AMIRE - Phantom measurements

1. **What kind of phantoms?**

15ml falcon tube identified as MRI PHAN 1H IM M. HEAD, typically delivered with Bruker scanner

Or the 50ml falcon tube identified as MRI PHAN 1H IM R. HEAD

which consists of demineralized water, sulfuric acid copper and sodium chloride

2. **How should it be positioned?**

The phantom should be attached to the surface coil, straight, with no air bubbles. When acquiring the localizer scan make sure the phantom is in the isocenter

3. **How many timepoints?**

For our first proof of concept study we acquired three sequences per phantom at weekly intervals for twelve weeks (Kalantari, EMIM2023 #901). For this study we ask you to collect at least four timepoints at weekly intervals.

4. **What sequences?**

One or more of the following sequences:

Mouse (MRI PHAN 1H IM M. HEAD)

- T1 RARE TE/TR=12ms/700ms, NA=3, image size 192*192, FOV 20*20, res 104µm2
- T2 turboRARE TE/TR=60/2000ms, NA=8, image size 192*192, FOV 20*20, res 104µm2
- GE-EPI TE/TR=12ms/1000ms, Rep=600, image size 64*64, FOV 25.6*25.6, res 400µm2

Rat (MRI PHAN 1H IM R. HEAD)

- T1 RARE TE/TR=12ms/700ms, NA=3, image size 192*192, FOV 35*35, res 182µm2
- T2 turboRARE TE/TR=64/2000ms, NA=8, image size 256*256, FOV 35*35, res 137µm2
- GE-EPI TE/TR=12ms/1000ms, Rep=600, image size 64*64, FOV 40*40, res 625µm2

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These sequences have been acquired at a 3T biospec Bruker scanner, in your specific case just drag and drop the default T1 RARE/T2 turboRARE/GE-EPI for your coil combination and your field strength.

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