IKA

designed for scientists

Measuring the viscosity of cosmetic products

/// Accurate results with ROTAVISC

Consistency, stiffness, processability and flowability are just a few of the factors that make up the desirable viscous behavior of a cosmetic sample. They are therefore important parameters for quality control in all manufacturing processes and in the application. The ROTAVISC series of viscometers allow for the precise measurement of viscosity, as well as ease of use.

What is the correct viscosity of a cream? That depends on whether, for example, it should penetrate the skin quickly or form a protective layer instead. In the first case, the cream improves the smoothness of the skin, in the second, it protects against infection, for example, if the skin gets burned. In both situations, the cream should be easy to distribute evenly while rubbing.

The respective viscous properties with different application requirements can be checked by measuring the viscosity at different shear rates. In order to ensure that the cream maintains a consistent level of quality, it is thus important to control the viscosity of the product under different loads.

QUALITY CONTROL AND PRODUCTION MONITORING WITH ROTAVISC

The ROTAVISC viscometer is suitable for quickly and reliably determining rheological parameters at different shear rates both in quality control and in the development lab. ROTAVISC is able to measure the viscosity of all liquid and viscous samples and is easy to use in the daily laboratory routine.

With an accuracy of ±1% of the measuring range and a reproducibility of ±0.2%, ROTAVISC meets all the requirements for reliable quality control and reliable production monitoring for the entire range of cosmetic products.

EXAMPLES OF APPLICATIONS IN COSMETICS

Creams
Lotions
Hair dyes
Nail polish
Shower gel
Soaps

USABILITY OF ROTAVISC

With the appropriate accessories, all fluid samples, even up to the low-viscosity range, can be measured well and reproducibly. It is also possible to adapt the device to user-specific measuring containers so that a decanting of the sample, and thus a possible change to the sample structure, is not mandatory.

Due to the extensive range of measuring geometries, ROTAVISC is suitable for all common measuring requirements and all conceivable free-flowing media. Measurement results can be provided in both relative and absolute terms. All measuring geometries are available from stock, so that even special user questions can be responded to quickly. The extensive range of accessories and an intuitive user interface ensure that ROTAVISC is fully usable. The necessary parameters can be set in no time, meaning that the staff responsible for the rheological measurements hardly require any training.

TECHNICAL FEATURES

Measurements according to DIN 53019 and relative measurements according to ISO 2555 are possible with ROTAVISC and the corresponding measuring spindles. ROTAVISC detects the sample temperature, which is important for the viscosity measurement, from a PT 100 sensor that can be immersed in the substance. You can store measurement methods and automate processes, even without connecting to a computer. This makes it possible to define both step and ramp programs, which can then be standardized over and over again.

TEMPERATURE CONTROL

The viscosity of a sample is always dependent on its temperature. Therefore, the sample should always be measured isothermally. The IKA tempering equipment meets this requirement by using immersion circulators as well as cryostats for temperatures ranging from -30°C to 250°C. This widens ROTAVISC's field of application, since the IKA laboratory software (see below) for controlling the thermostats can be used to specify rheological temperature ramps and record the change in viscosity.

VERIFICATION

The ISO 17025 standard requires that measuring instruments be verified. ROTAVISC offers users the option of carrying out this verification themselves. Thanks to the extensive range of appropriate standard fluids, users are fully independent, i.e. able to check their device without external maintenance costs. This allows them to check whether all specified readings are within the specified measurement accuracy range.

LABWORLDSOFT® 6 VISC

labworldsoft® software opens up completely new possibilities for the user. Thanks to this, the measurement data taken by ROTAVISC can be transferred to a computer and stored there. The software is also ideal for controlling ROTAVISC. labworldsoft® can also use ROTAVISC to carry out continuous measurements. The measured data is saved and is then available for evaluation.

It is particularly interesting that, while the viscosity is being measured, other parameters such as the pH value, the temperature and many others can be read in and processed by various measuring instruments via the software. As such, any correlation that exists between the parameters can be checked directly.

Do you have any usability questions, or would you like a quote? Our team is at your disposal at all times.

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