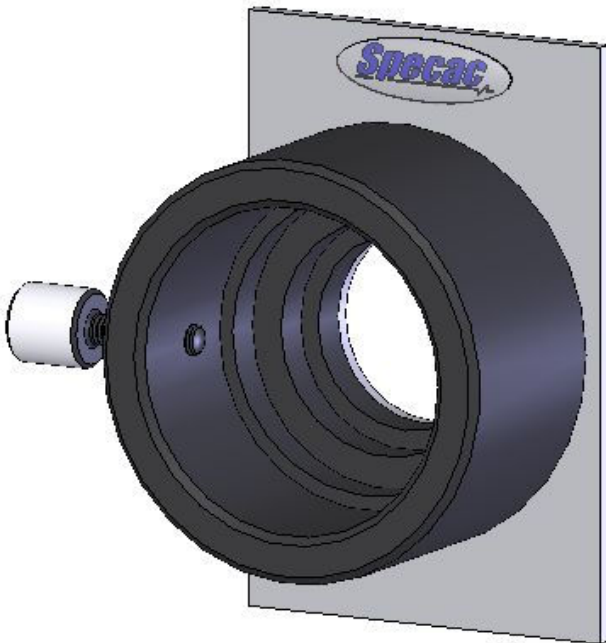




Ambient Temperature Cell Holder

User Manual



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2I-20740 Issue 2

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1. Introduction

Thank you for purchasing a Specac product.

The Ambient Temperature Cell Holder has been designed to allow for the study of solid and liquid samples at ambient temperatures, via transmission spectroscopy ranging from the Far UV through to the Far IR.

The Ambient Temperature Cell Holder has been designed to hold a variety of liquid and solid sample cell holders from Specac. The range of sample cell holders compatible for use in this holder are seen in Section 3 of this instruction manual.

The Ambient Temperature Cell Holder is supplied with its own standard 3" x 2" slide mounted back plate. The Ambient Temperature Cell Holder containing a sample cell holder is placed into a spectrometer sample compartment via use of this 3" x 2" slide mount plate.



Fig 1. Ambient Temperature Cell Holder

2. Checklist of Contents

Check that the following items have been supplied:

- Ambient Temperature Cell Holder with 3" x 2" slide mount plate.
- Instruction manual for the Ambient Temperature Cell Holder.
- Any sample cell holder ordered to be used in the Ambient Temperature Cell Holder.

Remove the Ambient Temperature Cell Holder from its packaging.

If a Liquid Cell under the part numbers of P/N's GS20500, GS20510, GS20560, GS20570, GS20580 or GS20590 Series has been ordered, do not unwrap it from its protective packing until ready to use as certain windows that may be used for the liquid cell (e.g. NaCl or KBr) may fog on exposure to the ambient atmosphere.

3. Sample Cell Holders

A variety of different cell holders for various sample types can be used within the Ambient Temperature Cell Holder. These include:

- Heatable Sealed Liquid Cells P/N GS20500 Series.
- Heatable Demountable Liquid Cells P/N GS20510 Series.
- Heatable Flow Sealed Liquid Cells P/N GS20560 Series.
- Heatable Flow Sealed Liquid Cells P/N GS20570 Series.
- Heatable Flow Demountable Liquid Cells P/N GS20580 Series.
- Heatable Flow Demountable Liquid Cells P/N GS20590 Series.
- Spectroelectrochemical Cells P/N GS20900 Series.
- Solids Cell Holders P/N's GS20600 and GS20610.

The liquid sample cell holders can use a range of window materials, all available from Specac. (A comprehensive list of IR transmitting materials and their properties can be found at the back of Specac's Catalogue). The solids holders P/N's GS20600 and GS20610 do not require use of any window materials.

Spectroelectrochemical Cells P/N GS20900 Series can also be used in the Ambient Temperature Cell Holder, although because of their application capability, they may be more suited for operation at sub zero °C temperatures offered by Specac's Variable Temperature Cell P/N GS21525.

