Biolin Scientific
[Progress Together]

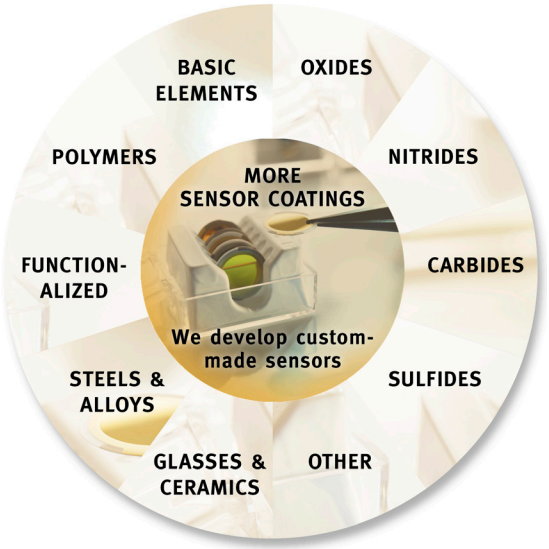
Q-Sense | Q-Sensors

Your world on a sensor

Our quality – your research success

Q-Sense takes pride in the extensive range of high quality sensors developed and produced in our world class in-house facilities. When you buy Q-Sensors they are quality tested to ensure reliability and quality guaranteed for QCM-D studies.

All this so you can get the most out of your time spent planning and executing experiments.

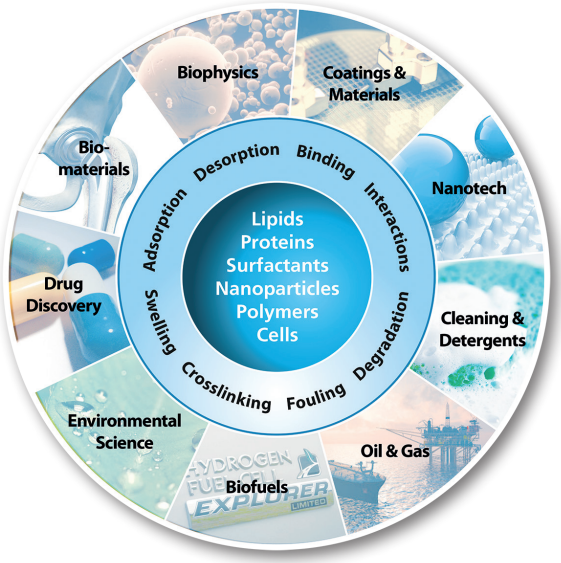


Our wide range – your possibilities

Q-Sense standard collection of Q-Sensors contains a wide range of materials such as basic elements, polymers, steels and functional surfaces and much more to accommodate the many different customer needs.

Customers are found in research ranging from molecular and medical sciences, to environmental sciences, oil and gas and detergent and cleaning research.

Explore the list of coating materials to discover your research possibilities.



Q-Sensors specifications	
Frequency	4.95 MHz +/- 50 kHz
Cut	AT
Size	Diameter: 14 mm, thickness: 0.3 mm
Finish	Optically polished, surface roughness of electrode less than 3 nm (RMS)

Your imagination – our challenge

Q-Sensors can be coated with basically any material, building a model system for the research problem you want to explore. Through the years our customers have challenged us to deliver a wide range of custom-made surface coatings to fit their specific goal and experiment at hand – and we have delivered. Some are now in our standard collection and many can be made upon request.

For example we have sensors coated with PVDF, the same material that Falcon tubes are made of, for container-closure interaction studies and we have nylon fabric coating for cleaning and detergent applications. Please visit our website www.biolinscientific.com/q-sense to explore our list of custom-made surfaces and their many application areas for inspiration.

We now challenge you to test our scientific skills and innovation capacity – which surface would take your research to the next level? Contact us at info@biolinscientific.com.

Please see our standard collection of Q-Sensors below (for custom made sensors, please visit www.biolinscientific.com/q-sense). For inspiration, we have added some examples of customer usage – but it is only your imagination that sets the limit!

