

Pearl Liquid Transmission accessory

The Pearl™ accessory contains Specac's innovative Oyster™ cell assembly. The top part of the Oyster™ cell is simply lifted out of the way to allow for fast and easy application of the sample and cleaning between samples.

Key Features of the Pearl

- **Highly reproducible pathlength**
Change pathlengths in seconds
- **Spacer-free, defined pathlength liquid transmission cell**
ZnSe or CaF₂ windows
Wedged or Parallel with pathlengths from 25 to 1000 µm
- **Handles viscous materials with ease**
Great choice for large volumes of samples



Oyster Cell



The Pearl™ has been designed to provide a more accurate pathlength than can be achieved using a traditional demountable cell, with pathlengths repeatable to significantly better than 1 µm thanks to the Oyster™ sample holder. Oyster™ cells have the unique feature of being offered with either parallel mounted windows (when accurate pathlength determination is required), or windows with a slight wedge angle to remove troublesome fringing patterns.

The Oyster™ cell mechanism is so easy to use that it makes the Pearl™ accessory suitable for handling highly viscous sample such as oils and greases. When dealing with large volumes of test samples the Pearl cannot be beaten for time efficiency.

Pearl™ can be fitted with ZnSe or CaF₂ Oyster™ cell assemblies which can be interchanged in seconds. Oyster™ cells are available in six pathlengths from 25 to 1000 µm.

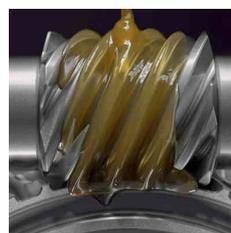
For volatile samples, there is an injection access port in the top of the Oyster™ cell so that the assembly does not have to be fully opened. The sample can be viewed through the two windows, allowing the user to ensure that no bubbles have been trapped. The Oyster™ cell can be cleaned very easily and quickly using tissue and an appropriate solvent.

Applications



Biodiesel

Read more in our Application note ["AN18-01 Analyzing the FAME content of Biofuels with FTIR using EN14078 \(ASTM D7371\)"](#).



Grease

Read more in our Application note ["AN18-02 Analyzing the Breakdown of Mineral Oil under Thermal Stress using the Pearl"](#).



Oils and Lubricants

Read more in our Application note ["AN16-01 Pearl™ New and Used Motor Oils"](#).

Ordering Information

The Pearl™ Liquid Transmission Accessory consists of the Pearl™ base unit with a slide-out drawer and Oyster™ cell.

The Oyster™ cell itself consists of top and bottom window assemblies which can be ordered as a complete set, or as separate parts. To vary the pathlength or wedge angle, different pre-determined bottom window assemblies must be purchased. The top window assembly is common to all pathlengths.

Technical Information

Window Material	Spectral Range / cm ⁻¹	Refractive Index
ZnSe	20,000 to 500	2.41
CaF ₂	50,000 to 1,100	1.31

Pearl base unit & spares

GS31000	Pearl base unit
<i>Note that you also require at least one complete Oyster™ cell</i>	
GS33502	Spare window housing
GS33510	Spare air blower/puffer

Oyster Cell (Top Window)

Window Material	Part No.
ZnSe	GS32200
CaF ₂	GS32300

Oyster™ Cell (Complete)

Window Material	Wedged or Parallel	Pathlength / μm					
		25	50	100	200	500	1000
ZnSe	Parallel	GS31216	GS31211	GS31212	GS31213	GS31214	GS31215
ZnSe	Wedged	GS31226	GS31221	GS31222	GS31223	GS31224	GS31225
CaF ₂	Parallel	GS31316	GS31311	GS31312	GS31313	GS31314	GS31315
CaF ₂	Wedged	GS31326	GS31321	GS31322	GS31323	GS31324	GS31325

Oyster™ Cell (Bottom Window)

Window Material	Wedged or Parallel	Pathlength / μm					
		25	50	100	200	500	1000
ZnSe	Parallel	GS33216	GS33211	GS33212	GS33213	GS33214	GS33215
ZnSe	Wedged	GS33226	GS33221	GS33222	GS33223	GS33224	GS33225
CaF ₂	Parallel	GS33316	GS33311	GS33312	GS33313	GS33314	GS33315
CaF ₂	Wedged	GS33326	GS33321	GS33322	GS33323	GS33324	GS33325

Note: For a complete unit you must order a Base Unit and a Complete Oyster Cell. Please specify your spectrometer manufacturer and model to ensure you get the correct baseplate.

United Kingdom
sales@specac.co.uk
+44 (0) 1689 892 902

United States
sales@specac.com
+1 866 726 1126

China
frank.li@specac.com

Singapore
kamhar.woo@specac.com

