

ICP Mass Spectrometer

ICPMS-2030

Supplies and Maintenance Parts



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Note: **Aq.** – Specific for aqueous samples

HF – Specific for HF samples

One-Year Consumables Kit

Part Name	P/N	Remarks	Appearance
Aq. One-Year Consumables Kit	220-95356-99	(2) Mini Torches (1) MicroMist DC Nebulizer (1) Nickel Sampling Cone (1) Nickel Skimmer Cone (1) Helix CT Locking Screw with Seal (1) Graphite Gasket Package (3/pk) (5) Packages of Sample Peristaltic Pump Tubing (6/pk) (5) Packages of Internal Standard Peristaltic Pump Tubing (6/pk)	

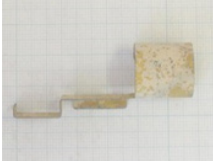
Sample Introduction

Torches

Part Name	P/N	Remarks	Replacement	Appearance
Aq. Mini Torch	211-94446-00	For standard samples	3 months* ¹	
HF HF Demountable Torch	211-94095-41	Torch for samples with residual hydrofluoric acid	3 months* ¹	

*1: Varies depending on the sample and the frequency of use.

Torch Fittings

Part Name	P/N	Replacement	Appearance
Aq. Mini Torch Adaptor	211-93779-41	1 year* ¹	
HF HF Torch Adaptor	211-93807-41	3 months* ¹	
Quartz Sleeve for Mini Torch	211-94046-00		
Shield Screen for Mini Torch	211-93819-00		
HF PE Injector for HF Torch	211-94096-41	3 months* ¹	
HF Outer Glass Housing for HF Torch	211-94013-00	3 months* ¹	
HF O-ring for HF Torch, 4D P15	036-11216-84	3 months* ¹	
HF O-ring for HF Torch, 4D P6	036-11204-84		

*1: Varies depending on the sample and the frequency of use.

Nebulizers

Part Name	P/N	Remarks	Replacememt	Appearance
Aq. MicroMist DC Nebulizer, 0.6 mL/min	220-95356-27	Substitute for P/N: 046-00092-21	2 months* ¹	
	Includes:			
	220-95356-07	Gas Tubing		
	220-95356-08	Fitting Seal		
	046-00092-18	Suction Tube		
HF Nebulizer, PFA1S	046-00092-17	For HF Samples	2 months* ¹	
	Includes:			
	046-00092-10	Tube Adapter		
	046-00092-09	Connector		
	037-61113-01	Clamp		
	046-00092-18	Suction Tube		

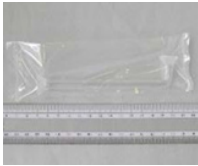
*1: Varies depending on the sample and the frequency of use.

Nebulizer Fittings and Tools

Part Name	P/N	Remarks	Appearance
Suction Tube Assembly	046-00092-18	Introduces the liquid sample to the nebulizer	
Argon Gas Tubing with Ratchet Connector	220-95356-07	Argon gas tubing replacement for MicroMist DC Nebulizer (P/N 220-95356-27)	
Replacement Seals	220-95356-08	Replacement seals for MicroMist DC Nebulizer (P/N 220-95356-27) (10/pk)	
Eluo Nebulizer Cleaner	220-95356-02	Dislodges particle build-up and cleans glass concentric nebulizer	
Guardian In-line Sample Filter * ²	220-95356-93	Protects nebulizer from particulates in samples. 120 µm PEEK filter	
In-line Filter Flushing Adaptor	220-95356-91	Required for connecting guardian in-line sample filter (P/N 220-95356-93) to the Eluo Nebulizer Cleaner (P/N 220-95356-02)	

*2: Recommended option.

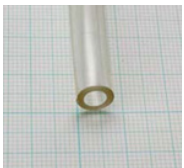
Spray Chambers

Part Name	P/N	Remarks	Replacement	Appearance
Aq. Torch Extension Pipe	211-93728-00	Connects the plasma torch to the cyclone chamber	1 year* ¹	
HF Torch Extension Pipe, HFS	211-94097-00	Connects the HF plasma torch to the PFA cyclone chamber	1 year* ¹	
Ball Joint Clip, 12	210-15508-01	Connects the torch to the torch extension pipe; connects the torch extension pipe to the spray chamber	1 year* ¹	
Aq. Cyclone Chamber	211-93578-00	Glass-made spray chamber	1 year* ¹	
HF PFA Cyclone Chamber	211-93579-00	Cyclone spray chamber for HF analysis	1 year	
Helix CT Locking Screw with Seal ²	220-95356-36	Lock nut and seal for spray chamber. Constant torque mechanism prevents over tightening while ensuring a gas-tight seal. Substitute for P/N: 046-00093-92	6 months	

*1: Varies depending on the sample and the frequency of use.

