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Poster 14

600 MHz NMR Microimaging Toward Micron Resolution

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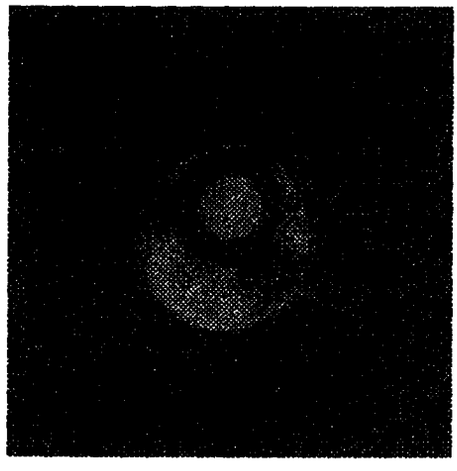
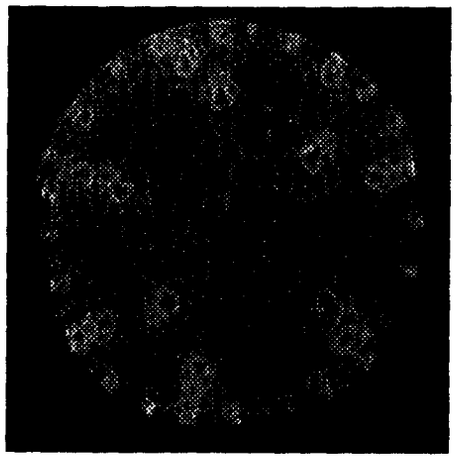
With a newly introduced 600 MHz (14T) NMR microimaging system(KBSI) we have carried out microimaging experiments toward micron resolution. A newly made 0.5 mm diameter rf coil and a new pulse sequence which can reduce diffusion effect made it possible to obtain high S/N to get a good phantom image with 1.4 μm × 1.4 μm × 50 μm pixel resolution in 2 hours. Experiments with rf coils of diameter 2 mm, 5 mm, and 10 mm were also taken to get images with pixel resolution from a few to tens of microns for various biological samples.



[그림 1] 1.4 μm × 1.4 μm × 50 μm image of a phantom (FOV=0.7 mm, MTX=512)



[그림 2] 6.7 μm × 6.7 μm × 200 μm image of a plant stem (FOV=1.2 mm, MTX= 180)