

Process Raman analysis

MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic

with TouchRaman™ immersion technology

Sterile construction for high value batches

Made from sanitary finished (15Ra) 316L stainless steel and exclusively sourced high-purity sapphire optics, the Thermo Scientific™ MarqMetrix™ Single-Use Bioreactor BallProbe™ Sampling Optic offers accurate and precise Raman measurement without compromising the sterility of your high-value batches.

Packaged in tear away bags, the probe can be sterilized via autoclave, steam-in-place (SIP), EtO or integrated into larger single-use systems and gamma sterilized (50kGy). Designed for ease of use, it is simple to connect the sterile probe to the Thermo Scientific™ MarqMetrix™ Fiber Head of the Raman system enabling powerful real-time chemical insights. To ensure batch purity, simply dispose of the probe when process is complete.

Engineered for bioprocessing conditions

Created to meet the requirements of the bioprocessing industry, the MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic is compatible with standard Pg13.5 ports. Measure media nutrient levels, viable cell density, and more with probes that match the form factor of dissolved oxygen (DO) bioprocess probes. The standard configuration includes a welded flange that prevents the probe from backing out of the port and fixes the immersion lengths at 220mm or 120mm.

Sterile, single-use design
for batch purity



Standard probe lengths:
120mm and 220mm (immersion)

Features and benefits

- Accurate and repeatable measurements
- Single-use, disposable probe for high-value batches
- Sterilizable via autoclave, SIP, EtO, gamma (not provided sterilized)
- Compatible with standard Pg13.5 ports
- Customization available for integrators

Applications

- Biopharmaceutical manufacturing
- Pharmaceutical manufacturing
- Cultivated meat production
- Industrial fermentation

The MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic can also be customized to meet integrators' specific application needs.

The MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic is easily coupled to the Thermo Scientific™ MarqMetrix™ Single-Use Fiber Head – the fiber optic interface to the Thermo Scientific™ MarqMetrix™ All-In-One Process Raman Analyzer.

The newly designed MarqMetrix Single-Use Fiber Head has a proprietary fitting that makes securely attaching and detaching the MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic a breeze. End users must have a MarqMetrix Single-Use Fiber Head to use MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic (standard Fiber Heads can be converted to the MarqMetrix Single-Use Fiber Head model).



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Product contacting materials	
Probe body	12.0mm diameter 316L Stainless Steel Sanitary finish 15Ra
Immersion optics	8.00mm diameter UV-grade sapphire ball
Sealing materials	USP Class VI and ISO 10993-5
Specifications	
Standard probe length	Fixed immersion length: 220mm or 120mm (optionally, probes can be purchased without a fixed flange - allowing variable immersion length up to 220mm)
Probe OD (outside diameter)	0.47 in. (12.0mm)
Sample working distance	TouchRaman (sample contacts BallProbe lens)
Continuous operating temperature range	5°C - 150°C
Pressured design condition	6,000psi (413 bar)
Fittings	Pg13.5, with silicone o-ring
Compatible sterilization methods	Autoclave, SIP, EtO, Gamma (50kGy)

Operating conditions
Suitable to intermittent exposure to standard bioprocess cleaning solutions, organic solvents, and most dilute acids and bases
Related products
MarqMetrix All-In-One Process Raman Analyzer - a single-unit spectrometer, laser, and acquisition computer
MarqMetrix Single-Use Fiber Head - filtered fiber optic interface specifically designed for the MarqMetrix Single-Use Bioreactor BallProbe Sampling Optic and MarqMetrix All-In-One Process Raman Analyzer

Learn more at thermofisher.com/MarqMetrixAIO

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