

Cubic K Product Components

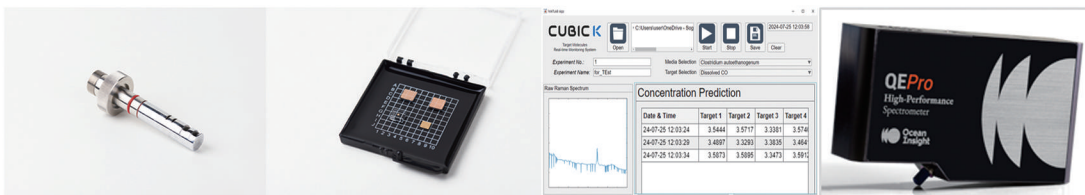


Real-time Monitoring System

On-line
Real-time
Measurement

High-Precision
Analysis

Real-time
Concentration
Display



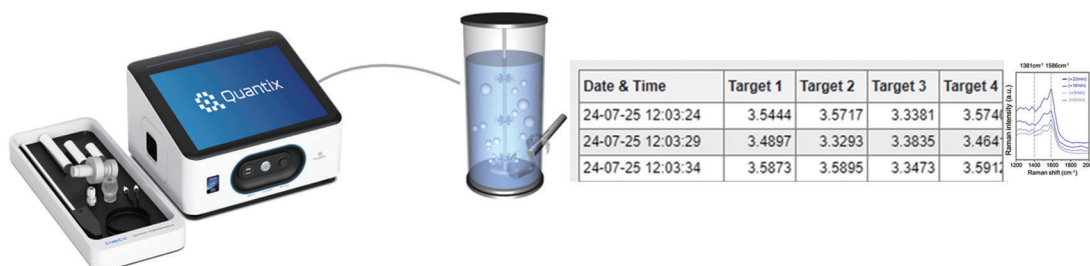
Guard

Substrate

Software

Raman
Spectrometer

Analytical Services



1) Target **Detection & Concentration** Analysis in Solution (Raw Data Provided)

2) Real-time Data Acquisition and Reporting During **Pilot-scale Process Setup**

Cubic K Real-time Monitoring Technology

Guard

Fluidic design and fabrication enabling bubble suppression and fouling prevention

Software

AI-driven prediction of solution concentrations under diverse conditions

Substrate

High-sensitivity, multi-analyte detection via optimized metallic nanostructures

List of Detectable Representative Substances

1. Petrochemical Process Field

Category	Substance Name	Category	Substance Name
Aromatic hydrocarbons	Benzene	Alcohols	Methanol
	Toluene		Ethanol
	Xylene	Ketones	Acetone
	Ethylbenzene		2-Butanone
Alkanes	n-Hexane	Others	Styrene
	Cyclohexane		Phenol
Alkenes	1-Butene		Pyridine
	Propylene		Naphthalene
Dienes	1,3-Butadiene		Aniline
Esters	Ethyl acetate	Over 50 compounds (+30 compounds detectable via SERS, including aromatic derivatives and oxidation products)	

2. Bioprocess Field

Category	Substance Name	Category	Substance Name
Nutrients / Substrates	Glucose	Buffers / Environmental regulators	Bicarbonate
	Glutamine		Phosphate
	Tryptophan		Ammonium
	Pyruvate		Dissolved CO
	Formate		Interleukin-6
Metabolites	Acetate	Biodiagnostics / Infection markers	<i>E. coli</i>
	Lactate		<i>P. aeruginosa</i>
	Succinate		Tumor necrosis factor-α
	Butyrate		Amyloid beta
	Ethanol	Others Over 20 compounds (+30 with SERS including coenzymes and metabolic cofactors)	

3. Water Treatment Field

Category	Substance Name	Category	Substance Name
Organic contaminants	Phenol	Inorganic contaminants	Phosphate
	Bisphenol A (BPA)		Cyanide
	Malathion		Hydrogen peroxide, H ₂ O ₂
	Ibuprofen		Hypochlorite, ClO ⁻
	Atrazine		Chlorate, ClO ₃ ⁻
	Glyphosate	Microbial pollutants	<i>E. coli</i>
	Diazinon		<i>P. aeruginosa</i>
	Rhodamine 6G		Algae
Inorganic contaminants	Nitrate	Particulate matter	Microplastics
	Sulfate	Over 15 compounds (+20 detectable with SERS, including pesticides and heavy metals)	

CUBIC K

✉ cubick@cubic-k.com

🌐 www.cubic-k.com

