Bogotá, 18 de septiembrel de 2026

Señores
SERVICIO GEOLÓGICO COLOMBIANO
Bogotá D.C. - Colombia

Ref: ACLARACIÓN ENFRIADOR DE RECIRCULACIÓN PROCESO SGC-PSI-067-2026

Respetados señores;

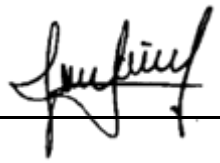
Analítica y Redes S.A.S, representante exclusivo de Analytik Jena para Colombia, confirma que el acople del ICP-OES de Alta Resolución PlasmaQuant 9200 Elite puede acoplarse a sistemas enfriadores de recirculación (chiller) que cumplan con los requisitos mínimos descritos en los requisitos de instalación (Ver sección 2.3 Water cooling), y que el chiller descrito cumple con los requerimientos termodinámicos e hidráulicos para su uso con el ICP-OES PlasmaQuant 9200 Elite.

Adicionalmente, el uso de recirculadores de enfriamiento de terceros NO invalida, ni limita, ni condiciona la garantía integral de Analytik Jena AG del ICP-OES (incluyendo el generador de RF y el sistema de introducción de muestra) y los servicios a cargo de Analítica y Redes S.A.S.

Así mismo a continuación se menciona algunos modelos de recirculadores de enfriamiento compatibles y de uso común con los equipos de ICP-OES.

- Labtech HS-150 Smart
- Polyscience DuraChill CA
- Van der Heijden Water-Water

Atentamente,

Firma: 

Nombre: REINALDO JAIMES ASCANIO
Representante Legal
C.C.: 91.206.684 de Bucaramanga, Santander
Analítica y Redes S.A.S
NIT: 830.059.956-1

Announcement of Readiness for Installation

PlasmaQuant 9200



IR-1

Electrical connection requirements

The emission spectrometer is operated on single-phase alternating current.

The device is not suitable for direct connection to line voltages of 115 V/120 V/127 V. In this case, the connection must be made via two phases or a transformer. Contact Analytik Jena if required. Installation may only be carried out by customer service or by specialist personnel authorized an trained by Analytik Jena.

		Complies	Does not comply
Voltage	200 to 240 V AC ±10 %	☐	☐
Frequency	50/60 Hz	☐	☐
Mains fuse (installation in the building)	16 A circuit breaker, tripping characteristic type B	☐	☐

Gas supply

"Not applicable" if the corresponding gas is not used.

IR-2

			Complies	Does not comply	Not applicable
Argon	Quality	> 4.6	☐	☐	
	Inlet pressure	500 to 700 kPa (5 to 7 bar)	☐	☐	
	Connection	Connection for hose inner diameter 4 mm or Swagelok 6 mm with reinforcing sleeve	☐	☐	
Oxygen (additive gas, optional)	Quality	≥ 4.5	☐	☐	☐
	Inlet pressure	600 kPa (6 bar)	☐	☐	☐
	Connection	Connection for hose inner diameter 2 mm or Swagelok 4 mm with reinforcing sleeve	☐	☐	☐

Exhaust unit

IR-3

		Complies	Does not comply
Material	Heat and corrosion resistant (recommended: V2A steel)	☐	☐
External pipe diameter Adapter using flexible aluminum pipe	ø 125 mm ø 125 mm, length: approx. 1000 mm	☐	☐
Extraction output	3.5 m^3/min ... 5.5 m^3/min (optimum 4.0 to 4.5 m^3/min)	☐	☐

IR-4

2.3 Water cooling

A cooling system is required to operate the emission spectrometer.

- The cooling system can be supplied by Analytik Jena, but it must be ordered as a separate item.
- Alternatively, a cooling system that meets the minimum requirements can be used.

Please select an option in the table below.

Option	Type/manufacturer		Guaranteed
Option 1:	☐	Water-air cooler	☐
The recirculating cooler is supplied by Analytik Jena	☐	Water-water cooler	
Option 2: The customer provides the recirculating cooler. The cooling system meets the minimum requirements (see below).			☐

The cooling system must meet the following minimum requirements:

Water return flow in the cooling water circuit	1.5 to 2.0 l/min
Cooling water temperature range at device cooling water inlet	18 to 20 °C
Recommended temperature setting	20 °C
Temperature stability	± 0.1 °C
Conductivity of the cooling water	50 to 200 µS/cm
Cooling performance	<2.5 kW
Pressure setting (max.)	600 kPa (6 bar)

For a water-water cooler, the customer must also comply with the following requirements for the water flow (on the primary side):

Water volume in circulation	610 l/h (at 15 °C water temperature at the inlet side, 20 °C at the outlet side and Δp = 40 kPa)

If the recirculating cooler is included in the delivery from Analytik Jena, the following components are supplied:

Component	Water-air cooler	Water-water cooler
Water hose (on the secondary side)	3.5 m	3.5 m
Water hose (on the primary side)	/	3.5 m
Connections	/	0.5"
Power cable	2.7 m	2.7 m
Interface cable (to the ICP-OES)	3.5 m	3.5 m
Minimum distance to adjacent devices (please observe)	60 cm	30 cm