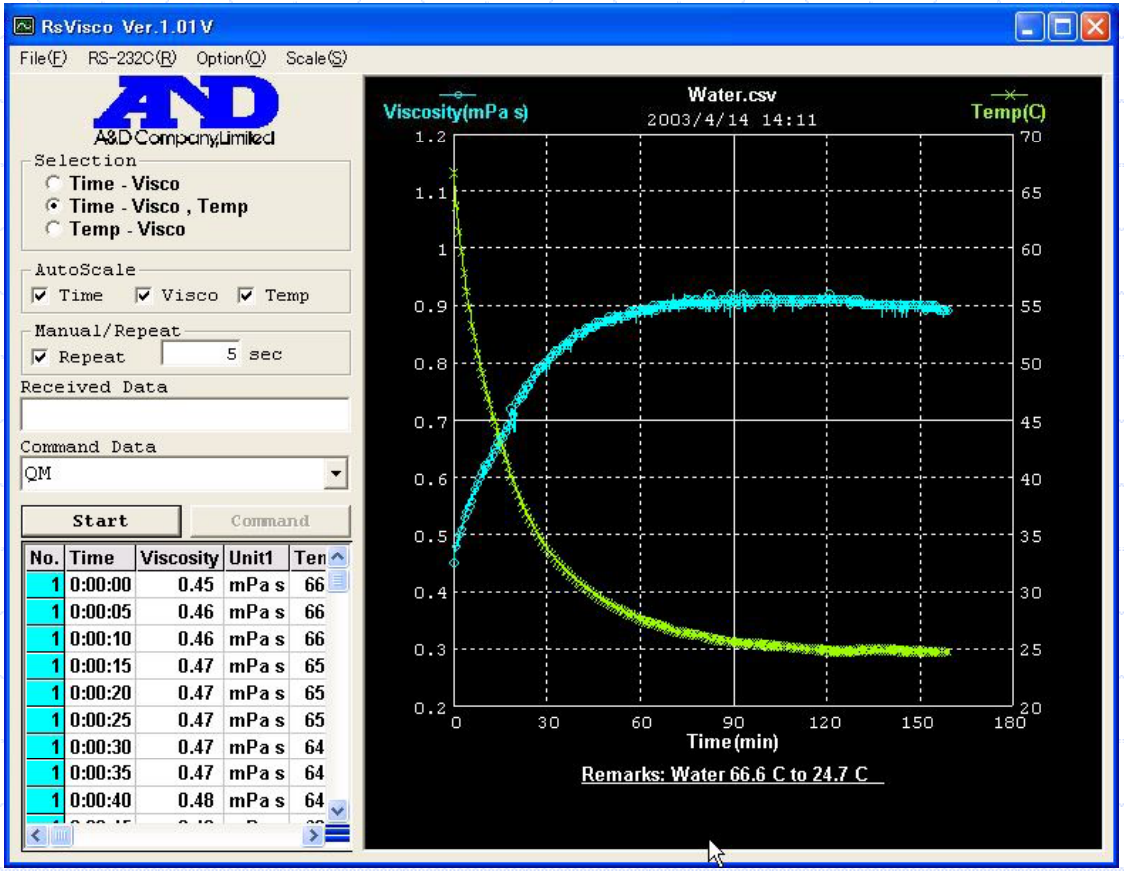
A&D SV-10/SV-100 Viscometer

Viscometry Revolution !

