

THE BIOREACTOR BALLPROBE

MARQMETRIX

MEASUREMENT MADE SIMPLE

Specially designed for bioprocess and sterile applications
12mm diameter, with TouchRaman immersion technology

Wetted Materials

Probe Body	12mm diameter 316L Stainless Steel, sanitary finish 15Ra
Immersion Optics	8.00mm diameter UV-grade sapphire ball
Sealing Materials	High-temperature epoxy



The MarqMetrix® Bioreactor BallProbe®

MarqMetrix BallProbe technology unlocks the power of Raman measurements for bioprocess applications. Our patented TouchRaman® sample interface measures the chemistry of the fluid touching the optic, producing a chemical profile of the media. The sensitivity and selectivity make MarqMetrix BallProbes the most reliable means for performing Raman measurements in heterogeneous mixtures.



**Well defined short focus of
TouchRaman provides
accurate reproducible results**



Designed specifically to meet the requirements of the bioprocess industry, the BioReactor BallProbe is both robust and exacting. With the durability to handle the rigors of sterile practices, including CIP/SIP and offline autoclaving, the BioReactor BallProbe is precisely manufactured for repeatable measurements batch-to-batch, probe-to-probe, and month-to-month.

The power of Raman, the simplicity of MarqMetrix

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Made from sanitary finished (15Ra) 316L stainless steel and exclusively sourced high-purity sapphire optics, the simplicity of design prompts an ease of use that eliminates user-to-user variation. The form factor of the BioReactor BallProbe is matched to the classic design of dissolved oxygen (DO) bioprocess probes—12mm diameter, Pg13.5 fittings, with 220mm and 120mm immersion lengths. The BioReactor BallProbe comes with a stainless steel protective cap that shields the internal optics of the probe during autoclaving and storage.

The utility of the BioReactor BallProbe is optimized when paired with our filtered fiber-optic interface, creating the MarqMetrix Fiber BallProbe—a complete sampling solution for accurate and repeatable Raman measurements. However, the BioReactor BallProbe can be purchased as a stand-alone product for use with existing fiber-optic Raman probes.



Simple design for ease of use and
consistent measurements

Specifications

Standard Probe Length	220mm or 120mm (immersion)
Probe OD (Outside Diameter)	0.472 in. (12.0mm)
Clear Aperture (max. Laser Beam Waist)	0.275 in. (7.1mm)
Sample Working Distance	TouchRaman (sample contacts BallProbe lens)
Continuous Operating Temperature Range	-20°C to 150°C
Design Pressure Rating	6,000psi (413 bar)
Compatible Laser Wavelengths	500-1100nm
Fittings	Pg13.5, with beveled Teflon washer and viton o-ring



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