



RheoSense

Simply Precise™



microVISC PRO®: Accurate Super-High-Viscosity Measurement Above 1,000,000 mPa.s

The RheoSense newest viscometer **microVISC PRO®** is an ideal viscometer for measuring high and super-high viscosity samples such as creams, paints and cannabis oils. The highlighted features are as follows:

- Minimal sample volume requirement, as small as 100 μL ! Thanks to microfluidics technology!
- Easy to use & portable
- Fast, built-in temperature control: 15 °C to 60 °C within 10 minutes
- Wide shear rate range (1 to 8,300 s^{-1}) for Newtonian and non-Newtonian samples
- Walk-up 7" touchscreen, compatible with Clariti™ data analysis software
- Compact, hood/glovebox compatible, with optional rechargeable battery

For this application brief, we tested Cannon high viscosity standard oil, N190000, at a shear rate of 5.96 s^{-1} and a temperature of 15°C. The test was conducted as follows:

1. ~250 μL of sample was back loaded into a microVISC pipette.
2. The microVISC PRO was equipped with an E20 chip to measure eight consecutive segments at 15°C. As is standard on the microVISC PRO, the first two were excluded from analysis: the first primes the chip and the second displaces any remaining previous sample. The remaining six were measured at 5.96 s^{-1} .
3. Cleaning was performed by loading heptane into a microVISC pipette and selecting the high-viscosity cleaning mode. This process was repeated at least twice to ensure thorough cleaning of the chip. Alternatively, the chip can be cleaned automatically using the RheoSense Chip Cleaning Station (CCS), a fast and effective option.

N190000 showed an average viscosity of approximately 1,165,800 mPa.s at 15°C, with a relative standard deviation (%RSD) of 0.75% across the six analyzed segments. The data show excellent measurement repeatability using the microVISC PRO, highlighting the capability of VROC® technology to accurately and reliably measure super-high-viscosity samples above 1,000,000 mPa.s.





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