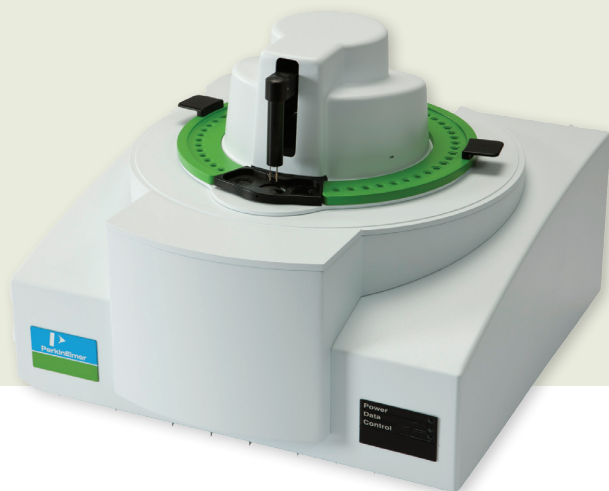


## Thermal Analysis



### Preparation Checklist

- Site Requirements
- Peripherals and Accessories
- Electrical Requirements
- Gas Requirements
- Environmental Requirements
- Safety Requirements
- PC Configuration
- Installation Overview
- Miscellaneous

## STA 6000: Site Readiness Instructions

### Order Overview

Please review this order. Record any discrepancies between the PerkinElmer order and your Purchase Order, along with any agreements or commitments made by your PerkinElmer Sales Representative that are NOT listed on the order. Let your Customer Care Representative know about these discrepancies and/or commitments with your Site Readiness Confirmation.

### Site Requirements

#### Bench Space

Instrument	Dimensions			
	Width	Depth	Height	Weight
STA 6000	37 cm (14.5 in)	61 cm (24 in)	30 cm (6.3 in)	16.0 kg (35.5 lbs)
PC	42.5cm (17 in)	49 cm (19 in)	49 cm (19 in)	21.8 kg (48 lbs)
Printer	41.0 cm (16 in)	32 cm (12.5 in)	21.5 cm (8.5 in)	x.xx kg (x.x lbs)
Circulator	21 cm (8.25 in)	40 cm (15.75 in)	57.1 cm (22.5 in)	32 kg (70 lbs)

A bench top of 100 cm (39.4in) W x 65 cm (24 in) D will accommodate an STA 6000 system with no accessories.

## Peripherals and Accessories

AS6 Autosampler, if equipped, must be installed away from direct sunlight.

Circulating chiller fan must be positioned so warm air out of the chiller is not blown onto either the instrument or autosampler (if equipped).

## Electrical Requirements

Power Consumption	
STA 6000	340 Watts Maximum
Computer	500 Watts Maximum
Circulator	1440 Watts Maximum

Power Specifications	
STA 6000	100/115 VAC, 3 Amps or 230 VAC, 1.5 Amp
Computer	100/115 VAC, 4.6 Amps or 230 VAC, 2.3 Amp
Circulator	120 VAC, 12 Amps or 240 VAC, 7 Amps

### Power Outlets

Each system component (STA 6000, Computer, Printer, etc.) requires a separate power outlet. All outlets should share a common earth ground.

This equipment is designed to operate within 10% of the selected line voltage. The supply must be smooth, clean and free of transient voltages over 40 volts.

Earth grounding: less than 1 ohm resistance between the grounds of any two components of the system.

## Gas Requirements

Note: All gasses and regulators must be supplied by customer. If the required gas quality is not available a filter drier is required.

If splitting a single gas source is necessary, please contact your local service representative for information on the regulator install kit part number N519-0462.

A Nitrogen balance purge of - 40 cc/min. is required. This gas should be clean and dry having minimum purity of 99.995%. Regulator Outlet Pressure 2-3 bar (30-45 psi).

Sample purge gases can be: dry argon, air, nitrogen or oxygen, with a minimum purity of 99.995%.

The regulator shutoff valve should have a 1/4" NPT male thread on the outlet side. Regulator Outlet pressure 2-3 bar (30-45 psi).

## Coolant Requirements

**The STA 6000 requires a coolant of one of the following types:**

**Circulating Water** A source of water and a drain are required. Flow rate of 5 l/min required.

**Chiller** A liquid circulating device such as the PolyScience Model 9102. The 9102 water circulator does not include the cooling liquid. 50/50 Ethylene Glycol (non automotive grade, Fisher P/N E1774), Distilled Water and Algaecide (N0776059 8 drops per gallon) is required as the cooling media to 15 °C. Minimum temperature control  $\pm 0.1$  °C is required.

