QCM Flow Cell Kit

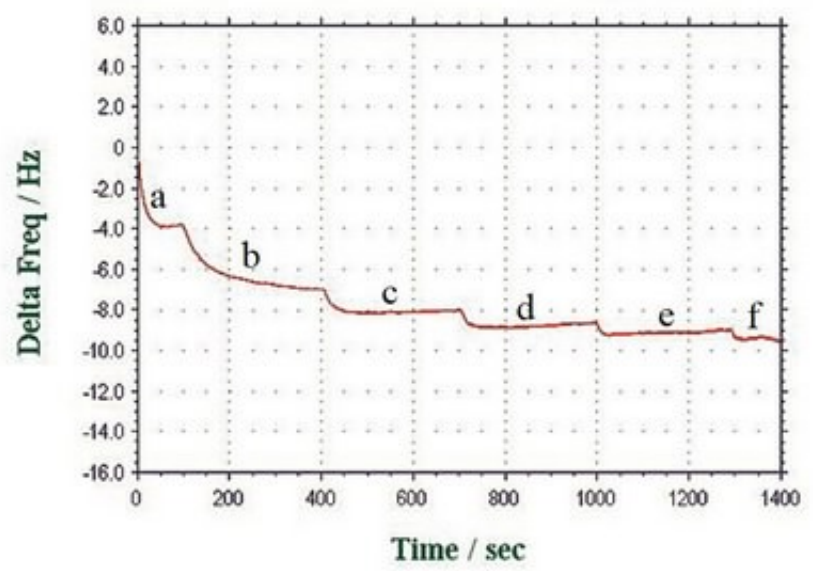
Also available EQCM flow cell kit

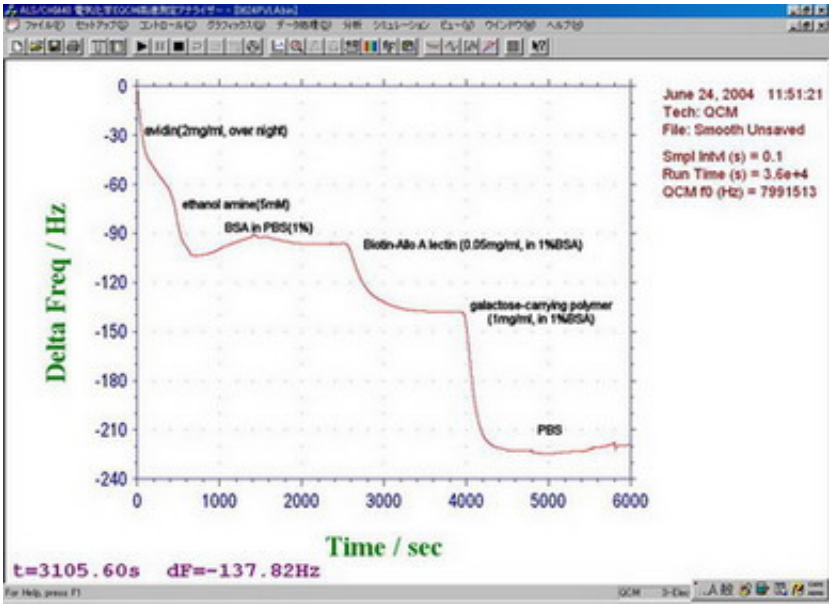
The Resonance frequency of quartz changes when material attaches to the electrode's surface.
This product is capable of super-micro quantitative analysis by using this unique behavior.

solution: PBS with 2 mM Dithiodipropionic acid
a: stationary state
Flow rate: **b**:85, **c**:110, **d**:140, **e**:160, **f**:190 μl/min

Baseline is stable enough as shown in figure.

Result of Frequency Change by Serial Monitoring





Above figure shows result of change in frequency with time by adding :
avidin (2 mg/ml), ethanolamine (5 mM),
BSA in PBS (1%),
Biotin-Allo A lectin (0.05 mg/ml, in 1% BSA),
galactose-carrying polymer (1 mg/ml, in 1% BSA),
PBS

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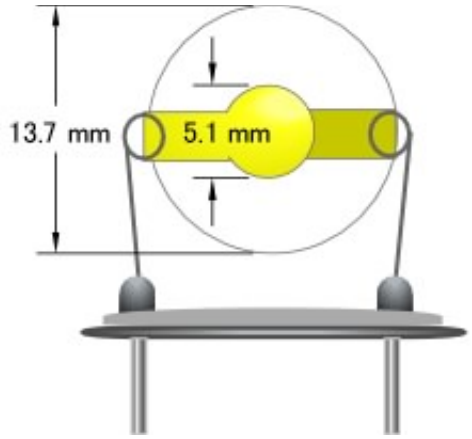
Quartz Crystal

Thickness of 10 MHz quartz is 0.16 mm. Accelerating the oscillation frequency means to make the quartz thinner and delicate. Resolution and easiness to care for should be taken into the consideration. We can offer two surface conditions of quartz - Polished and Unpolished. Polished one has a 100 Å thickness of gold layer on a titanium adhesive layer. We would recommend the unpolished quartz if there is a possibility that the titanium layer might effect on your experiment. We would like you to note that the gold layer on the unpolished quartz peels off easier than the polished one because it does not have adhesive layer.



