



RheoSense

Simply Precise®

Measuring Viscosity of Nivea Hand Cream with m-VROC II

If you need to measure a high viscosity hand or face cream across a broad shear rate range, the **m-VROC® II** now offers the capability to do this accurately. Highlighted features of the instrument include:

- Ability to test small sample quantities repeatedly.
- High accuracy, $\pm 2\%$, and superior repeatability, $\pm 0.5\%$.
- Precise and fast temperature control with Peltier technology

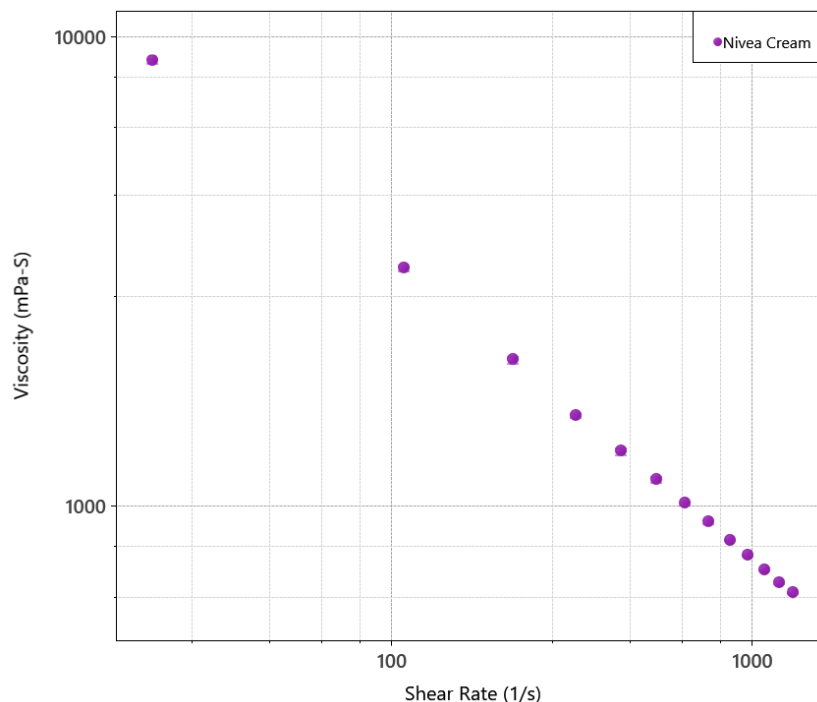
In this application brief, the viscosity of Nivea soft light hand and body cream was measured using the m-VROC II. The test procedure involved the following steps:

1. To measure the high viscosity sample a C20 chip was used.
2. 80 μL of the sample was back loaded into the 100 μL syringe using a positive displacement pipette.



3. A measurement protocol was created to determine the viscosity of the sample over a wide shear rate range at room temperature.
4. The Chip Cleaning Station (CCS) is used for the final cleaning of both the chip and reservoir using the pre-loaded aqueous cleaning protocol.

The plot here illustrates the viscosity of Nivea cream as a function of shear rate, from 20 s^{-1} to 1300 s^{-1} , as measured with the C20 chip. Each data point is an average of three repeated measurements. All error bars, smaller than data pts., correspond in length to the standard deviation. As shown, the data clearly demonstrates significant non-Newtonian shear thinning behavior of the cream.



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