

# Monitoring of physical property change

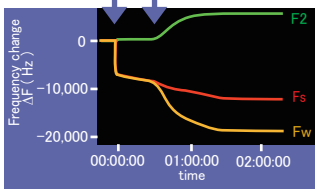
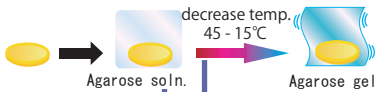
**Method**

1. Add 500 $\mu$ L of measuring buffer.
2. Set starting temperature.
3. Increase or decrease temperature.

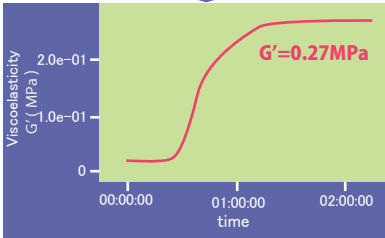
**Example**

① Monitoring of gelation

(measurement of delation point)



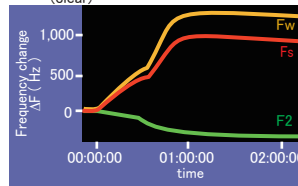
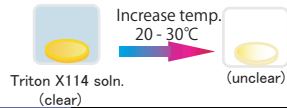
Analysis



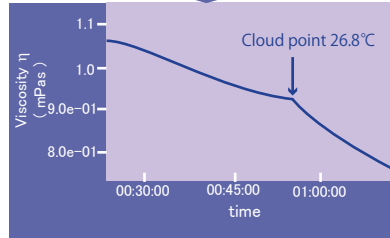
Increase of F2 means viscoelastical change.  
By analysing  $G'$ , it is confirmed the gelation process.

② Monitoring of viscoelasticity

(measurement of cloud point)



Analysis



Cloud point is the temperature, which solubility is increased by cleavaging hydrogen bond.

The viscosity is suddenly changed at 26.8°C, and it is cloud point.

**Application**

1. Measurement of temperature which cause structure change.
2. Observation of Kraft point of surfactant.
3. Monitoring of phase transition for liquid crystal or gell matrix.
4. Monitoring of viscoelastic change of their films.
5. Evaluation of biocompatibility of materials.

**More Application**

It is also possible to induce the a.m. property change chemically !

1. Monitoring of structure change by drug-protein and ligand-receptor interaction.
2. Observation of structure change by denaturing agents.
3. Monitoring of structure change of surface materials( i.e.: grafted polymers)