Agilent CrossLab
From Insight to Outcome

Agilent 5800 and 5900 ICP-OES

Site Preparation Checklist

Thank you for purchasing an Agilent *instrument*. To get you started and to assure a successful and timely installation, please refer to this specification or set of requirements.

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 an information guide and checklist prepared for you that outlines the supplies, consumables, space, and utility requirements for your equipment.

Introduction

Customer Responsibilities

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

- ❑ The necessary laboratory or bench space is available.
- ❑ The environmental conditions for the site as well as laboratory gases, plumbing and extraction.
- ❑ The power requirements related to the product (e.g. number and location of electrical outlets).
- ❑ The required operating supplies necessary for the product and installation.
- ❑ 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.
- ❑ Please consult the Special Requirements section for other product-specific information.
- ❑ For more details, please consult the 5800 and 5900 ICP-OES Site Preparation Guide
- ❑ 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.

Revision: A.01, Issued: July 19 2021
Document part number: G8020-90901

Agilent

Customer Information

1 If you have questions or problems in providing anything described as a Customer Responsibility, please contact your local Agilent or partner support service organization for assistance before the scheduled installation. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your site.

2 Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.

3 Other optional services such as extra training, compliance services and consultation for user-specific applications may also be provided at the time of installation. Please discuss with your Agilent Sales representative before the installation is scheduled.

Important Customer Web Links

- Videos about specific preparation requirements for your instrument can be found by searching the *Agilent YouTube* channel at https://www.youtube.com/user/agilent
- To access *Agilent University*, visit http://www.agilent.com/crosslab/university/ to learn about training options, which include online, classroom and onsite delivery.
  A training specialist can work directly with you to help determine your best options.
- A useful *Agilent Resource Center* web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information.
  Check out the Resource Page here: https://www.agilent.com/en-us/agilentresources
- Need technical support, FAQs, supplies? – visit our *Support Home page* at http://www.agilent.com/search/support
- Get answers. Share insights. Build connections:
  Join the *Agilent Community* at https://community.agilent.com/welcome

Revision: A.01, Issued: July 19 2021
Document part number: G8020-90901

Site Preparation

Dimensions and Weight

Identify the laboratory bench space before your instrument arrives based on the following table.

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.

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.

Table 1 Dimensions and Weight

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs.	cm	in	cm	in	cm	in
Agilent ICP-OES Instrument	90	198.4	88.7	34.9	74.0	29.5	62.5	24.6
ICP-OES Shipping Container	113.5	250.2	117.2	46.2	88.9	35	83.6	32.9
Agilent Recirculating Chiller	82	181	57.5	22.6	70.2	27.6	36.8	14.5
SPS 4 Autosampler	15	33.1	51.0	20.1	36.3	14.3	60.0	23.6
SPS 4 trolley	8.4	18.5	96	37.8	80	31.5	49.0	19.3
Personal computer (typical)	10	22	52	20.5	77	30	50	20
Printer (typical)	10	22	20	8	65	26	50	20

Environmental Conditions

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

Special notes

1 Instrument performance can be affected by external sources of heat and cold, (e.g., direct sunlight, heating/cooling from air conditioning outlets, drafts), and/or vibrations.

2 Exhaust flow must be continuous as long as the plasma is ON.

3 Flexible ducting must be used for easy removal during instrument maintenance.

4 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.

5 The customer is responsible for supplying the ductwork between the instrument and the lab extraction system.

Table 2 Temperature and Humidity Specifications

Parameter	Specification
Temperature	15-30°C (59-86°F) < 2 °C/h change throughout the entire working day
Humidity	20-80 %
Elevation	Up to 3,000 meters (10,000 Ft)
Atmosphere	Non-Condensing; Non-Corrosive

Table 3 Heat Dissipation

Instrument Description	Heat Dissipated (Maximum)		Heat Adsorbed (Maximum)	
	W	BTU	W	BTU
Agilent ICP-OES Instrument	870	2,970		
PC/Monitor (typical)	430	1,570		
Agilent Recirculating Chiller	3,200	10,920	1,400	4,780

Table 4 Exhaust Venting Requirements

Product	Port Diameter		Exhaust flow	
	mm	in	m3/min	ft3/min
Agilent ICP-OES Instrument	150	5.9	> 2.5	> 90
			< 6	< 200
SPS 4 Cover Kit	50	1.97	> 0.35	> 12.4

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.