A&D Company Limited

WinCT-Viscosity Software

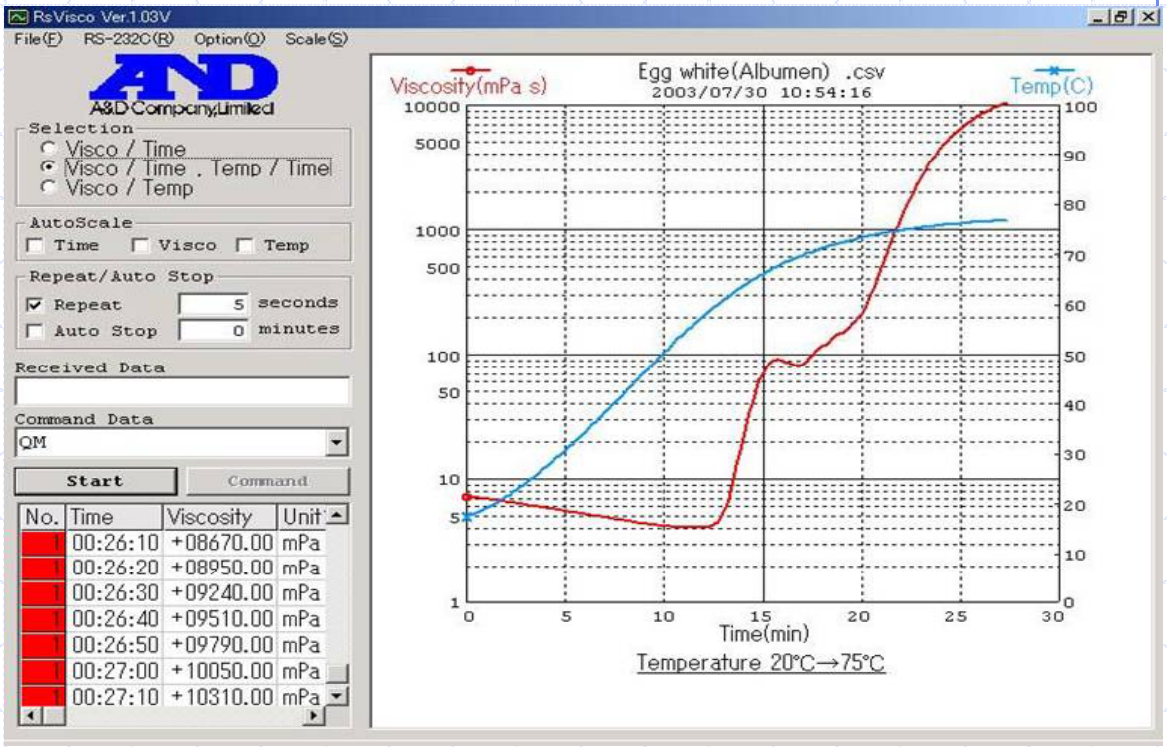
Viscosity & Temperature of Pure Water



Temperature has great influence on viscosity.!!

- Viscosity of Pure Water at 20 degree centigrade is 1.002 mPa· s (cP)

Temperature (centigrade)	Viscosity (cP)
0	1.792
10	1.307
20	1.002
30	0.797
40	0.653
50	0.547
80	0.355
100	0.282



A&D SV-10

Data Transmission Software **WinCT-Viscosity**

Sine wave **V**ibro Viscometer

Viscometry Revolution

SV

Technology

“Viscometry Revolution!”

The field of viscometry has been dominated for more than 50 years by the conventional methods – rotation type, capillary type, cup and drop type.

Even Brookfield , one of the giants of the viscometer manufacturers, has brought in only minor improvements to the viscometer market.

