

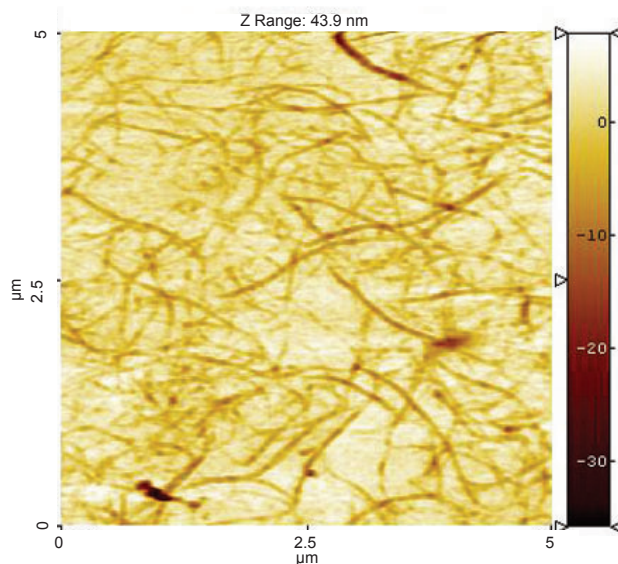
Q-Sense Cellulose Coated Sensor

● Q-Sense Sensor QSX 334 is a representative model surface of native cellulosic fibers, thanks to the native type of cellulose used during coating.

Before use, rinse the sensor gently with water and dry with nitrogen gas. If the sensors are monitored in water, there might be some initial swelling of the cellulose, which will level out.

General cleaning procedures are not given due to the varying usages of this sensor. For some applications like degradation studies, the sensors can only be used once as cellulose surfaces. ● ● ●

Please note that cellulose is a natural material, and minor variations between batches with respect to structure and composition may occur.



AFM image of QSX 334

● SENSOR SPECIFICATIONS

Cellulose thickness	~ 6 nm
Surface roughness	3-4 nm RMS (according to AFM)
Adhesive layer	Poly(ethylene imine)
Sensor base	SiO ₂
Stability	Stable in water and mild buffers

● CELLULOSE SPECIFICATIONS

Cellulose type	Microfibrillated cellulose ^{1*}
Crystallinity	Crystalline cellulose I and amorphous regions
Fibril diameter	5-6 nm
Fibril aggregates	Some aggregates of 10-20 nm
Fibril length	Up to several µm

1 Pääkkö et al. (2007) Biomacromolecules, 8, 1934-1941 * Also referred to as nanofibrillar cellulose in literature

www.q-sense.com