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.

Table 5 Power Cords and Receptacle

Power Cord Description	Wall Receptacle	Length Meters (ft)
Power cord UK, Sing, Malay, HK, C19, 13A	BS1363	2.5 (8.2)
Power Cord, Australia, C19, 16 amp	AS 3112	2.5 (8.2)
Power Cord, Europe/Korea, C19, 16 amp	CEE7/V11	2.5 (8.2)
Power Cord, 250V US/Canada 15A	NEMA 6-15R	2.5 (8.2)
Power Cord, Japan, C19, 20 amp	NEMA L6-20P	2.5 (8.2)
Power Cord, Swiss/DK, C19, 16 amp	Swiss/Denmark 1302	2.5 (8.2)
Power Cord, India/S.Africa, C19, 15 Amp	BS 546	2.5 (8.2)
Power Cord, Israel, C19, 16 Amp	Israeli SI32	2.5 (8.2)
Power Cord, Argentina, C19, 20 amp	IRAM 2073	2.5 (8.2)
Power Cord, China, C19, 15 amp, Fast	GB 1002	4.5 (14.7)
Power Cord, Taiwan/S America, C19, 20A	NEMA 5-20P	2.5 (8.2)
Power Cord, Thai 220V, 15 A, 1.8M, C19	NEMA 5-15	1.8 (5.9)
Power Cord, Brazil, C19 250V 16A	NBR 14136	2.5 (8.2)

Table 6 Power Requirements

Instrument Description	Line Voltage and Frequency V, Hz	Maximum Power Consumption VA	Maximum Current Consumption Amps
Agilent ICP-OES Instrument	200-240 V 50/60Hz Single phase	2900	15
Recirculating Chiller	208-230 V 60 Hz 240 V 50 Hz	2900	12.2

Cooling Water Requirements

Special notes

1. The preferred cooling system is the Agilent Recirculating Chiller, filled with Poly-Clear Fluid (G3292- 80012).
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 µS.
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.

Table 7 Cooling Water Requirements

Cooling water Parameter	Specification
Heat to be adsorbed	1,400W for dual view instruments 900W for radial view only instruments
Flow Rate	2.0 L/min (0.3 us gallons/min) minimum
Temperature	15- 28°C, 20°C recommended at water inlet of ICP-OES
Temperature Stability	± 1.0°C
Pressure	Inlet pressure 230-400kPa (33-58psi)
Connections	Hoses 5 m (16.4 feet) long, ID=12 mm (7/16 inch) 2 x Male NPT 1/2 inch fittings
Conductivity	50-150µS at the chiller reservoir

Gas Requirements

Special notes

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

Table 8 Gas Requirements

Compressed gas	Purity	Typical Working Pressure
Argon	≥99.99%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)
Nitrogen, Optional Polychromator Purge Gas	≥99.99%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)
Option Gas (If required for application)	Oxygen 20% Argon 80% ≥99.99%	500-600kPa (73-88psi) Recommended 550kPa (80 psi)

Required Operating Supplies by Customer for Installation

Special notes

1 Download the Essential Chromatography and Spectroscopy Supplies Catalogs for a complete overview about available supplies for your new and existing Agilent Instruments https://www.agilent.com/en-us/products/lab-supplies

Table 9 Required Operating Supplies

Item Description (including Dimensions etc.)	Vendor's Part Number (if applicable)	Recommended Quantity
DI Water	No Available	500 mL
Blank Solution Pure ASTM Type 1A water with 5% HNO3	5190-7001	500 mL
5 ppm Wavelength Calibration Solution	6610030100	500 mL
Waste Liquid Container	5042-4769	4L minimum