

We use a synthetic polymer as a gelling agent that offers several advantages over the traditional agar/agarose fBIRN phantom. Being a natural product derived from seaweed, agar is subject to significant variation in gel properties and relaxation times from batch to batch.

Due to the high-temperature processing that agar requires, traditional fBIRN phantoms suffer from the presence of bubbles. In addition, agar is mechanically fragile and a growth medium for bacteria.

Our VERIFLUX gel:

- Is practically bubble-free, due to our superior, room-temperature manufacturing process.
- Has enhanced standardisation of relaxation times controlled by paramagnetic salts.
- Is less prone to fracturing and more mechanically stable than agar due to its inherent elasticity.



veriflux

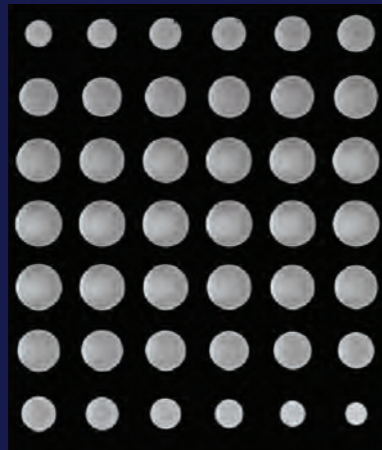
Automated Stability Analysis

		veriflux Specification Table
Sphere Diameter	18cm	
Gel T1	~460 ms*	
Gel T2	~60 ms*	
Materials	HDPE (spherical shell), Nylon (cap), Nitrile (cap gasket)	
Phantom Contents	Water-based polyacrylamide gel, doped with Manganese Chloride and CMIT:MIT based preservative.	
Includes	Liquid crystal thermometer Protective foam lined box. Stand	

Functional Magnetic Resonance Imaging (fMRI) pushes an MRI scanner's hardware to the limits of its performance, whilst demanding exceptional stability in order to detect small changes in blood oxygenation levels. For over 18 years MRI system stability for fMRI has been monitored using the fBIRN fMRI quality assurance protocol[1], which specifies a phantom, imaging protocol and analysis algorithm to quantify performance.

Designed to fit within modern multi-channel MRI head coils, the VERIFLUX Phantom uses a proprietary, water-based, synthetic gel inside a HDPE spherical shell, resulting in a test object that meets the characteristics established by the fBIRN committee.

It can be used in conjunction with the VERIFLUX SaaS, providing an easy-to-use, automated fBIRN stability analysis for dedicated management of quality assurance tests.



Susceptibility Weighted Image acquired at 3T

EPI volume acquired at 3T

veriflux

- The ideal solution for fMRI stability Quality Assurance testing.
- fBIRN compliant spherical gel phantom.
- 18cm diameter HDPE spherical shell.
- Homogeneous and bubble-free: superior image quality compared to agarose gels.
- Physiologically matched relaxation times.
- Use to assess temporal stability, SNR, SFNR, RDC, and other MRI performance metrics.
- Use with VERIFLUX SaaS for an easy-to-use, automated fBIRN stability analysis.

[1] Report on a multicenter fMRI quality assurance protocol. Friedman and Glover. JMIR p827-839, Vol 23, Issue 6, 2006. (<https://doi.org/10.1002/jmri.20583>)

Precision Guarantee

Unmatched Precision for fMRI Systems

Veriflux guarantees the utmost accuracy, stability, and quality assurance for your fMRI systems.

Secure a promise of precision in every scan.

SaaS Simplicity

Automation at Your Fingertips

Veriflux SaaS offers swift and dependable fMRI analysis.

Automated Analysis AI processes your data, delivering results at unprecedented speed.

Say goodbye to time-consuming analyses.

Time-saving Innovation

Your Time-Saving Ally

Streamlines the fMRI analysis process, saving you both time and resources.

Simplifies complex quality assurance procedures.

Confidence Unleashed

Ensuring Confidence in Your Data

Provides clear indications of quality assurance with a simple red or green light system.

Elevate your confidence and trust in your fMRI data.

Analysis Details



In-depth Analysis with Veriflux

Quality Control Measures:

Detailed documentation of quality control measures, including voxel masks and statistical maps, to ensure the highest data integrity and reproducibility.

Signal-to-Noise Ratio (SNR):

Veriflux calculates the SNR to assess the quality of receiver coil used for fMRI data, ensuring that the signal is distinguishable from the noise.

Temporal Signal-to-Noise Ratio (tSNR):

Evaluates the stability of the signal over time, which is crucial for the detection of subtle changes in blood oxygenation, particularly in pathological conditions, where it might be reduced.

Spatial Resolution:

Veriflux provides detailed analysis of true spatial resolution, ensuring that your functional scan resolution is in line with your expectation

How it works

Simple and Efficient Process using the VERIFLUX phantom with the VERIFLUX SaaS

Start by scanning the Veriflux phantom. Upload your DICOM images to the Veriflux system. Our AI for Automated Analysis takes over, analyzing the signal. Receive a clear red or green light for quality assurance. Get a fully detailed datasheet of the scan, on-demand.

