

QTF F-Master Is The World's First Real Time Quartz Tuning Fork Biosensor (QTF) Measurement System That Work In Liquid.



QTF F-Master is the first fully integrated QTF based mass sensitive biosensor measurement system. It consist of QTF driver circuit, frequency counter, vertical liquid alignment system and F-Master software. It is used via computer over the USB cable. The system does not require any adjustment or any setting. It is complete and ready to use. As soon as you plug the power and USB cable you are ready to make experiment.

Detect viruses, bacteria and any target molecule

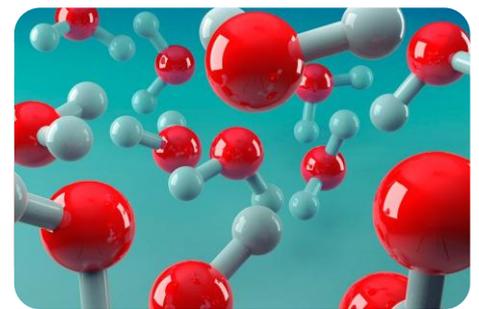
QTF is a very sensitive biosensor technology. Design your selective surface to detect any analyte. Your target could be viruses, bacteria or any other molecules. This is a new research area. Became a pioneering researcher in biosensor technologies.



Viruses



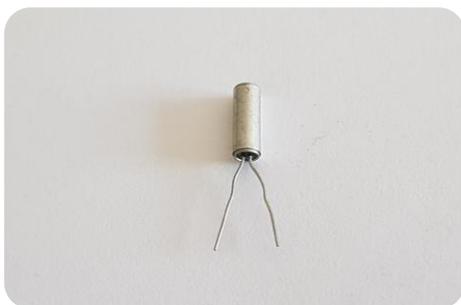
Bacteria



Molecule

Use standard low cost 32 kHz quartz crystal as sensor base or chip

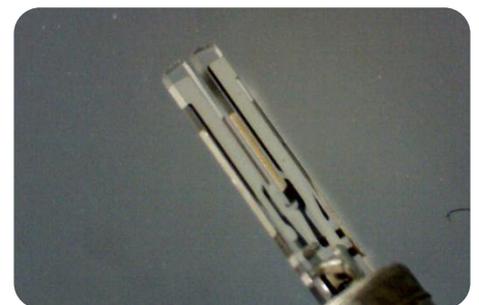
You don't need to purchase special sensor chips. The sensor base (or the chip) is a standard quartz crystal. These crystals are developed by the watch industry and used in the electronic industry widely. It could be found at local electronic component supplier shops or web sites. Because of its being a very low cost (approximately 0,03 USD) you could develop your sensor as disposable type. After removing the vacuum package you will find the quartz tuning fork structure inside. This is your biosensor base.



32 kHz Quartz Crystal



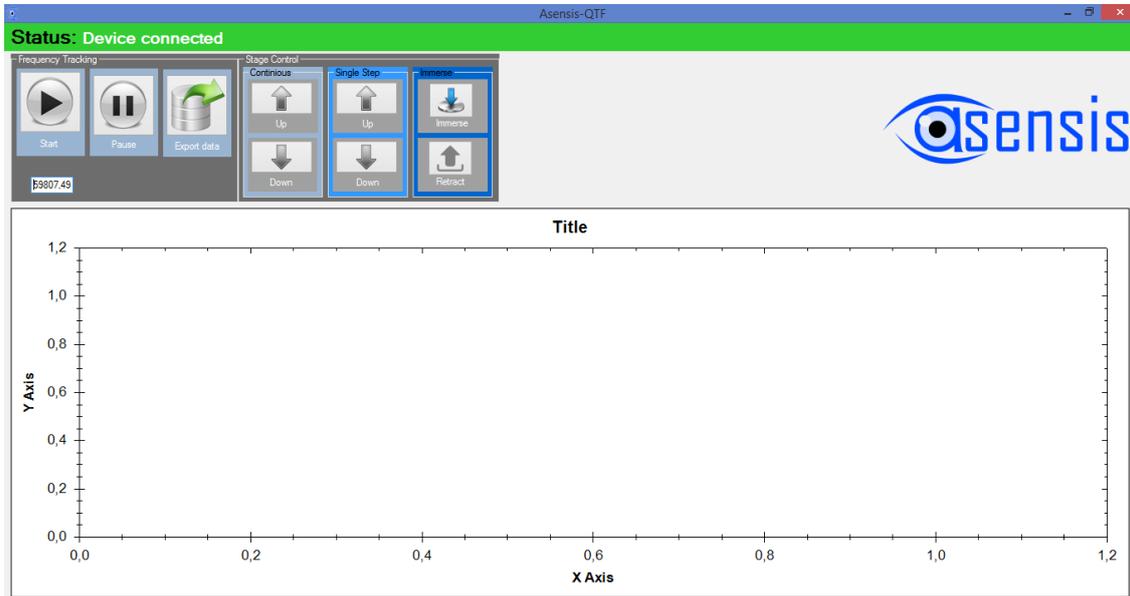
Vacuum package removed



A closer look to QTF

Simple and clear user interface

QTF F-Master is a computer controlled system. You can use the user interface by clicking a few button. It is simple and clear. No training required. Detailed explanation made in the user manual.



Easy operation with vertical alignment system

QTF structure has electrodes at its surface. If you immerse it into a liquid a short circuit will occur. This makes the experiment in the liquid impossible. There is a narrow region at the tip of the QTF with no electrodes. QTF F-Master has an electro mechanic system to align the QTF into the liquid precisely and in repeatable manner. This will help you to ensure good experiment condition.



Features

Work at gas and liquid environment

You can use QTF sensors as biosensor to detect biomaterials in liquid. You can also use QTF as gas sensors. QTF F-Master works in either liquid or gas environment properly.

Keep measuring the frequency during experiment

QTF F-Master measures the frequency in real time. During your experiment you can keep measuring. It will record 10 frequency value per second.

Fast and reliable results

QTF F-Master is a stable and ready to use system. You can perform hundreds of experiment each day with reliable results. So you can use the results in your publication without extra examination.

Export your data in .xlsx file format

You can export your data to be used in another scientific software such as origin and matlab. Data exported in .xlsx file format.

The system measures the series resonance frequency of the QTF

32 kHz QTF has exactly 32768 Hz parallel resonance frequency. But the system uses series resonance frequency which is slightly below that value.

Specifications

- 1 to 10 sample per second
- 0.3 Hz frequency resolution
- Measurement range between 29000Hz and 33000Hz
- Exporting data in excel format
- 60mm petri dish
- 21 mm range in vertical direction.
- Simple and easy operation.

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