*2: Recommended option.

Drains

Part Name	P/N	Remarks	Replacement	Appearance
Clip, D-310-1	046-00993-01	Spray chamber and drain trap connection clip	6 months* ¹	
Aq. PTFE Drain Clip* ²	220-95356-35	PTFE drain clip for corrosive samples. Substitute for P/N: 046-00993-01	1 year* ¹	
HF Clamp, CW30014	037-60091-03	HF spray chamber and HF drain connection clip	1 year* ¹	
Aq. Drain Trap, 8214	046-00093-01	Standard drain trap	1 year* ¹	
HF Hydrofluoric Acid Resistant Drain	220-95356-23	Drain for HF samples	1 year* ¹	
PVC Tube, R3603 3/16 X 5/16 X 1/16	016-31428-00	Drain exhaust tube, specify length (meters)	1 month* ¹	
HF Cable Tie	072-60320-01	Affixes the waste liquid tube to the drainage port of the HF drain	3 months* ¹	

Drains (continued)

Part Name	P/N	Remarks	Replacement	Appearance
PVC Tube, R3603 7/16 X 9/16 X 1/16	016-31429-10	Allows liquid waste to flow from drain trap to waste container; specify length (meters)	3 months* ¹	
Clamp, SNP-10	037-61113-04	Affixes the drain tube to the drain trap	1 year* ¹	
Waste Container, PE-10-4106-55	038-00516-06	Polyethylene waste liquid container, 10 L	---	

*1: Varies depending on the sample and the frequency of use.

*2: Recommended option.

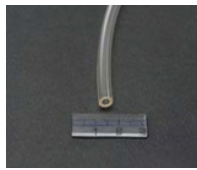
ICPMS-2030

Main Unit

Part Name	P/N	Remarks	Replacement	Appearance
Air Filter	211-91545-00	Lower section air filter	1 year* ³	

*3: Varies depending on the installation environment of the equipment.

Plasma Stand

Part Name	P/N	Remarks	Replacement	Appearance
Plasma Gas Tube Assembly	211-93868-41	Tube for plasma gas to the torch	1 month* ¹	
PVC Tube, R3603 1/8 X 1/4 X 1/16	016-31404-00	Tube for auxiliary gas to the torch; specify length (meters)	1 month* ¹	
Coupler, MC-04PH	035-60903-01	Connects plasma gas and auxiliary gas tubing to the main unit. Two required	1 year* ¹ (For HF set-up)	
Connector, GAZFIT04	046-00092-25	Connects plasma gas and auxiliary gas tubing to the torch. Two required	3 months* ¹ (for HF); 1 year* ¹ (for other set-ups)	
Copper RF Coil	211-93821-41	Comes standard	6 months* ¹	

*1: Varies depending on the sample and the frequency of use.

Interface

Part Name	P/N	Remarks	Replacement	Appearance
Copper Sampling Cone	220-95356-82	Comes standard	6 months* ¹	
Copper Skimmer Cone	220-95356-83	Comes standard	6 months* ¹	
Nickel Sampling Nozzle * ²	220-95356-84	For analysis of corrosive samples	6 months* ¹	
Nickel Skimmer Cone * ²	220-95356-85	For analysis of corrosive samples	6 months* ¹	
Platinum Sampling Cone	220-95356-80	For sulfuric acid samples and other corrosive samples. Free refurb available	1 year* ¹	
Platinum Skimmer Cone	220-95356-81	For sulfuric acid samples and other corrosive samples. Free refurb available	1 year* ¹	
Gasket	211-90174-41	Graphite gasket located beneath the sampling cone	Recommended with any cone replacement	
Bolt, HEX SUS M3X5	022-27001-00	Screw for sampling cone. Four required	---	
Bolt, HEXSOCH SST M3X6	022-27002-00	Screw for skimmer cone. Two required	---	

*1: Varies depending on the sample and the frequency of use.

