

Process Raman analysis

MarqMetrix 0.125 in. BallProbe Sampling Optic

0.125 in. (3.2mm) diameter, for small volume & precise spatial applications utilizing our patented TouchRaman Immersion Technology

Designed for microwell measurements

The Thermo Scientific™ MarqMetrix™ 0.125 in. BallProbe™ Sampling Optic is our smallest diameter TouchRaman™ immersion contact probe.

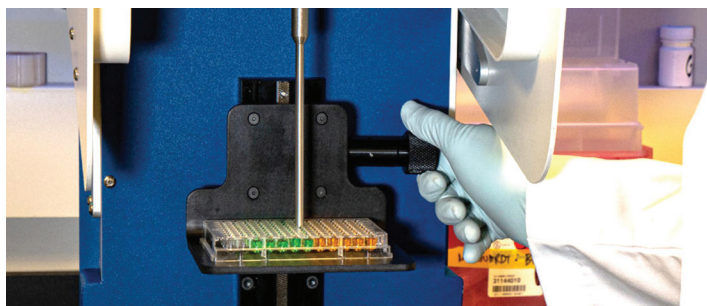
Designed to make measurements in small-volume microwells and make highly resolved spatial measurements, this probe is constructed from stainless steel 316L, UV grade-sapphire, and an epoxy seal with wide chemical compatibility. The probe is designed to fit into the individual wells of microwell plates, but can also be used in moderate chemical laboratory and light-process applications.

Simply touch & measure

MarqMetrix BallProbe technology utilizes an exclusively sourced, high-grade spherical sapphire lens. The short focal length of the spherical optic allows for TouchRaman—where users simply touch the probe to the sample—yielding highly reproducible sampling of liquids, solids, slurries, powders and heterogeneous mixtures.

The simplicity of use allows non-specialists to collect high-quality data and eliminates user-to-user variation.

This is the smallest diameter product in the MarqMetrix BallProbe product line



Features and benefits

- Immersion contact probe for touch measurements in small volume microwells
- Measures liquids, solids, slurries, powders, and heterogeneous mixtures
- Simple design for measurement accuracy and reproducibility
- Can be used in moderate chemical laboratory and light-process applications

Applications

- Biopharmaceutical manufacturing
- Pharmaceutical manufacturing
- Food and beverage processing
- Oil and gas processing
- Chemical and hazardous applications

Featuring a 3mm ball lens, the MarqMetrix 0.125 in. BallProbe Sampling Optic. is compatible with standard 0.125 in. compression fittings for porting into processes.

Due to the probe's small form-factor, the effective collection volume is less than 1 nanoliters (nL). Raman analysis of small (uL) volumes can be performed in low volume conical vials with almost no interference from the vial.

With sensitivity comparable to that of the larger BallProbes, MarqMetrix 0.125 in. BallProbe Sampling Optic is perfect for analysis of small volume, difficult-to-access samples, monitoring continuous-flow and micro-batch reactors, among other applications.

Thermo Fisher Scientific also offers a disposable 0.125 in. tip for use when interrogating harmful, sensitive or biological samples where safety, sterility and contamination are critical priorities.

Wetted materials	
Probe body	0.125 in. (3.2mm) OD Stainless steel 316L
Immersion optics	3mm diameter UV-grade sapphire ball
Sealing materials	High-temperature epoxy

Specifications	
Standard probe length	1 in. (25mm)
Probe OD (Outside Diameter)	0.125 in. (3.175mm)
Sample working distance	TouchRaman (sample contacts BallProbe lens)
Continuous operating temperature range	-20 to 150°C
Pressured design condition	6,000psi (413 bar)
Compatible wavelengths	500-1100nm

Optical properties
Made with high purity UV-grade sapphire ball lens aligned along the C-axis, eliminating response variability due to birefringence

Operating conditions
Suitable for intermittent exposure to most dilute and concentrated acids (hot & cold), bases and most organic solvents including ethanol, THF, ethyl acetate, acetone, DCM, toluene, pentane and acetonitrile
Avoid exposure to aqua regia, heated formic acid, mixed acid, TFAA

Related products
Thermo Scientific™ MarqMetrix™ All-In-One Process Raman Analyzer
Thermo Scientific™ MarqMetrix™ Performance BallProbe™ Sampling Optic
Thermo Scientific™ MarqMetrix™ Fiber BallProbe™ Sampling Optic filtered fiber optic interface specifically designed for the MarqMetrix BallProbe and MarqMetrix All-In-One Process Raman Analyzer
Thermo Scientific™ MarqMetrix™ Proximal Probe Sampling Optic



Learn more at thermofisher.com/MarqMetrixAIO

thermo scientific