

Agilent 5100 and 5110 ICP-OES Site Preparation Checklist

Thank you for purchasing an Agilent instrument. To get you started and to assure a successful and timely installation of your Agilent ICP-OES, please refer to this site preparation checklist.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is a checklist that outlines the space, utilities, supplies and consumable requirements for your equipment for your site.

This checklist includes information on these products G8010AA, G8011AA, G8012AA G8014AA, G8015AA and G8016AA

Customer Responsibilities

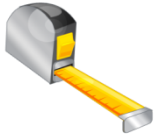
Make sure your site meets the following specifications before the installation date. For details, see specific sections within this checklist, including:

- The necessary laboratory bench space is available
- The environmental conditions for the lab and exhaust venting
- Laboratory gases and plumbing
- The power requirements related to the product (e.g., number & location of electrical outlets)
- The required operating supplies necessary for the product and installation
- Please consult Other Requirements section below for other product-specific information.
- Please follow the site preparation instructions provided in the 5100 and 5110 ICP-OES Site Preparation Guide, part number G8010-90001. This document is only an overview of the main requirements.
- Agilent Technologies service providers will not install your Agilent ICP-OES system until an adequate exhaust system is present and functioning. See Environmental Conditions section.

If Agilent is delivering installation and familiarization services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.

Important Customer Information

1. If you have questions or problems in providing anything described as a Customer Responsibilities above, please contact your local Agilent or partner support/service organization for assistance prior to delivery. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your laboratory.
2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to reschedule any services that have been purchased.
3. Other optional services such as additional training, operational qualification (OQ) and consultation for user-specific applications may also be provided at the time of installation when ordered with the system but should be contracted separately.

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Dimensions and Weight

Identify the laboratory bench space before your system arrives based on the table below.

Pay special attention to the **total height and total weight requirements for all system components you have ordered and avoid bench space with overhanging shelves**. Also, pay special attention to the total weight of the modules you have ordered to ensure your laboratory bench can support this weight.

Special Notes

1. The Agilent ICP-OES, its data system and accessories will be delivered to your site in large and small shipping containers. Note the size of the largest shipping container below.
2. The containers will be delivered in a large truck. You must furnish a forklift, or other suitable lifting device, and make arrangements to unload the truck and transport the containers to your site. All doorways, hallways, floors and elevators must be able to accommodate the largest, heaviest container. Do not open any of the shipping containers unless a representative of Agilent Technologies is present.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs	mm	in	mm	in	mm	in
Largest shipping container	152	335	1225	48.2	910	35.8	945	37.2
5100, 5110 ICP-OES Mainframe	106	234	940	37	740	29.5	800	31.5

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Environmental Conditions

Operating your instrument within the recommended temperature ranges ensures optimum instrument performance and lifetime.

Special Notes

- Performance can be affected by sources of heat and cold (e.g., direct sunlight, heating/cooling from air conditioning outlets, drafts and/or vibrations). The site's ambient temperature conditions must be held constant to within ± 2 °C for optimum performance.
- Maximum altitude up to 3000 m.
- Recommended exhaust and venting requirements** include:
 $2.5 \text{ m}^3/\text{min} > \text{flow} < 6.0 \text{ m}^3/\text{min}$ minimum ($90 \text{ ft}^3/\text{min} > \text{flow} < 200 \text{ ft}^3/\text{min}$) for 150mm diameter ducting.
 Exhaust flow must be continuous as long as the plasma is ON.
 Exhaust flow must be stable: maximum fluctuation of $\pm 5\%$ of flow.
 The ventilation ducting must have an ID of 150mm (5.9 inches).
 Flexible ducting must be used for easy removal during instrument maintenance.
- User safety requires that the exhaust gases from the plasma be vented externally to the building and not re-circulated by the environmental control system. Health hazards include chemical toxicity of solvents and samples.
- The customer is responsible for supplying the ductwork between the instrument and the lab extraction system.

Instrument Description	Operating temp range °C (F)	Operating humidity range (%)	Heat Dissipation (Watts)	Heat Adsorbed (Watts)
5100, 5110 ICP-OES	15-30°C (59-86°F)	25-80, non-condensing, non-corrosive	870 Maximum to room	
PC Monitor			430 (PC:365, Monitor:65)	
G8481A Recirculating Chiller	15-30°C (59-86°F)		2,000 (Maximum)	1400 DV 900 Radial
G8489A Recirculating Chiller	15-30°C (59-86°F)		3,200 (Maximum)	1400 DV 900 Radial
Extraction Vent				2030 max

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Power Consumption

Special Notes

1. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
2. Installation requires an isolated, noise free ground.
3. A power cable will be supplied based on your region. Please ensure the appropriate wall receptacle is provided.