Variety of Viscometers

Rotation Type

Drop (Falling ball) Type

Variety of Viscometers

- Capillary type

- Cup type

Variety of Viscometers

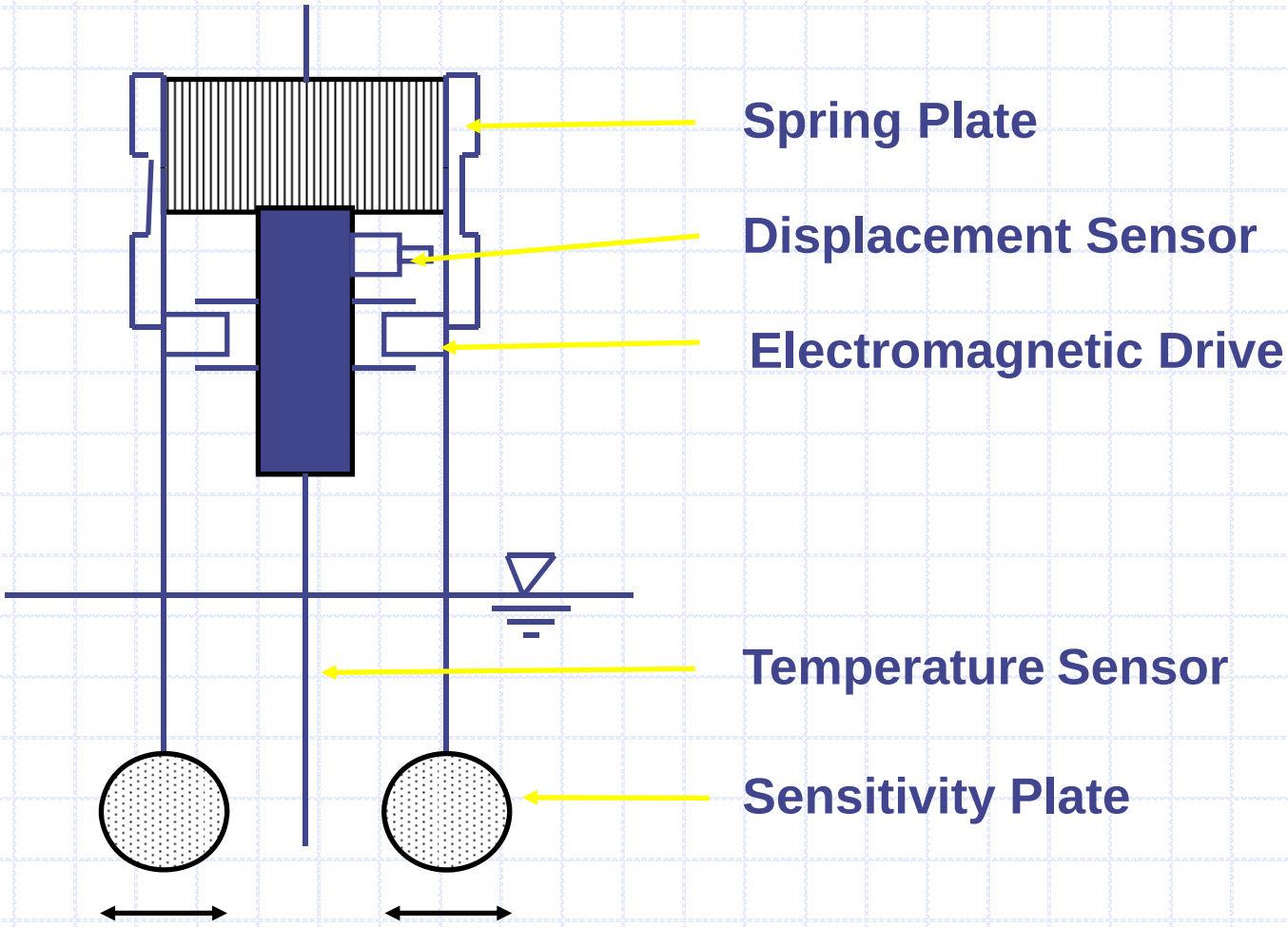
- Vibration type

SV Technology

1. **Measurement at Resonant Frequency**
   - High sensitivity & Accuracy
2. **Tuning Fork mechanism as a detector**
   - Eliminating reactions (reducing the noise)
   - Accuracy & a wide range of measurement
3. **Real Time Graphical Measurement**
   - WinCT-Viscosity

