

0.7 T NMR Imager (LF-MRI)

<https://search.labfacilities.wur.nl/SearchDetail.aspx?deviceid=b15aed78-0627-47d2-9bbb-59afe0c6bb84>

Brand

Princeton Applied

Type

0.5209

Contact

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Organisation

Agrotechnology and Food Sciences

Department

Biophysics

Description

This system - Bruker Avance 200 - is used for anatomical and functional imaging of plants, fruits, seeds and other living organisms, food systems, (bio)reactors and porous materials. A Rheo-accessory is available for Rheo-MRI.

Technical Details

The LF-MRI is based on an electromagnet system with a 10 cm air gap, equipped with an 1 T/m flat gradients set for optimal accessibility.

Complementary Techniques

This equipment is part of Wageningen Nuclear Magnetic Resonance Centre (WNMRC). WNMRC is a rare and unique NMR facility. It offers user access to various NMR, MRI and ESR spectrometers (ranging from low to high magnetic fields, including imaging, solid state (MAS) and liquid state NMR), with applications ranging from molecular, cells and organisms suspensions to complex foods and intact plant level.
<http://www.wageningenur.nl/en/Expertise-Services/Facilities/Wageningen-NMR-Centre.htm>

Publications

Most Water in the Tomato Truss Is Imported through the Xylem, Not the Phloem: A Nuclear Magnetic Resonance Flow Imaging Study, , Plant Physiology, <http://www.plantphysiol.org/content/151/2/830>

The impact of metal transport processes on bioavailability, , Water Science & Technology, <http://www.iwaponline.com/wst/06510/1875/065101875.pdf>

