

Application Note

Temperature dependence of viscosity of ethylene glycol

Industry :
Instrument

6. Procedure

1) Enter the following conditions in measurement condition of the sequence mode of control software.

✧ Measurement mode	:Sequence mode
✧ Measurement temperature	:0-200°C (10°C interval)
✧ Motor rotation speed	:1,000 rpm
✧ Measurement time	:I (1 second)
✧ Repeat count	:10 times
✧ Measurement interval	:5 seconds
✧ Waiting time for temperature stability	:10 minutes

2)

with a cap and packing, set the sample container in the EMS Viscometer, and click the measurement button.

7. Example

The viscosity measurement results about the temperature dependence of ethylene glycol are shown in Figure 1 and Table 1,2.

The result is confirmed to be corresponding to the value described in the reference below well.

The difference of measurement results is seen to be large in the high temperature, however, it can be measured stably within R.S.D.3% even in the vicinity of boiling point (197.3°C).

For your information, it takes about 4 and half hours to measure the temperature dependence of the viscosity with sequence measurement.

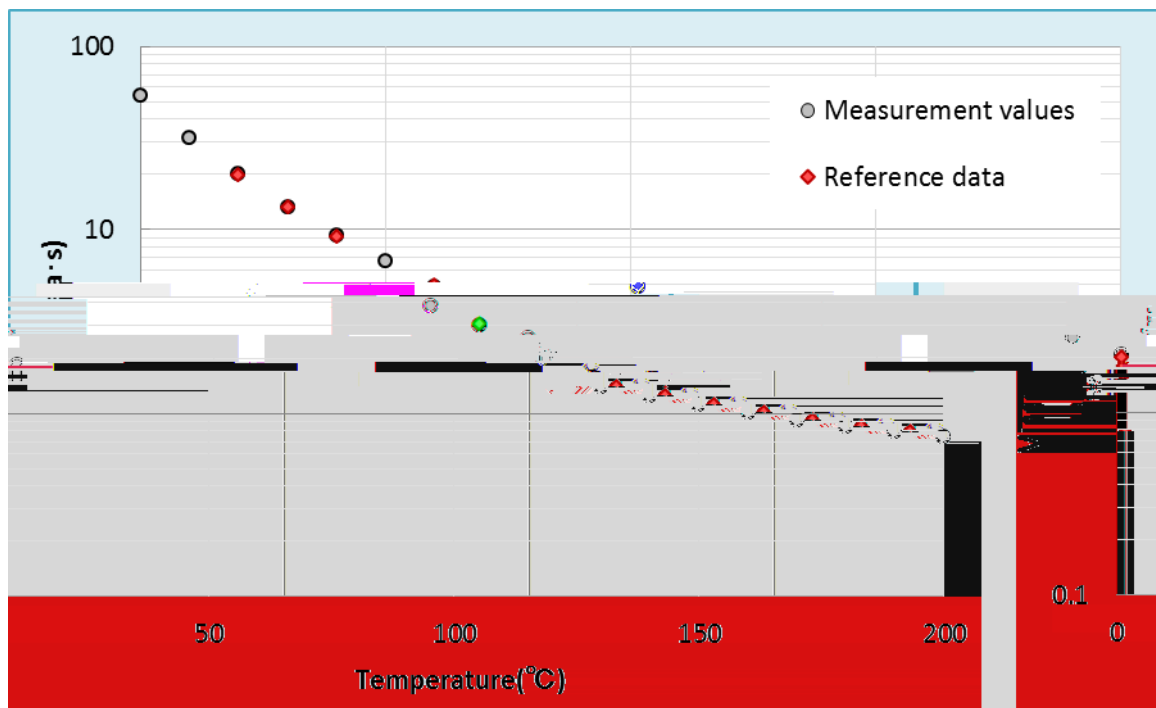


Figure 1. Measurement result about the temperature dependence of the viscosity of ethylene glycol

Table 1. Measurement result about the temperature dependence of the viscosity (0 - 100°C)