SV Technology

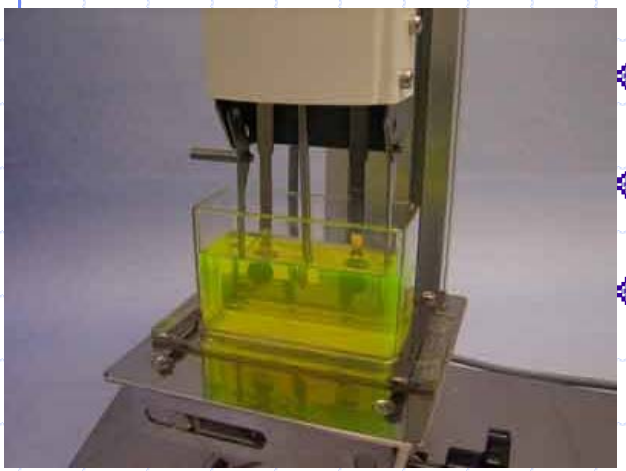
Mechanism for eliminating reactions



SV-10
New Viscosity Detector

Inside of Vibration Sensor

Specifications Measuring Range



- SV-10
- 0.3 - 10,000 mPa.s **(10Pa.s)**
- 13 mm (Sensor diameter)

- SV-100
- 1,000 - 100,000 mPa.s **(100Pa.s)**
- 5 mm (Sensor diameter)

Specifications

- **Measuring method**
  - Tuning Fork Vibration Method
    Natural frequency 30 Hz
- **Repeatability**
  - 1% (Standard Deviation, 20-30℃, No condensation)
- **Operating Temperature**
  - 10 ~ 40℃ (50 ~ 104 F)
- **Sample Weight**
  - 35ml and more
- **Temperature Indicator Measuring Range**
  - 0℃ to 100℃ with the resolution of 0.1℃

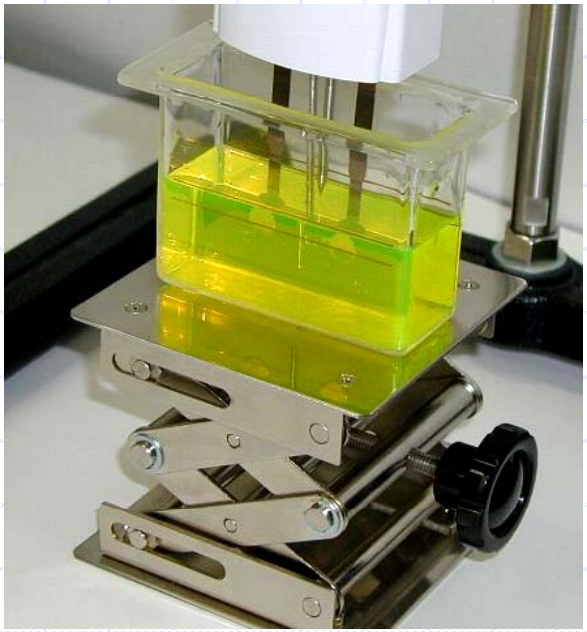
Specifications

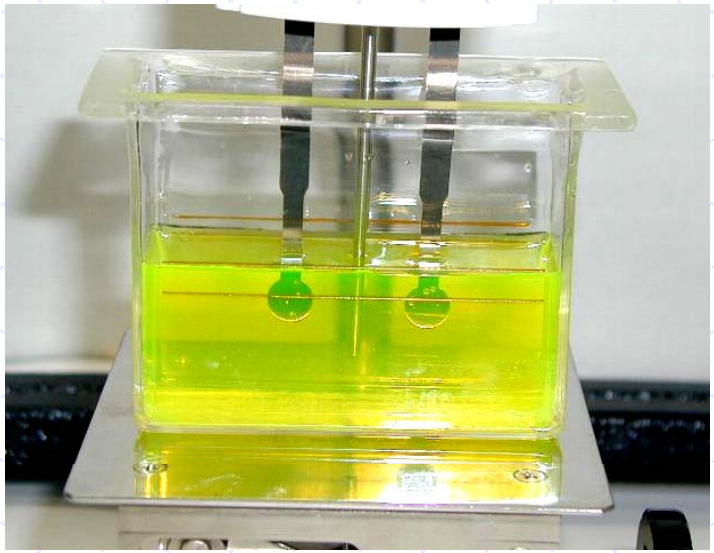
- **Display**
  - Vacumn Fluorescent Display (VFD)
- **Standard accessories**
  - Data transmission software (WinCT-Viscosity)
  - Polycarbonate sample containers (120℃ heat resistance)
  - RS232C interface
- **Power supply (by AC adaptor)**
  - AC100/120/220/240 V, 50/60Hz, 14VA