*2: Recommended option.

Argon Supply

Part Name	P/N	Remarks	Replacement	Appearance
Half Union, 1/4"	035-65503-00	Connects argon supply hose to regulator; comes with nut and ferrule	---	
Inline Filter, B-4F-7	210-14037-00	For argon supply	1 year	
Insert, B-405-170	035-69703-01	Two used while replacing inline filter	1 year	
Sleeve Set, B400SET	035-62974-01	Two used while replacing inline filter	1 year	
Tube, 44PP, White	016-43505-00	Argon supply piping; specify length (meters)	---	
Guardian In-line Gas Filter*²	220-95356-92	Protects gas box from liquid siphoning and the nebulizer from particulates in the argon supply. Argon Gas tubing (P/N 220-95356-07) is required for installation if connected to a Tygon tubing type of nebulizer	1 year* ¹	
Fitting, Nickel Plated Brass Male Connector*²	220-95248-06	Used with 220-95248-05. Qty 2 per regulator. Protects ICPMS gas box from over-pressurization	---	
Parker Pneumatic Regulator*²	220-95248-05	Screw for sampling cone. Four required	---	 P32

*1: Varies depending on the sample and the frequency of use.

*2: Recommended option.

Vacuum System

P/N	Part Name	Remarks	Replacement	Appearance
Rotary Pump Oil, LVO700 1L	211-92625-12	Oil for the rotary pump in the vacuum system	6 Months	

AS-10

Consumable and Repair Parts

Part Name	P/N	Remarks	Replacement	Appearance
Peristaltic Pump Tube	042-00405-24	PTFE tubing used in the peristaltic pump	6 months*4*5	
Cassette Head, SR10/30-N2.5	042-00405-11	Peristaltic pump head	1 year*4	
Filter	211-88565-00	Intake vent filter on the left side of the Autosampler	1 year	
Connection Tube	211-83697-00	Connects nebulizer suction tube to the sample tubing	1 month*4	
Nozzle	206-50290-91	Acquires the sample; comprises of a PTFE tube set into a stainless steel pipe	---	
Fuse, 218 3.15P	072-02004-21	250 V, 3.15 A, T-type	---	
Turntable Cover	206-50295-01	Prevents contamination of samples	---	
Turntable	206-50062-00	Holds sixty regular test tubes and eight high-capacity test tube	---	
Power Cord	071-60821-08	Power cable, 125 VAC/13 A	---	

*4: Although it depends on the usage conditions, as a guide, this applies when measuring 50 samples per day;

*5: When using distilled water as rinse solution.

Sample Cups and Containers

Part Name	P/N	Remarks	Appearance
Vial, 15 mL	046-00147-04	Polypropylene vial, 15 mL capacity	
Vials, 15 mL	220-95369-00	Polypropylene vials, 16 mL, 1000/pk, for any autosampler	
Glass Test Tube, 12 mL	046-00150-27	For AS-10 only	
50 mL Containers, 8520-50111	046-00428-01	50 mL capacity, 25 pieces, for any autosampler	
Reagent Tube	200-93113-05	Glass tube, 53 mL, for AS-10 only	
Rinse Solution Container	206-87284-91	2 L plastic container for rinse solution	

ASX-280 and ASX-560

Consumable and Repair Parts

Part Name	P/N	Remarks	Appearance
2-Rack Enclosure	220-95356-51	For ASX-280 or AS-10	
4-Rack Enclosure	220-95356-50	For ASX-560	
Enclosure Flange for Hood Venting	220-95356-53	Replacement enclosure flange	
Enclosure Filter and Adapter	220-95356-57	Used with fan or external ventilation	---
Enclosure Fan	220-95356-52	Maintains positive pressure when vent not possible	
2-Rack Enclosure Base	220-95356-59	Optional base for ASX-280 or AS-10 enclosure, when seal along bottom not possible on bench	
4-Rack Enclosure Base	220-95356-58	Optional base for ASX-560 enclosure, when seal along bottom not possible on bench	
Autosampler Probe	220-95336-10	Replacement Probe for ASX-280 & ASX-560. 0.8 mm ID, carbon fiber, red band, replace 6 months	
Rinse and Drain Hookup Kit	220-95336-11	For ASX-280 & ASX-560. Replace yearly.	

