



QSense Sensors for Biointerface Interaction Analysis

QSense® sensors for biointerface interaction analysis offer a versatile selection of QCM-D sensors designed to replicate surface materials commonly used in this field. Covering a broad spectrum of materials from metals, alloys, and ceramics to various grades of polymers, these sensors enable research across diverse applications, including dental and orthopaedic implants, biosensors, biomedical devices, nanomedicines, and drug development.



Suggested Sensors

- Silicon Dioxide (SiO_2)
- Hydroxyapatite (HA)
- Titanium (Grade 5)
- Stainless Steel (AISI 316)
- Polystyrene (PS)

QSense QCM-D in Biotech

QCM-D stands apart by providing real-time, label-free measurements of biomacromolecule interaction on a wide variety of surfaces. By characterizing and providing detailed information on the macromolecules and enabling rapid kinetic tracking, QCM-D uniquely answers key questions in biointerface analysis.

What can you measure?

- How much of the molecule of interest adsorbs to different surface materials?
- How do changes in concentration, pH, or temperature affect the adsorbed amount?
- How are the molecules arranged at the surface?
- How do surface modifications impact molecular interaction?
- How do multilayer films or biomimetic membranes build up and respond to relevant media?

Sensor selection for biointerface interaction analysis

Sensor Code	Material	Delivery Time	Application
QSX 301 – Au	Gold	1 week	Surface functionalization, drug delivery, and bioimaging
QSX 303 – SiO ₂	Silicon Dioxide	1 week	Substrates for biosensors, microfluidics, and surface modification
QSX 304 – SS2343	Stainless Steel (AISI 316)	1 week	Implants, surgical tools, and stents due to corrosion resistance and mechanical strength
QSX 309 – Al ₂ O ₃	Aluminum Oxide	1 week	Dental implants, joint prostheses, and wear-resistant coatings
QSX 310 – Ti	Titanium	1 week	Orthopedic and dental implants, prosthetics, pacemaker cases due to excellent biocompatibility
QSX 314 – Pt	Platinum	1 week	Electrodes for pacemakers, neural interfaces, and biosensors
QSX 336 – Borosilicate	Borosilicate Glass	1 week	Microfluidic chips, biosensor substrates, and labware
QSX 305 – PS	Polystyrene	6 weeks	Cell culture dishes, microplates, and petri dishes
QSX 311 – Ta	Tantalum	6 weeks	Bone implants and surgical devices due to biocompatibility and corrosion resistance
QSX 322 – Ag	Silver	6 weeks	Antimicrobial coatings, wound dressings, and biosensors
QSX 330 – ZrO ₂	Zirconium Dioxide	6 weeks	Dental crowns, orthopedic implants, wear-resistant coatings
QSX 348 – PDMS	Polydimethylsiloxane (Silicone Oil)	6 weeks	Microfluidic devices, soft lithography, and implantable devices
QSX 350 – PP	Polypropylene	6 weeks	Syringes, pipette tips, and medical packaging
QSX 351 – LDPE	Low-Density Polyethylene	6 weeks	Joint replacements, prosthetics, and labware
QSX 900 – Ti (Grade 5)	Ti-6Al-4V	8 weeks	High-strength alloy for load-bearing implants and joint replacements
QSX 900 – Nylon	Nylon "6.6", "66" etc.	8 weeks	Sutures, catheters, and membranes
QSX 900 – PVDF	Polyvinylidene Fluoride	8 weeks	Membranes for filtration and biosensors
QSX 900 – PMMA	Polymethyl Methacrylate	8 weeks	Intraocular lenses, dental prosthetics, and microfluidics
QSX 999 – PU	Polyurethane	8 weeks	Catheters, wound dressings, and implants

About us

At Biolin Scientific we are committed to empower professionals in Surface and Interface science and engineering to reach outstanding results faster and easier. Our instruments and sensors are tailored for advanced analysis of thin film properties and surface and interface phenomena at the nanoscale. Trusted by top universities and industrial labs worldwide, our premium solutions help solve complex challenges and drive progress in scientific research and product development.

Biolin Scientific AB

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Empowering Innovators