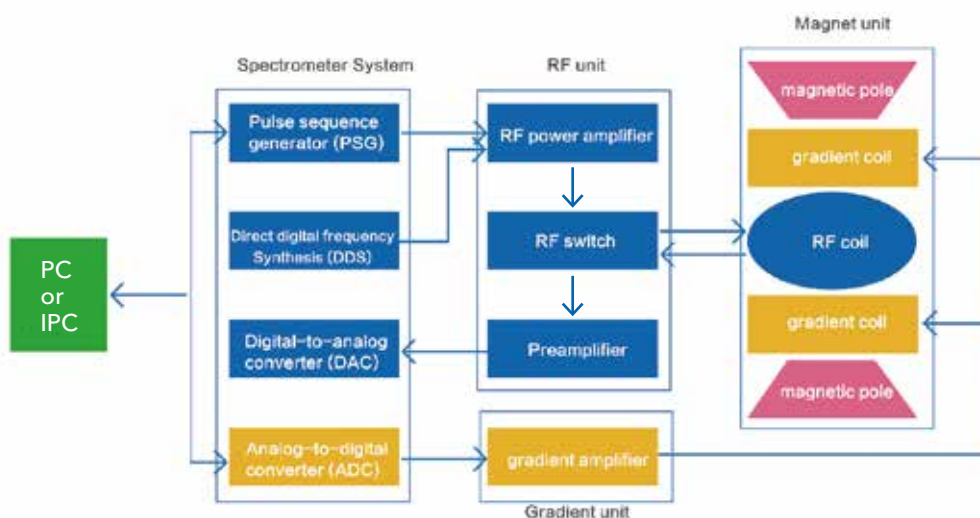


NMR/MRI Integrated Experimentation Platform



EDUMR20-010V-I is a compact desktop magnetic resonance imaging test instrument designed for magnetic resonance imaging technology teaching experiments. It can be used to teach NMR principles, demonstrate the magnetic resonance imaging process and conduct many other NMR/MRI experimental courses under the professional engineering disciplines (such as Modern Physics, Applied Physics, Radio Physics, Electronics and Information Engineering) and medical imaging related professions .

- Magnet: permanent
- Magnet field: 0.5 ± 0.08 T
- Probe size: 15 mm
- Effective detection area size: $\geq \Phi 12.5$ mm \times H25 mm



Both PC and IPC are available for different needs.

Experiment Summary

A wide range of experiments are available, up to 60 experiments covering various aspects of MRI and NMR operation listed below (not all).

EDUMR NMR/MRI theory and the equipment structure

NMR/MRI basic theory (Physics)

- Fundamental principles of NMR/MRI
- Nuclear magnetic resonance phenomenon
- Relaxation and NMR signal
- Spatial location of NMR signal
- Image re-construction of MRI
- Pulse sequences of NMR

EDUMR MRI system (Electronic information engineering)

- Magnetic unit
- Radio frequency unit
- Gradient unit
- Spectrometer
- Magnetic shielding and radio frequency shielding

EDUMR NMR/MRI advanced experiment items

NMR/MRI theoretic experiments

- Electronic shimming
- Measuring the Larmor Frequency by 90° FID Sequence
- FID signal in rotating coordinate system
- Hard RF determined by Hard Pulse-echo Sequence
- Soft RF determined by Soft Pulse-echo Sequence
- Soft Pulse-echo Sequence
- T1 determination by inversion recovery method (IR)
- T2 determination by CPMG

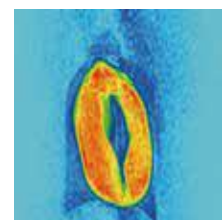
MR Imaging technical experiments

- Spin echo imaging
- Multi-slice spin echo imaging
- T1, T2 weighted imaging
- IR imaging
- 2D imaging
- 3D imaging
- FOV, space location, slice gap, slice thickness, slice angle

2D MRI



Contrast media of different concentrations



Peanut (coronal)

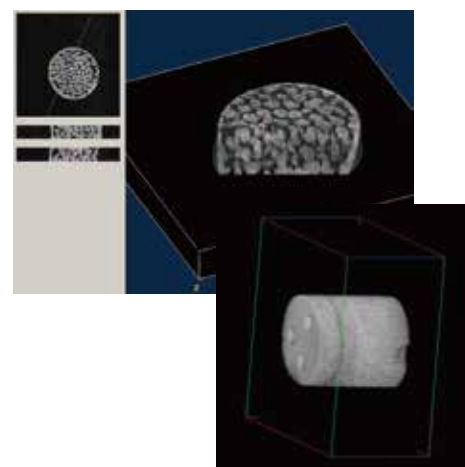


Chilli (coronal)



Spatial resolution water phantom

3D MRI



SUZHOU NIUMAG CORPORATION

Add: Floor 1-2, Building 2, Suzhou Software Technology Park, No.78, Keling Rd, Suzhou, Jiangsu, China
Tel: +86-512-62393560 Email: info@niomag.com Web: www.nmranalyzer.com

Korea South

Add: 3F, A-316, 212 Olympic-ro, Songpa-gu, Seoul 05553 Rep of Korea
Tel: +82-2-2145-4360 Email: jkbhang@jktac.co.kr Web: www.jkxtac.com