

Instruments Installed and to be Installed

Analysis platform/Classification		Instrument Name	Analysis of the Content	Num.
Major/Trace Substances Analysis	Major Substances analysis	Ion Chromatography	anion and cation composition determination of water sample	1
		Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)	cation composition and heavy metal content determination of water sample	1
		Nutrients Continuous Flow Analyzer	determination of Nutrient content in water sample	1
		Total Organic Carbon Analyzer (TOC)	TOC/DOC determination	1
		Elemental Analyzer (EA)	CHNS/O composition determination in organic matter/particle	1
		Greenhouse Gas Analyzer	determination of CO ₂ CH ₄ N ₂ O NH ₃ and H ₂ O in the air	1
	Trace Substances analysis	Inductively coupled plasma mass spectrometry (ICP-MS)	component analysis of trace amounts and supertrace elements	1
		High-performance liquid chromatography-Inductively coupled plasma mass spectrometry (HPLC-ICP/MS)	trace element composition and morphological analysis	1
		Atmospheric aerosol OC/EC Analyzer	atmospheric aerosol organic carbon/element carbon content offline test.	1
	Auxiliary instrument/ Pretreatment equipment	High flux sealed microwave digestion system	pretreatment for sediment/mineral/soil sample	1
		Fully automated chromatographic purification system	automatic element ion separation and collection system	1
		High precision electronic balance (including six figure ultramicrobalance)	balance, from macro to ultra trace sample	8
Structure and Morphology Analysis	Analysis of characteristic pollutants	Gas chromatography- Quadrupole time of flight mass spectrometer (GC-QTOF MS)	high resolution qualitative analysis of volatile, semi-volatile organic pollutants	1
		Gas chromatography- Triple quadrupole mass spectrometer (GC-TQ MS)	trace quantitative analysis of volatile, semi-volatile organic pollutants	1
		Fourier transform/ion cyclotron resonance mass spectrometer (FT/ICR MS)	high resolution qualitative analysis of organic pollutants	1
		Ultra performance liquid chromatography-Quadrupole trap mass spectrometer (UPLC-Q/TRAP MS)	trace quantitative analysis of organic pollutants	1
		Gas chromatography-Thermal Conductivity Detector (GC-TCD)	conventional gas detection	1
	Material structure analysis	Thermal field emission scanning electron microscope (TFESM)	material structure analysis	1
		Ultra-high speed intelligent particle size Analyzer	grain size analysis at micron level	1
		Automatic specific surface and aperture Analyzer	mineral and material specific surface and pore size analysis	1
		Nanoparticle Size & Zeta potential Analyzer	particle size and zeta potential analysis at nanometer level	1
		Photosynthesis Analyzer	analysis of plant photosynthetic intensity	2

Analysis platform/Classification		Instrument Name	Analysis of the Content	Num.
Elemental and Isotopic Composition Analysis	Stable isotope analysis	Stable Isotope Ratio Mass Spectrometer (IRMS)	determination of isotopic composition of C/N/S/H/O elements	4
		Hydrogen and Oxygen Isotopic Water Analyzer	determination of H and O isotopic composition of water sample	1
		Carbon dioxide Carbon Isotope Analyzer (iTOC-CDS)	determination of carbon isotopic composition of organic matter in soil or water	1
		Methane Carbon Isotope Analyzer	determination of carbon isotopic composition of CH ₄	1
		Nitrous Oxide Isotope Analyzer	determination of isotopic composition of N ₂ O	1
	Non-traditional isotope analysis	Multi Collector Inductively Coupled Plasma Mass Spectrometer (MC-ICP-MS)	determination of isotopic composition of various elements	2
Nuclide Mass Spectrometry Analysis	Nuclide isotope analysis	Well-type High purity -Ge γ Spectroscopy	type and activity determination of a variety of low-content radionuclides	1
		XCAMS Compact Accelerator Mass Spectrometry System	determination of ¹⁴ C, ¹⁰ Be, ²⁶ Al, used for dating, etc.	1
Long-Term Field Observation and Research	In suit observation	Atmospheric Flow-rate Sampler	Airborne particulate matter sampler	4
		HBO Weather Station	monitor meteorological parameters	2
		Water -Parameter Analyzer (YSI)	monitor water quality parameters	2
		Field Water-Parameter Monitor	monitor water quality parameters	4
		Water Depth & Sediment Detection System	water depth detection and underwater formation profile information detection	1
		Rebound Gasoline Original- Soil Collector	field soil sample collection	2
		Heavy-Soil Gas Sampler	field soil gas collection	1
		Multi-frequency Walking Acoustic Doppler Flow Profiler	river flow test for flow field observations of natural rivers	1