Part Name	P/N	Remarks	Appearance
2-Channel Peristaltic Pump Tubing Cartridge	220-95336-14	For ASX-280 & ASX-560. Replace yearly.	
Sample Rack (60 vials)	220-95336-15	For ASX-280 & ASX-560	
Sample Rack (21 vials)	220-95336-17	For ASX-280 & ASX-560	
Polypropylene Sample Vials (14 mL)	220-95369-00	For ASX-280 & ASX-560; 1000/pk	
Polypropylene Sample Vials (50 mL)	220-95336-20	For ASX-280 & ASX-560; 500/pk	
2-Rack Spill Tray for Flat Bottom Flasks	220-95336-22	For ASX-280	
4-Rack Spill Tray for Flat Bottom Flasks	220-95336-23	For ASX-560	
RS-232 Interface Cable	220-95336-27	For ASX-280 & ASX-560	
Z-Axis Drive Assembly	220-95336-30	For ASX-280 & ASX-560	
Z-Axis Tubing	220-95336-31	For ASX-280 & ASX-560	

Consumable and Repair Parts (continued)

Part Name	P/N	Remarks	Appearance
24-Volt Power Supply	220-95336-33	For ASX-280 & ASX-560	
X-Axis Drive Belt	220-95336-34	For ASX-280 & ASX-560	
Rinse Station	220-95336-41	For ASX-280 & ASX-560	
Dual Rinse Upgrade Kit	220-95356-42	For ASX-280 & ASX-560	

Peristaltic Pump

Part Name	P/N	Remarks	Replacement	Appearance
Peristaltic Pump Tube for Samples	018-31558-44	0.76 mm inner diameter tubing, 6 pieces	1 week* ¹	
Peristaltic Pump Tube for Internal Standard Addition	018-31558-43	0.25 mm inner diameter tubing, 6 pieces; used with internal standard addition kit	1 week* ¹	

*1: Varies depending on the sample and the frequency of use.

Chemicals

Tuning Solutions

Part Name	P/N	Remarks
ICPMS Tuning Solution	220-95357-63	Used to tune the instrument
ICPMS Concentrated Tuning Solution	220-95357-65	Used to tune the instrument. Need to dilute x1000 times before use
200.8 Tuning Solution	220-95357-59	Used to tune the instrument as required by the EPA 200.8 Method
2 ppb Uranium	220-95357-81	Used for IQ/OQ of the LF model

Trace Metal Grade Acids

Part Name	P/N	Remarks
Ultra-Pure Nitric Acid, 67-70%	220-95371-01	Used to digest samples and stabilize metals. For trace metal analysis at ppt level
Extra-Pure Nitric Acid, 67-70%	220-95371-02	Used to digest samples and stabilize metals. For trace metal analysis at ppb level
Ultra-Pure Hydrochloric Acid, 32-35%	220-95371-06	Used to digest samples and stabilize metals. For trace metal analysis at ppt level
Extra-Pure Hydrochloric Acid, 34-37%	220-95371-07	Used to digest samples and stabilize metals. For trace metal analysis at ppb level

Standard Solutions

Part Name	P/N	Remarks
ICPMS Standards Set for EPA 200.8 Rev. 4.4	220-95377-10	Contains the 5 required calibration standards in 125 mL vials
ICPMS Standards Set for EPA 200.8 Rev. 5.4	220-95377-11	Contains the 5 required calibration standards in 125 mL vials
USP 232 Oral Elemental Impurities Standard	220-95357-20	Contains the required calibration standard in 125 mL vial
USP 232 Parenteral Elemental Impurities Standard	220-95357-21	Contains the required calibration standard in 125 mL vial
USP 232 Precious Metals Elemental Impurities Standard	220-95357-22	Contains the required calibration standard in 125 mL vial
ICPMS Standards Set for Cannabis Applications	220-95366-70	Contains 500 mL, 1000 ppm of each individual standard: arsenic, cadmium, mercury, lead, scandium, indium, bismuth

