ROSS MILES FOAM ANALYZER – RMFA

AUTOMATIC AND EXACT FOAM ANALYSIS IN ACCORDANCE WITH ASTM D1173

KRÜSS

Advancing your Surface Science

AUTOMATIC FOAM ANALYSIS – FOLLOWING THE STANDARD AND GOING BEYOND

- **Electronic foam height measurement according to Ross-Miles as per ASTM D1173**
- **Recording of the overall decay curve and drainage**

At KRÜSS, we develop automated measuring instruments with exactly repeatable procedures for interfacial chemical measurements in line with international standards. In this way, we provide accurate, simple and quick implementation of many standards, and optimize their use in quality assurance.

One example is our Ross Miles Foam Analyzer – RMFA, the world's first instrument for automatic measurements of foamability and foam stability conforming to ASTM D1173.

Exact repeatability and time saving due to electronic height measurement

The RMFA uses standardized vessels in a newly-developed measuring set-up for electronic, optical foam height detection. Measuring the initial foam height does not have to be coordinated with the discharge of the reservoir solution anymore, but is registered electronically. Thanks to narrowly observed measuring times as per Ross-Miles of one, three, and five minutes and a height resolution of 0.4 mm, analyses in accordance with ASTM D1173 achieve precision that was previously unheard of.

The quality of the analysis also no longer depends on the care that is taken by the user when reading the foam height. This has increased the repeat accuracy considerably. The electronic data measurement also saves a great deal of time, since the measurement no longer has to be followed live. The user therefore gains five minutes with every foam analysis, which he can use to prepare the next sample, for instance.

More than fulfilling the standard: decay curve and drainage recording

With the RMFA, not only are the measuring points recorded according to the standard, but additionally data for the entire decay curve are obtained with high chronological density. The foam stability can be characterized in greater detail in this way. Furthermore, the instrument also registers the liquid height and therefore provides information about drainage. This information is particularly useful for foam applications in which the liquid content plays an important part, such as foams for washing and cleaning.

RMFA AND ADVANCE SOFTWARE – DEVELOPED FOR PERFECT CONVENIENCE

- **Intelligent instrument design for quick and reliable handling**
- **Intuitive software for easy measuring and evaluation**

TASKS AND APPLICATIONS

- Foams for washing and cleaning
- Foams in body care products
- Surfactant development
- Flotation as a method for separating solids, e.g. for paper recycling
- Foam-inhibiting and foam-reducing agents (antifoamers/defoamers)
- Foam prevention for paints and varnishes, process and waste water and cooling lubricants

MEASURING METHODS AND OPTIONS

- Automatic foam height measurement in accordance with ASTM D1173 with a resolution of 0.4 mm
- Automatic start of measurement when the initial foam height is recorded
- Exact measurement of foam height after 60, 180, and 300 seconds
- Recording of the entire height curve
- Recording of the liquid level for measuring drainage
- Quick compilation of multiple measurements in comparison tables and charts

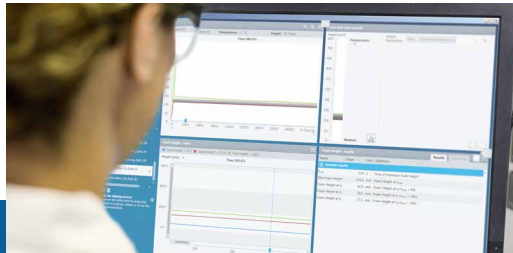
Quick and reliable installation and cleaning

Preparing the measurement with the large, standardized glass vessels is extremely easy with the Ross Miles Foam Analyzer – RMFA. The column is securely fixed between the LED and the sensor strip of the instrument in just a few quick steps. It is absolutely perpendicular, so that the reservoir solution always enters the presented liquid in the center. Like this the turbulence for foam formation is excellently reproducible.

Handling is made even more simple and convenient by an optional rack beneath the RMFA with a collection vessel into which the liquid can be emptied. Therefore, the glass column remains in the instrument for draining and cleaning the whole time.

Setting up, starting and evaluating measurements in an intuitive way

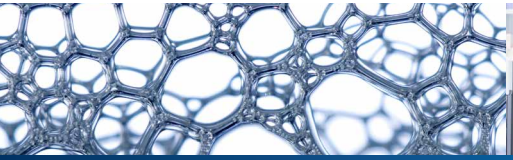
ADVANCE, the software for the RMFA, combines a user interface that is oriented to the workflow with self-explanatory operation and an appealing design. A new measurement with a standard-compliant procedure can be created from a measuring template with a single click. The results and raw data curves of any desired analyses can be displayed together quickly and easily in tables and charts. Since ASTM D1173 recommends the examination of different surfactant concentrations, this effortless comparison of results is also ideally oriented to the standard.



ALWAYS CLOSE TO YOU

At KRÜSS, we combine technical know-how and scientific expertise with plenty of passion. That is why we not only produce high-quality measuring instruments for surface and interfacial chemistry – we offer a unique combination of product and scientific consulting. Our continuous know-how transfer ensures that not only we at KRÜSS keep pace with scientific developments, but also our customers.

In this way, we help you to optimize and make better use of your technologies. This has made us the global market leader in the field of surface and interfacial tension measurement. As a matter of course, we will gladly support you with further information as well. Feel free to ask us about publications, application cases, and helpful information about other KRÜSS products. We are always close to you.



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