**Coolant Temperatures** 15 °C  $\geq$  35 °C

## Environmental Requirements

Laboratory Environment	
Temperature Range	15 to 40 °C
Humidity	<80% (Non-condensing)

Clean and dust-free.

Level, vibration-free work surface.

### Water Requirements

The STA 6000 comes equipped with a tap water circulating system. In this configuration tap water or water circulating device (i.e. PolyScience type chiller) must be located conveniently near the STA 6000. The coolant tubes provided (2) are approximately 5 feet long (1.5 meters) having an OD of 12 mm (0.47 in) and ID of 8 mm (0.31 in). If additional tubing length is required, it is the responsibility of the customer to provide the additional tubing.

Flow rate 5 L/h.

## Safety Requirements

### Gas Cylinders and Gas Delivery Lines

Lock down straps should be present on all gas cylinders.

**Ventilation** As required.

## PC Configuration

Due to numerous differences in PC hardware, PerkinElmer cannot guarantee that our software will run on a customer-supplied computer.

PerkinElmer installation of a customer-supplied computer is available for an additional fee.

PerkinElmer is not responsible for problems caused by unspecified system components, software, and/or accessories. A maximum of one hour is allowed for installation of a computer and software of a non-PerkinElmer supplied computer. The additional time it takes to verify this type of problem is billable at the current service rate. It is advisable the customer's IT support be available as needed.

**Software** As per requirement.

## Installation Overview

On receipt of the equipment, the customer is to inspect the packaging for physical damage. If damage is present the shipping container should be opened to verify no physical damage to the instrument has occurred and the customer must notify the shipper immediately.

Note: Unpacking will only be performed by approved PerkinElmer personnel and contents inventoried.

### Physical Installation (Instrument Only)

The physical installation will vary based on system configuration.

### Physical Installation (Software)

A PKI Service Engineer will install the instrument control and data analysis software. If the customer IT person is required to be in attendance to perform the software installation it is the responsibility of the user to make the arrangements with their IT Department prior to the installation to confirm their presence.

## Physical Installation (Accessories)

As Required.

## Installation Test Standards

A PKI Service Engineer will test the instrument to insure that its performance meets PerkinElmer's specifications. Reference materials are supplied with the instrument to test its functionality.

## Customer Orientation

The customer must be available for an instrumentation orientation.

## Miscellaneous

If IQOQ validation is required for this instrument, please contact your local Service representative.

Spar Parts	
Part Number	Description
N5202083	STA 6000 SaturnA Sensor

Sample Pans and Lids	
Part Number	Description
N5200040	Sample pans (pack of 3)
N5202032	Ceramic Lids (pack of 6)
N5200045	STA6000/STA8000/TGA4000 Ceramic Sample Pan Kit – 45 Pans
N5201021	TGA 4000/STA6/8000 Pt/Rh Pans 2.5mm height - 5 Pans
N5201022	TGA 4000/STA6/8000 Pt/Rh Pans 5.0mm height – 5 Pans
N5201023	TGA 4000/STA 6/8000 Pt/Rh Pan 2.5mm height – 1 Pan
N5201024	TGA 4000/STA 6/8000 Pt/Rh Pan 5.0mm height – 1 Pan

Tools and Materials	
Part Number	Description
09908400	Tweezers, flat forceps
N5202093	Forceps, flat tip serrated
N5361078	Narrow tipped tweezers 5.25 inches long
N5202088	Spirit Level
04190197	Container of Alumina
N5200042	Calibration weight

Calibration Metals		
Part Number	Description	Nominal Temperature °C
03190033	Indium calibration reference	156.6
03190034	Tin calibration reference	231.9
03190035	Lead calibration reference	327.5
03190036	Zinc calibration reference	419.5
N5370438	Silver calibration reference	961.8
N5380057	Aluminum calibration reference	660.3
N5380058	Gold calibration reference	1064.2
N5380071	Palladium calibration reference	1554.9

PerkinElmer, Inc.  
940 Winter Street  
Waltham, MA 02451 USA  
P: (800) 762-4000 or  
(+1) 203-925-4602  
[www.perkinelmer.com](http://www.perkinelmer.com)



For a complete listing of our global offices, visit [www.perkinelmer.com/ContactUs](http://www.perkinelmer.com/ContactUs)

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