Peripheral Equipment

Software

Part Name	P/N	Remarks
ICP-MS LabSolutions Software Package	211-49314-92	Required for running the instrument; install on the connected computer
ICP-MS LabSolutions DB Connection Kit	211-49204-92	Used to establish the bridge between ICPMS LabSolutions Software and LabSolutions DB
ICPMS TRM LabSolutions Software Package	211-49200-92	Used for time resolved measurement

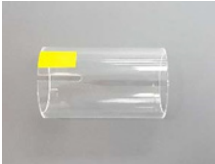
Autosamplers

Part Name	P/N	Remarks
AS-10 Autosampler	211-93680-58	60 samples
	<i>Requires:</i>	
	071-60821-08	Power Cord
ASX-280 Autosampler	220-95336-05	120 samples
	<i>Options:</i>	
	220-95356-51	Enclosure
ASX-560 Autosampler	220-95336-04	240 samples
	<i>Options:</i>	
	220-95356-50	Enclosure

Chillers/Cooling Kits

Part Name	P/N	Remarks
Cooling Water Circulator	211-92962-41	Water chiller for steady cooling of the system; 200 to 230V, 2 kVA; use distilled water only
	<i>Requires:</i>	
	211-93827-41	Chiller Connection Kit
	018-31509-00	PTFE Braided Hoses
	220-90646-15	NEMA 6-15P Plug, 15A 250V
Tap Water Connection Kit	211-90558-41	Required when tap water is used for cooling
	<i>Requires:</i>	
	035-60942-15	Coupler set for tap water connection
Coupler, PMCD1002BSPT	035-60928-21	Coupler for cooling water tubing connection

Tools

Part Name	P/N	Appearance
Torch Positioning Jig	211-93834-41	
RF Coil Positioning Jig	211-93716-41	
Skimmer Removal Jig	211-92103-00	
Phillips Screwdriver, 5.5X100 #2	086-11014-01	
Allen Wrench, for changing cones	086-03819-00	

Optional Accessories

Sample Introduction Alternatives

Part Name	P/N	Remarks
Aq. Automatic Internal Standard Addition Kit, Glass^{*2}	220-95356-90	For use with the peristaltic pump; glass mixing block; for general applications
HF Automatic Internal Standard Addition Kit, PEEK	211-95010-41	For use with the peristaltic pump; PEEK mixing block; for HF applications
HVG-1 Hydride Generator	206-17143-42	For high-sensitivity analysis of As, Se, and Sb; compatible, but not supported with ICPMS-2030LF and ICPMS-2030 with relocation detection
	Requires:	
	211-93243-41	HVG-ICPMS Connection Kit
	042-00412-01	Drain Pump
Laser Ablation Kit	211-93829-41	
	Requires:	
	035-60903-01	ICP Coupler
HF HFS-5 Hydrofluoric Acid Sample Injection System	211-93828-41	Directly injects samples that contain HF; includes an HF torch, chamber, extension tube, nebulizer, drain, and the corresponding accessories
Elegra Argon Humidifier^{*2}	220-95356-70	For high salt sample introduction
ASXpress Rapid Sample Introduction System	220-95379-01	Increases sample introduction efficiency; works with CETAC ASX-280 and ASX-560 ONLY
Niagara Rapid Rinse Kit	220-95356-60	Increases sample introduction efficiency; works with AS-10 and CETAC ASX-280/560

*2: Recommended option.

Optional Accessories

Miscellaneous

Part Name	P/N	Remarks
Liquid Chromatography Hardware Front End	Available Upon Request	---
Duct Adapter	211-93832-41	Exhaust Duct Connection Adapter

Chemical Compatibility: AS-10

Standard Set-up

Chemical Name	Sample	Rinse Solution
Water	✓	✓
Ethanol	✓	✓
Hydrochloric Acid	✓	✓
Nitric Acid	✓	✓
Sulfuric Acid	✓	✓
Hydrofluoric Acid Xylene	✓	✗
Xylene	✗	✗
Perchloric Acid	✓* ₁	✗
Methanol	✓	✓
Sodium Hydroxide	✓	✗
Kerosene	✗	✗
Acetic Acid	✗	✗
MIBK	✗	✗
IPA	✗	✗
DMF	✗	✗
NMP	✗	✗

✓: Usable

✓*₁: Use a glass container for the sample and reagent

✗: Not usable

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