Features

- Excellent Accuracy
- Wide Measurement Range
- Accurate Detection of Temperature
  – Thermometer is standard
- Continuous Measurement
- Non-Newtonian Sample Viscosity Measurement
- Foaming Sample Measurement
- Continuous Measurement of Change in Property of Fluid Samples
- Simple Operation and Short Measurement Time
- Real-time Graphic Measurement Data Output
  WinCT-Viscosity Software

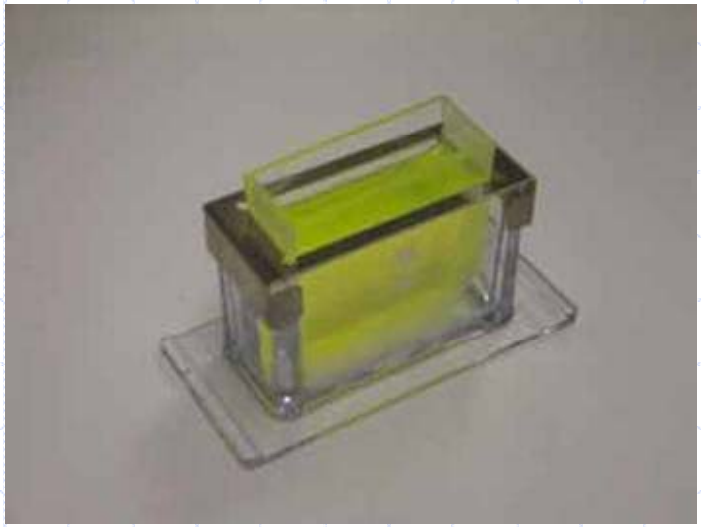
Sensor (SV-10) & Sample Container