Catalog No.	Description	qty	Frequency
010226	Quartz crystal Au	5	7.995 MHz
012106	Quartz crystal Pt		

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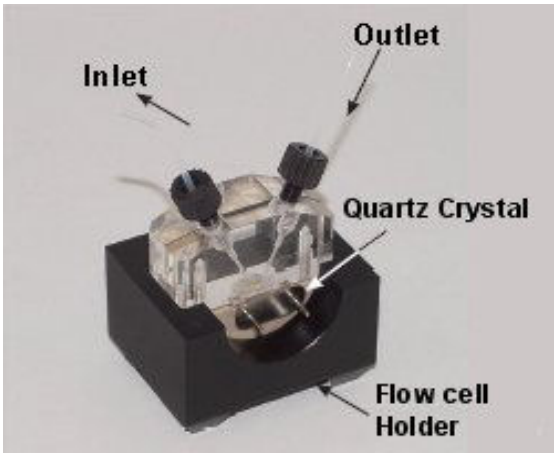
QCM Flow Cell Kit - Components

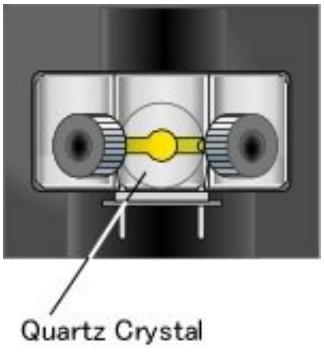
Catalog No.	Description	Components
011121	QCM Flow cell kit	Acrylic Flow Cell PEEK Cell PEEK Cap Teflon tube Dynaseal PEEK (2) Fixing Screw (2) Silicon O-Ring (2) Flow Cell Holder Pt counter electrode
	Optional Products	
012167	RE-1B Reference electrode (Ag/AgCl)	
012171	RE-7 Non Aqueous reference electrode (Ag/Ag^+)	

This cell even can be used in two ways, with the choose of PEEK Cell or Acrylic Flow Cell.
- Acrylic Flow Cell, for **QCM Flow Mode**
- PEEK Cell, for **EQCM Mode**

QCM Flow Mode

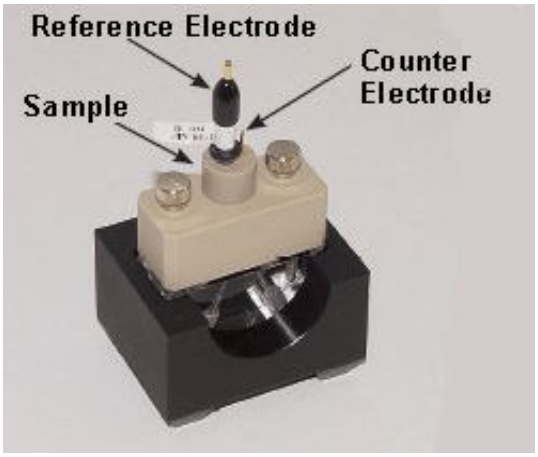
Using physical absorption such as antigen-antibody reaction on a solid surface

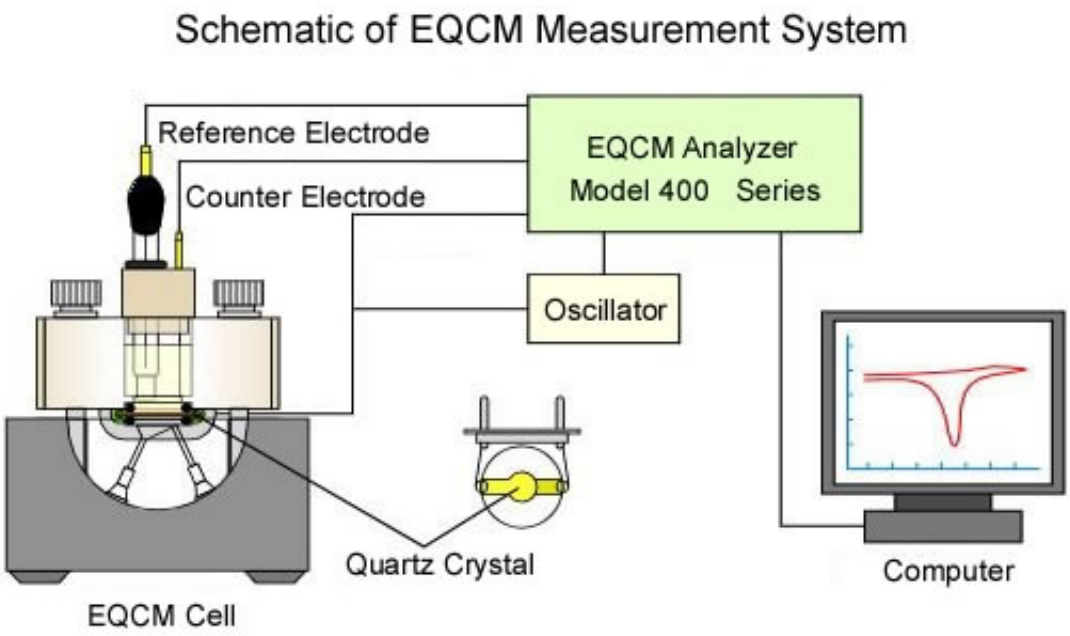




EQCM Mode

Using electrochemical absorption





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