

## About us

RHEAWAVE specializes in designing, developing and installing solutions devoted to **in-line quality control of products during the manufacturing process.**

RHEAWAVE makes use of a contactless acoustic technology, for proven optimization and control of production.



## ULTRASOUND METROLOGY

Non Destructive Testing

Inside Process

## Biotope

- Located in Tours within the François-Rabelais University, RHEAWAVE evolves in a state-of-the-art scientific and technical environment.
- RHEAWAVE benefits from a local network of technology partners.
- Laureate in the national "i-Lab" 2014 contest and distinguished by one of the 5 grand prizes from the jury, RHEAWAVE obtained financing for the development of its flagship product.
- Laureate of the "Réseau Entreprendre Val de Loire" in 2015, it is surrounding itself with a network of entrepreneurs.

## Contact us

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## Innovative Devices

### RheaOnLine®

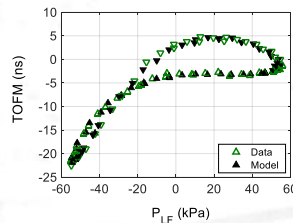


RheaOnLine, prototype 1.0, outfits agro-food and cosmetic production line pipes.

Dedicated to quality control on the production line, RheaOnLine® continuously measures the viscoelasticity of products during production.

This patented technology is based on sound waves interaction (10 kHz – 2 MHz) which allows for contactless and non destructive measurement, suitable for fluids and solids. It uses quasi-real-time analysis of ultrasonic pulses modulated by low-frequency sound palpation of the product.

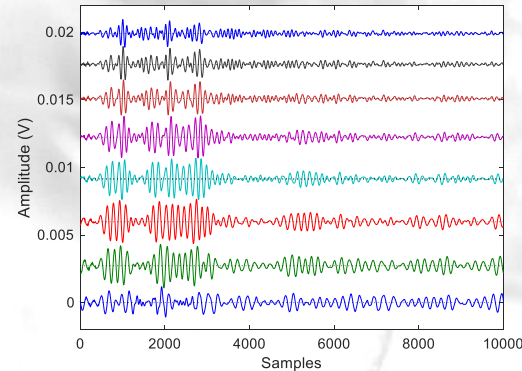
Dynamic Viscoelastic diagram in air-based granular medium,



Developed for production lines in the foods and cosmetics industries, RheaOnLine® provides contactless product traceability: it's the zero-contamination alternative to testing via sampling.

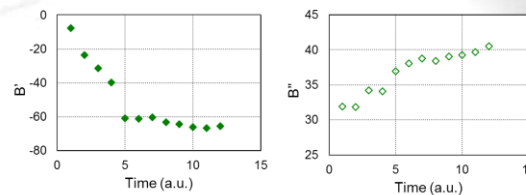
### InPulse™

InPulse™ uses ultrasonic spectroscopy technology for material characterization, which is particularly suited for the nondestructive testing of mechanical parts in the metallurgy, plastics, ceramics and elastomer industries.



Analyzing the ultrasound signals in the frequency domain gives access to the material's viscoelastic properties.

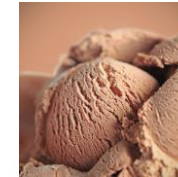
*"Non Destructive and Contactless Testing, for product traceability and monitoring"*



Monitoring of the compaction of a granular medium composed of hollow glass beads immersed in water: elastic properties (graph on the left) and viscous properties (graph on the right), obtained from dynamic viscoelastic diagrams.

## Customized Study Services

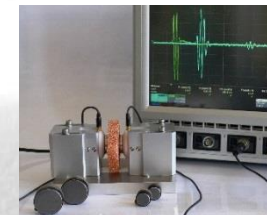
RHEAWAVE's know-how and expertise in acoustic metrology is available to its customers for R&D studies :



- Viscoelastic characterization of materials (multiphasic, granular,... complex or fragile)
- Texture transformation monitoring



- Nondestructive testing: integrity of a material (detection of microcracks, microbubbles ...)



Study services: Characterization of viscoelastic behavior of a porous medium.

## Support

RHEAWAVE assists its customers in defining and implementing acoustic solutions dedicated to resolving their material characterization issues.

RHEAWAVE also proposes support in the use of its products in particular *via* :

- An advanced data analysis (dedicated signal processing software and discriminant parameters identification),
- Customized training on our measurement tools.