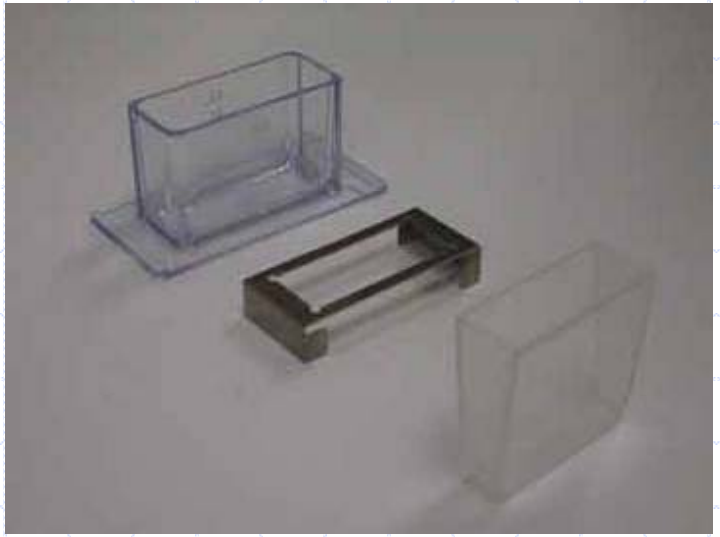




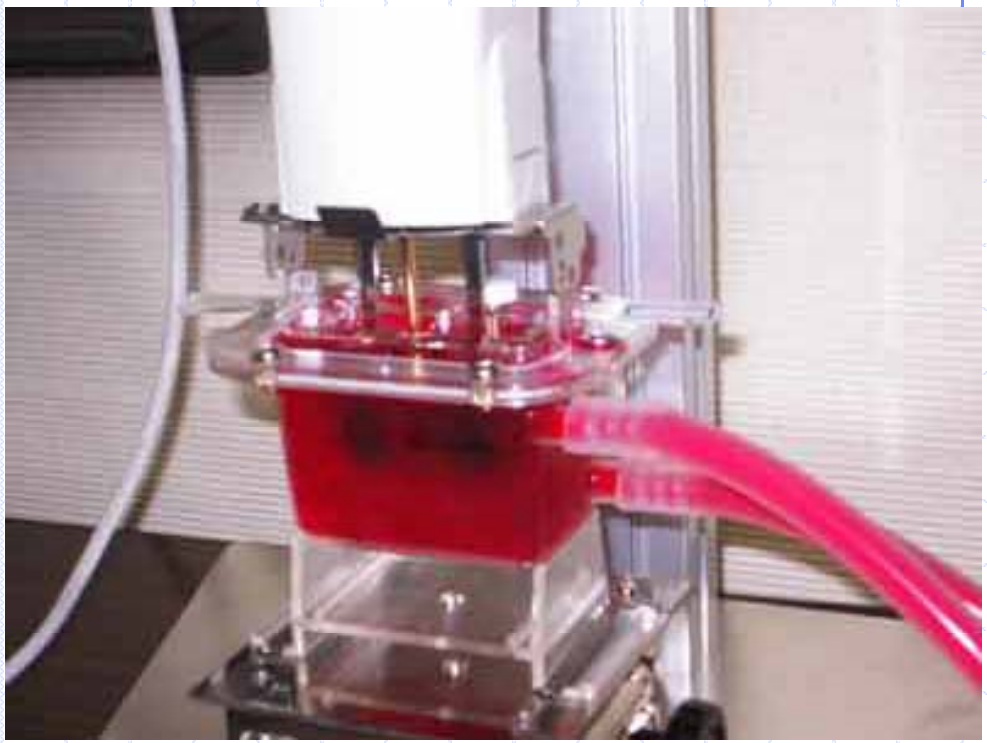
Vibration Sensor and Sample liquid

10ml cup & 13ml Glass cup

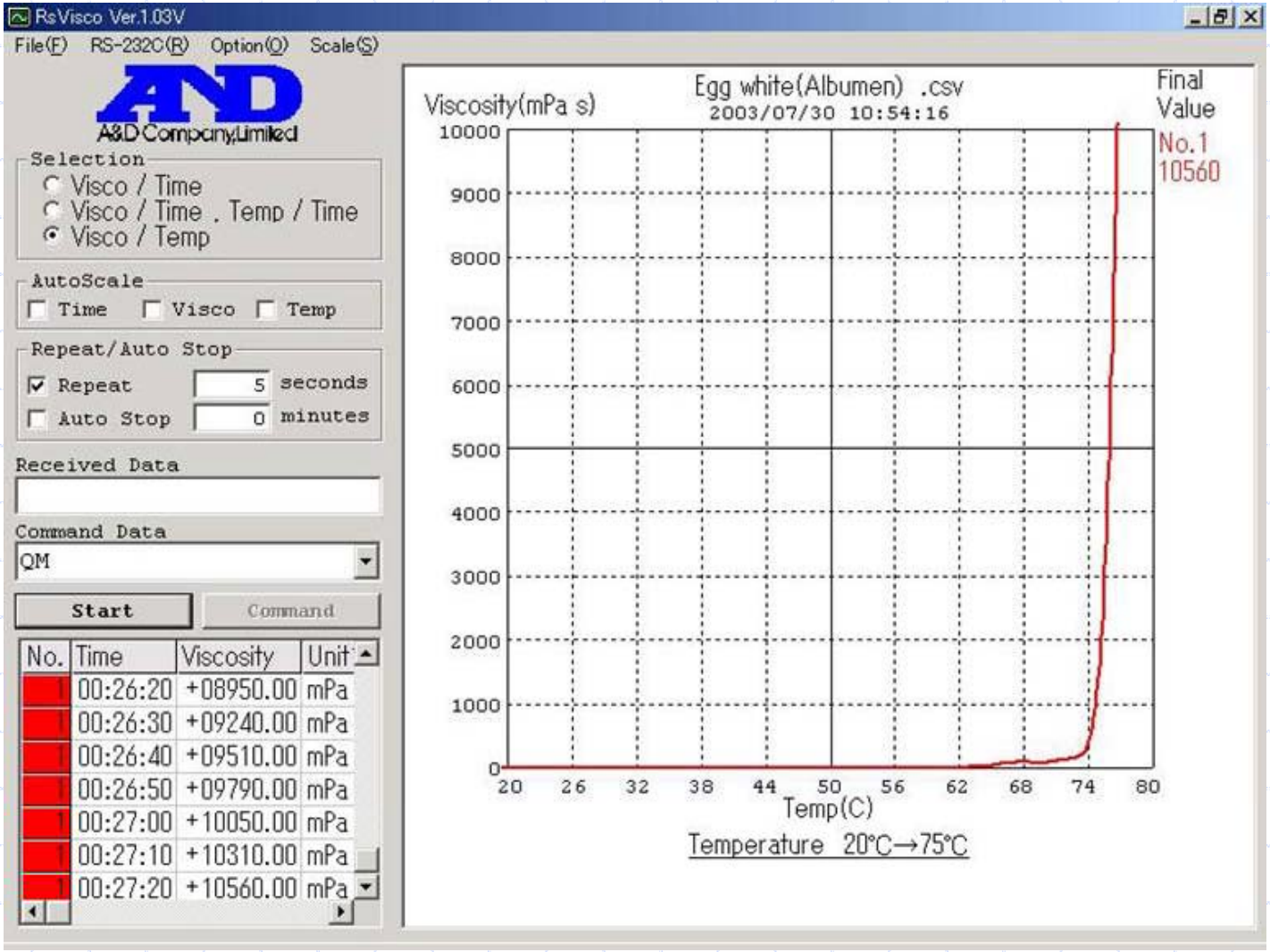




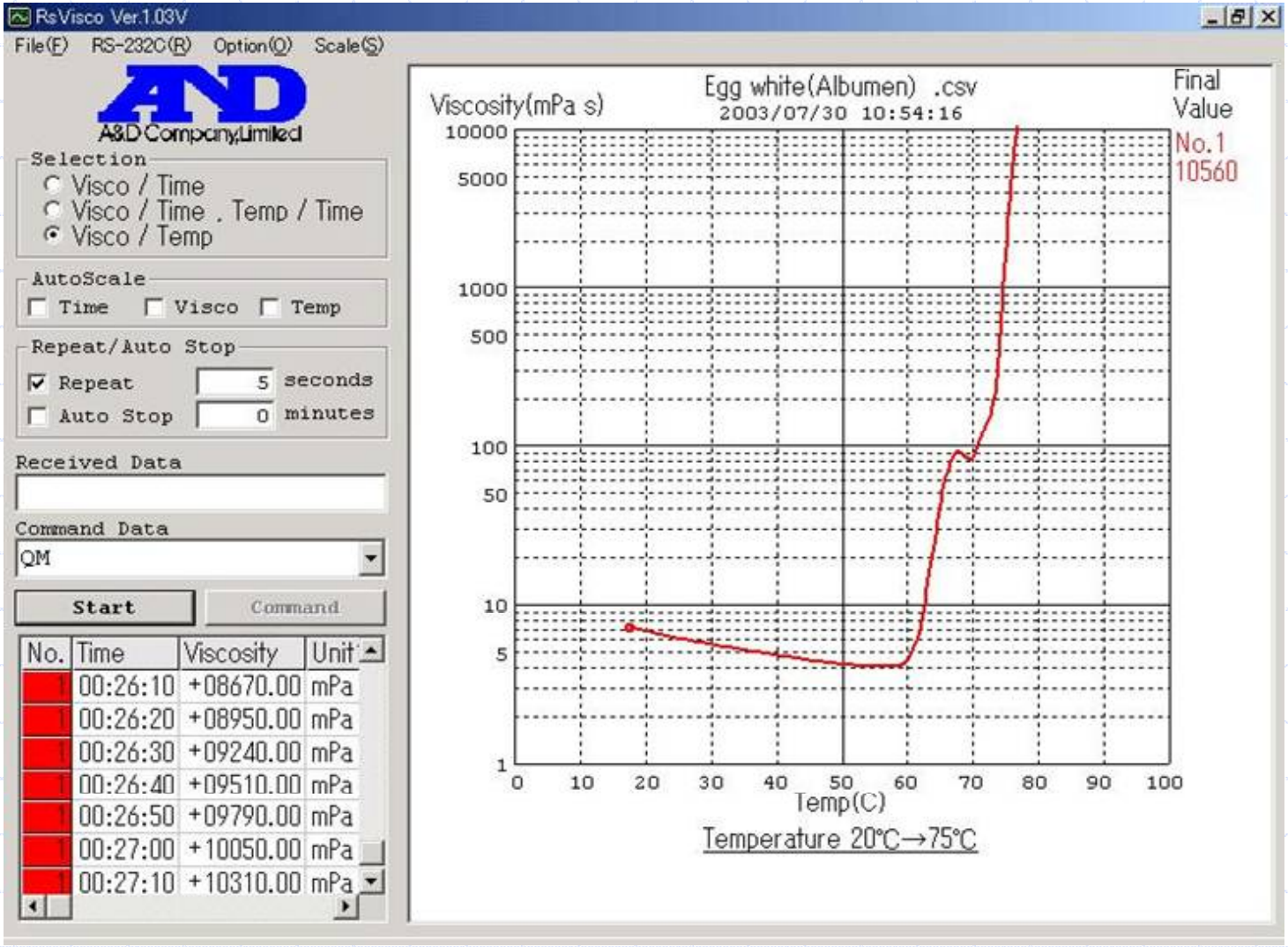
Water jacket



Win-CT Viscosity (Egg white)



WinCT-Viscosity (Egg white)



Win-CT Viscosity (Egg white)

WinCT-Viscosity (Egg white)

Technology Comparison

	SV-10	Rotation Type	Cup Type
Waiting time	15 seconds	2 ~ 3 minutes	20 ~ 30 seconds
Accuracy	±1% of **Reading**	±1% of **Full Scale**	±1% of **Reading**
Measurement Type	Newtonian / Non-Newtonian	Newtonian / Non-Newtonian	Newtonian
Low viscosity measurement	0.3 ~ 10,000 mPa· s	15 ~ 2M mPa· s	0.3 ~ 3,000 mPa· s
Easy Operation	Auto / One detector only	Auto/ Spindle replacement required	Cup replacement required
Graphical software	Standard	Option	NA
Digital output	OK	OK	NA

Target Market Segments

By Applications

- Low viscosity measurement
- Non-Newtonian fluid measurement
- Bubble & flowing fluid measurement
- Real time & continuous graphical measurement with temperature
- Curing and softening process measurement

Target Market Segments

By Industry

- Research & Development sections of companies in such industries as;
  Chemical, Cosmetic, Food, Ink, Paint, Precision Machinery, Pharmaceutical, etc.
- Universities

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Thank you !