4. Installation

Fit a Sample Cell Holder in the Ambient Temperature Cell Holder

A separate instruction manual has been written for the operation and use of the various sample cell holders (Liquid Cell Holders P/N's GS20500 and GS20510 Series) and the Solids Holders P/N's GS20600 and GS20610 that are used within the Ambient Temperature Cell Holder. This manual should be consulted prior to the use of these sample cells in the Ambient Temperature Cell Holder.

A specific instruction manual for the High Pressure Heatable Liquid Flow Cells P/N's GS05910, GS05915, GS05920 and GS05925 Series, is also available. Once again, when using any of these liquid cells in the Ambient Temperature Cell Holder, this manual should be consulted prior to use.

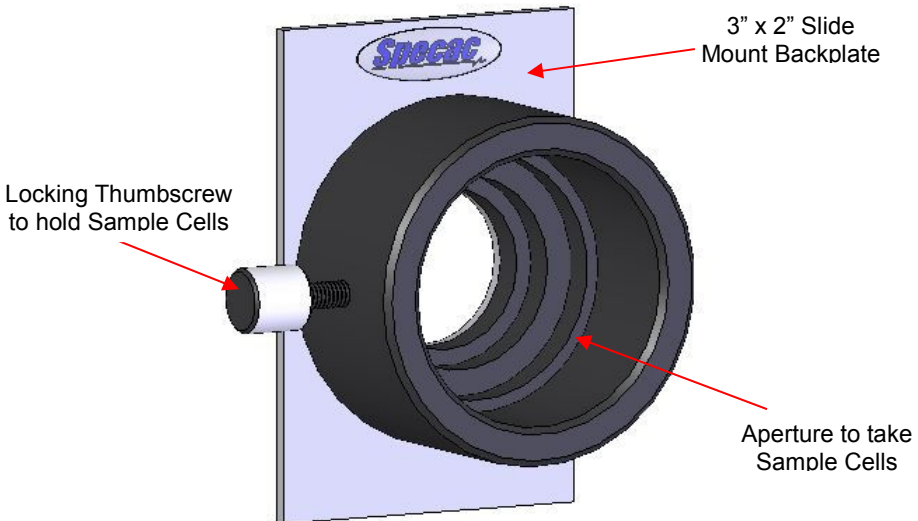


Fig 2: Ambient Temperature Cell Holder

Fig 2. shows the Ambient Temperature Cell Holder. **Any** of the sample cell holders that can be used with this accessory are simply placed into the aperture recess as shown. The back of the sample cell is pushed as far into the aperture recess as possible. When the sample cell has been positioned correctly, lock and hold the sample cell into position by tightening of the locking thumbscrew on the side of the Ambient Temperature Cell Holder as seen in Fig 2.

Ensure that any liquid sample cells that are to be used have been inserted for their correct orientation with respect to the aperture of the liquid cell itself and the window assembly, before tightening the locking thumbscrew. The apertures of the P/N's GS20500, GS20510, GS20560, GS20570, GS20580 and GS20590 Series liquid cells are rectangular and the liquid cell should be mounted such that the longest dimension of the rectangular aperture is oriented in parallel to the 3" dimension of the slide mount backplate (i.e. north to south, when viewed from the front face of the liquid cell).

Installation of Ambient Temperature Cell Holder into the Spectrometer

It may be necessary to first install the Ambient Temperature Cell Holder into the sample compartment of a spectrometer via the 3" x 2" slide mounting plate. Slide the Ambient Temperature Cell Holder into position and check that the beam path of the spectrometer will be running centrally through the aperture of the Ambient Temperature Cell Holder and the focus point of the beam will be at the centre of any sample cell holder that is to be installed into the Ambient Temperature Cell Holder.

Then, insert a sample cell into the Ambient Temperature Cell Holder, following instructions associated with the specific sample cell, as described previously.

Cleaning and Storage

After use, advice for cleaning of any sample cell holder that has been used should be followed from its own instruction manual. The sample cell is removed from the Ambient Temperature Cell Holder by loosening the locking thumb screw. The Ambient Temperature Cell Holder can remain in the spectrometer or be removed to be stored in a dry cabinet area.

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