Q-Sensors	Inspirational customer cases	
Sensor description	Example of model systems	Example of application
Aluminium	Electrodes	Electrochemistry, lithium insertion, energy
Aluminium Oxide	Water treatment plant, nanoparticles	Environmental
AlSO	Kaolinite mimic	Energy, mining
Amorphous Fluoropolymer AF1600 (from DuPont)	Teflon, non-stick surfaces, inert surfaces	Protein surfaces, cleaning and detergent analysis, petroleum
Barium Titanate	Dielectric ceramic used for capacitors	
Biotin (on gold)	Biological, biochemical interaction	Protein interactions, molecular biology, antigens
Borosilicate	Glass labware, syringes, cookware	Pharmaceuticals, cleaning and detergent anlysis
Calcium Carbonate	Minerals (e.g. limestone, chalk, marble, tufa)	Energy, mining
Cellulose (on SiO2)	Fabric, filter, fiber	Enzyme interactions, cleaning, electrochemistry, biofuels
Chromium	Coating	Corrosion, electronics
Cobalt	Orthopedic implant, battery, pigment	Medical device, energy, electroplating
Copper	Wire, cables, coating	Corrosion, antifouling
Gold	Universal surface	Thiols, anything – everything sticks to gold
Gold (Ti Adhesion)	Universal surface	Fundamental electrochemistry
Graphene**	Graphene oxide	Electronics, energy storage, biomedical applications and bio-sensors
His-tag Capturing	Biological systems, biochemical interactions	Antibody, protein-protein, probing of conformational changes
Hydroxyapatite	Bone, teeth, bioinspired material, mineral	Biomaterials, medical device
Iron	Combustion engine, nano particles	Corrosion, environmental transport, energy
Iron Oxide (Fe2O3 and Fe3O4)	Hematite and magnetite mimic, pipelines, nanoparticles, minerals	Solar energy, photo and pigment catalyst, corrosion, biofilm formation, environmental transport, energy
Magnesium	Mineral	Energy, mining, used in bikes, cars, cellphones
Molybdenum	Mineral	Energy, mining, aslo replaces Tungsten in some ferlalizer
NHS-Amine Coupling	Biological, biochemical interaction	Protein interactions, molecular biology, antigen-antibody
Nylon "6.6"	Nylon fabric	Cleaning and detergent analysis
PEI	Additive, flocculating agent	Adhesives, water treatment, cosmetics, wet-strength agent
Platinum	Electrodes	Fuel cells, catalytic converters, energy
Polystyrene	Hydrophobic surface, filters	Cell studies, inert surfaces, filter interaction, medical device
PMMA	Plexiglass, bone cement, dental filling	Biomedical, lenses, aquariums, car headlights
PVDF	Plastic, pharmaceutical filter, falcon tubes	Container interactions, pharmaceutical industry
Silicon	Semiconductor	Energy, etching
Silicon Carbide	Rare mineral moissanite, carbone supporters	Energy, catalyst, electronics
Silicon Dioxide	Glass	Etching processes, silanization, cleaning and detergent analysis
Silicon Nitride	Biomaterials, integrated circuits	Electronics, medical device
Silicon Oxycarbide	Carbon supports, electrodes	Catalysts, LEDs, brakes, graphene production, energy
Silver	Nano particles, antimicrobial coating	Environmental transport, coatings, materials
Soda-lime glass	Household glass, labware	Cleaning products, surface interactions
Steel (SS2343, US 316 & L605)	Stents, acid resistant steel, stainless	Environmetal, medical device, blood coagulations,
Tantalum	Electrodes, reactors	Alloys, electronics, energy
Tantalum Nitride	Electrodes	Electronics
Titanium	Medical implants	Medical Device, biomaterials
Tungsten	Electrodes	Etching processes
Zinc Oxide	Minerals	Mining, energy, rubber manufacuting, ceramic, calamine lotion

* Please note that specifications in this brochure may be subject to change without notice
** Developed in collaboration with ICN2

Biolin Scientific
[Progress Together]

Biolin Scientific AB, Box 70379, SE-107 24 Stockholm, Sweden
Visiting address: Klarabergsviadukten 70, House D, floor 8
Phone: +46 31 769 7690, E-mail: info@biolinscientific.com
www.biolinscientific.com

About Us

Biolin Scientific is a leading Nordic instrumentation company with roots in Sweden, Denmark and Finland. Our customers include companies working with pharmaceuticals, energy, chemicals, and advanced materials, as well as academic and governmental research institutes. Our precision instruments help discover better drugs faster, develop better solutions for energy and materials, and perform research at the frontiers of science and technology.