

# The Pearl

## The FTIR Liquid sampling system

**Specac**

The Pearl™ accessory contains Specac's innovative Oyster™ cell assembly, which holds the sample in a horizontal plane. The top Oyster™ cell holder is simply lifted out of the way to allow for fast and easy application of the sample and cleaning between samples.

### Key Features

- The easiest to use FTIR liquid sampling system available
- Faster, more accurate and more repeatable than traditional liquid cells
- Wedged option to eliminate troublesome fringing completely
- Different pathlengths and window materials in seconds
- Handles viscous materials with ease



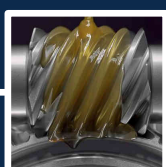
### Applications



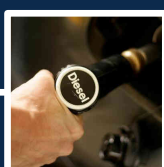
Oil & Lubricants



Edible Oils



Grease, Pastes & Slurries



FAME & Diesel

For more 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.

The Pearl™ has been designed to provide a more accurate pathlength than can be achieved using a traditional liquid transmission accessory, with pathlengths repeatable to significantly better than  $1 \mu\text{m}$  thanks to the Oyster™ sample holder. Oyster™ cells have the unique feature of being offered with either parallel mounted windows, or windows with a slight wedge angle to remove troublesome fringing patterns.

Pearl™ can be fitted with ZnSe or CaF<sub>2</sub> Oyster™ cell assemblies which can be interchanged in seconds. Oyster™ cells are available in six pathlengths from 25 to 1000  $\mu\text{m}$ .

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.



### Benchmark Baseplate

Specac believe that it should be possible to quickly and easily switch between sampling accessories. To facilitate this, we have developed the Benchmark™ Baseplate system which ensures that a single instrument-specific baseplate can be used for all Benchmark™ compatible accessories. You only ever need as many baseplates as the number of different spectrometer models in your laboratory.

# The Pearl

## Ordering Information



The Pearl™ Liquid Transmission Accessory consists of the Pearl™ base unit with a slide-out drawer and Oyster™ cell holder. The drawer can be ordered in a choice of colours.

The Oyster™ cell itself consists of two machined 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.

N.B. It is not possible to remove the windows from the Oyster™ window assemblies.

### Pearl™ base unit

GS31000-A (Blue) GS31000-B (Black) GS31000-G (Green) GS31000-O (Orange)  
GS31000-P (Purple) GS31000-R (Red) GS31000-Y (Yellow)

## Oyster™ Complete Cells

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

## Oyster™ Bottom Window

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

## Oyster™ Top Window

| Window Material  | Product No. |
|------------------|-------------|
| ZnSe             | GS32200     |
| CaF <sub>2</sub> | GS32300     |

