology

Algapro™ revolutionizes traditional phytoplankton monitoring approaches and integrates deep learning and state-of-the-art algorithm to automatically detect different phytoplankton. Regular phytoplankton monitoring is important to diagnose the water quality and aquatic ecosystem's health to protect against Harmful Algal Blooms (HABs), enabling safe water for everyone.

To date, Algapro™ systems have been deployed with water utilities in Singapore and China.



Large Scale Phytoplankton Monitoring

ZWEEC's proprietary phytoplankton detection technology enables phytoplankton monitoring at large scale and high frequency to protect water resources from algae contamination by breaking the limitations of professional manpower resources, relieving experts from labour-intensive manual microscopic examination.

ZWEEC's Breakthrough: Deep Learning + Automated Expert Systems



- ✓ High-speed processing: 15 units of samples in 6 hours
- ✓ High accuracy: more than 80% accuracy
- Overcomes challenges of skilled manpower shortages
- ✓ Fully-automated
- √ 4X time and cost savings compared to traditional methods



View of System Dashboard

Real-time analysis and computation of phytoplankton identification, differentiation, and count



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Technical Specifications						
Power	220~240VAC,Maximum 1000W					
Dimensions	 Sample control chamber: 38 X 40 X 45 cm Digital scanning microscope: 35 X 40 X 48 cm Monitor display: 23.8" Keyboard and mouse: Standard USB keyboard and mouse 					
Operating Environment	 Indoors Temperature: 0 - 40°C Humidity: < 90% 					
Industrial PC	 Intel Core i9 processor Nvidia RTX2060 graphics card 16GB RAM 500GB Hard-disk 					
Video Camera	6.3 million pixels1/1.8" Sony CMOSUSB3.0					
Microscope	Olympus BXLens: PLN40X, 20X, 10X, 4X					
Observatory Plate	3 micro-stream tubes					
Sample Chamber	Capacity of 15 glass bottles					
Size of Sample Bottles	• 15ml per glass bottle					



Building the Next Evolution in Water Technology

ZWEEC is a leading Singapore-based technology company focused on building innovative and secure water technology solutions. Adopting an integrated and data-driven approach, our solutions leverage on advance analytics, artificial intelligence and predictive modelling to power IoT solutions that drive early intervention opportunities. Our award-winning water technology solutions, available as on-premises implementation and as secure cloud solutions, are trusted by water industry leaders from Singapore, Australia, China, Taiwan, the US, and the Middle East.

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