Part number	Description	Wall receptacle	Length m (ft)
8120-8620	Power cord UK, Sing, Malay, HK, C19, 13A	BS1363	2.5 m (8.2)
8120-8619	Power Cord, Australia, C19, 16 amp	AS 3112	2.5 m (8.2)
8121-1222	Power Cord, Europe/Korea, C19, 16 amp	CEE7/V11	2.5 m (8.2)
8120-8623	Power Cord, 250V US/Canada 15A	NEMA 6-15R	2.5 m (8.2)
8120-6903	Power Cord, Japan, C19, 20 amp	NEMA L6-20P	4.5 m (14.7)
8120-8622	Power Cord, Swiss/DK, C19, 16 amp	Swiss/Denmark 1302	2.5 m (8.2)
8121-0710	Power Cord, India/S.Africa, C19, 15 Amp	BS 546	2.5 m (8.2)
8121-0161	Power Cord, Israel, C19, 16 Amp	Israeli SI32	2.5 m (8.2)
8121-0675	Power Cord, Argentina, C19, 20 amp	AS 3112	2.5 m (8.2)
8121-0070	Power Cord, China, C19, 15 amp, Fast	GB 1002	4.5 m (14.7)
8120-6360	Power Cord, Taiwan/S America, C19, 20A	NEMA 5-20P	2.5 m (8.2)
8121-1301	Power Cord, Thai 220V, 15 A, 1.8M, C19	NEMA 5-15	1.8 m (5.9)
8121-1787	Power Cord, Brazil, C19 250V 16A	Brazil	2.5 m (8.2)

4. Do not use extension cords with Agilent Technologies equipment. They cannot provide enough power to the system and can be a safety hazard. If the desired location of equipment does not permit its standard power cord to reach an electrical outlet, your electrician should install additional outlets. Otherwise, you should relocate the equipment closer to existing electrical outlets.

Instrument Description	Line Voltage & Frequency (V, Hz)	Maximum Power Consumption (A)	Nominal rating (VA)
5100, 5110 ICP-OES,	200-240 VAC \pm 10%, 50/60Hz Single phase	15	2900
PC Monitor Printer	100-127VAC 200-240VAC	10 5	1000 1000
G8481A Recirculating Chiller	220-240 Vac, 50 Hz 120 Vac, 60 Hz	8.9 16	2140 1920
G8489A Recirculating Chiller	208-230 Vac, 60 Hz 240 Vac, 50 Hz	12.2 12.2	2900 2900
SPS 4 Autosampler	100-240 VAC 47-63Hz	<1	60

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Cooling Water Requirements

Special Notes

1. The preferred cooling system is the Agilent Chiller (G8481A), filled with Poly-Clear Fluid (G3292-80010).
2. If you are not using the preferred system, and another type of water re-circulator is used, the reservoir should be filled with distilled water having a conductance in the range of 50-150 μ S.
3. Distilled water will keep the system clean. Do not use tap water as it will contaminate the system and do not use deionized water as it will corrode the system.

Cooling Water Parameter	Specification
Heat to be dissipated	1,400W for dual view instruments 900W for radial view instruments
Flow Rate	2.0 L/min (0.3 us gallons/min) minimum
Pressure	Inlet pressure 230-400kPa (33-58psi)
Temperature	15- 28°C, 20°C recommended at water inlet of ICP-OES
Conductivity	50-150 μ S at the chiller reservoir
Connections	Hoses 5m (16.4 feet) long, 12mm ID, with 1/2 inch NPT male connectors

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Gas Requirements
Special Notes

1. The gas regulators should be within 3 meters (9.8 feet) of the ICP-OES.

Compressed gas	Purity	Typical Working Pressure kPa (psi)
Argon	≥99.995%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)
Nitrogen, Optional Polychromator Purge Gas	≥99.995%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)
Option Gas (If required for application)	Oxygen 20% Argon 80% ≥99.995%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)

Important Customer Web Links

- For additional information about our solutions, please visit our web site at <http://www.agilent.com>
- Need to know more? Customer Education – <http://www.agilent.com/crosslab/university/>
- Need supplies? - www.agilent.com/chem/supplies

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