

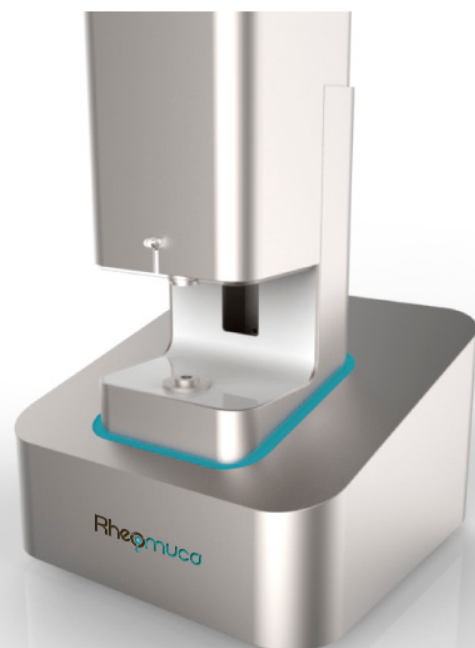


Rheomuco

Switch to sputum analysis

COPD, cystic fibrosis, asthma, etc. could all be much better understood or treated if we had a more accurate view of the viscoelastic properties of sputum.

Rheomuco is specifically designed to allow biophysical analysis of sputum, while remaining simple to use even by non-specialists in rheology.



Rheomuco by Rheonova

Sputum volume: 0.5 – 2 ml
Sample preparation: 5 min
Analysis time: 10 min

Whatever the stage of your research, Rheomuco can help

Research

- Physiopathology
- Screening
- Pharmacodynamics

Development

- Efficacy
- Molecule benchmarking

Clinical trials

- Efficacy
- Dose range finding
- Secondary outcomes

Looking for new ways to understand and analyze sputum?
We are thrilled to present Rheomuco. Contact us to set-up a demo!

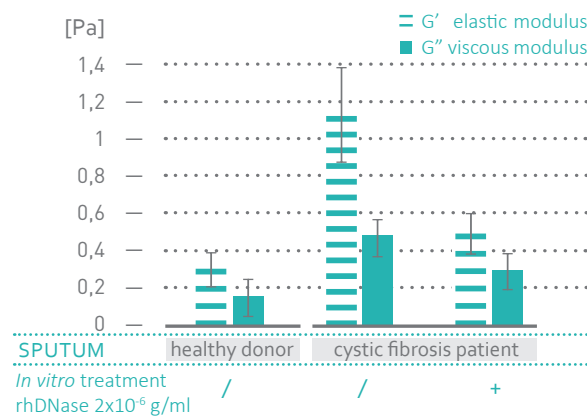
contact@rheomuco.com // www.rheomuco.com

A biophysical solution for sputum analysis

Rheomuco is specifically designed to help you study and develop treatments for pulmonary disorders. Our innovative equipment measures the viscoelasticity of sputum and offers you real-time high-quality rheological data which is easy to interpret.

Enhancing your research

Explorations of conditions associated with sputum-related problems generally rely on spirometry. A few studies have also reported the use of rheometers^{1,2}.



By precisely measuring the viscoelasticity of sputum, Rheomuco 1/ can distinguish between samples from healthy donors and patients, 2/ provides an objective measure to assess treatment efficacy.

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How does Rheomuco meet scientists' needs?

Advantages	Rheomuco	Rheometer	Spirometer
Assay duration	10 min	1h	15 to 30 min
Direct result readout	Yes	No	Yes
Germ identification	Yes	Yes	No

Rheomuco is a valuable complement to spirometry. It is an effective alternative to classical rheometers, reducing analysis time and providing comprehensive results without requiring analysis by a rheology expert.

Rheomuco: a 3-step protocol

1. Collect sputum samples
2. Prepare the sample – 5 min (one measurement per sample)
3. Measure its viscoelasticity – 10 min

The Rheomuco offer

The Rheomuco offer covers full support for method implementation, which includes:

- Advice on collecting and preparing samples
- Installation of the Rheomuco
- Training for its use
- Installation of dedicated software for sputum analysis which pilots the device and handles data acquisition and analysis.

In addition, Rheonova proposes complementary tailored services:

- Maintenance
- Help with setting up new protocols or analyzing results.

Specifications

- Equipment dedicated to mucus analysis: G* modulus > 0.1 Pa
- Range of measurements from mucociliary clearance to cough: 0.1 Hz – 10 Hz
- Experiments performed at 37 +/- 0.1 °C
- Small footprint: L: 40 cm / W: 45 cm / H: 57 cm
- Measurement cell disinfection: washable & autoclavable, or disposable
- Dedicated software supplied, data exportable to PC
- Power supply: 220 V, 50 Hz
- No need for compressed air
- Torque resolution: 0,1µN.m



An innovation signed Rheonova

Rheomuco is developed by Rheonova, an expert in rheology for industrial applications. Since 2010, Rheonova has served and advised a range of industrial sectors – chemistry, pharmacy and cosmetics – helping them to measure, understand or improve complex viscoelastic properties of their products or in their processes. With Rheomuco, Rheonova has created an innovation both for rheology and for health, by providing accurate easy-to-use equipment for routine sputum analysis.

[1] Serisier D.J. et al. 2009. "Macrorheology of Cystic Fibrosis, Chronic Obstructive Pulmonary Disease & Normal Sputum." Respiratory Research

[2] Tomaiuolo G. et al. 2014. "A New Method to Improve the Clinical Evaluation of Cystic Fibrosis Patients by Mucus Viscoelastic Properties." PloS One