

|                   |                                                        |
|-------------------|--------------------------------------------------------|
| <i>Experiment</i> | <b>Date:</b> January 20, 2005<br><b>Time:</b> 12:47 pm |
|-------------------|--------------------------------------------------------|

|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| <i>General Data</i> | <b>Condition:</b> Good<br><b>Imaged:</b> <input checked="" type="checkbox"/> |
|---------------------|------------------------------------------------------------------------------|

| <i>Holder Data</i>        |     |
|---------------------------|-----|
| <b>Holder:</b>            | N/A |
| <b>Holder Case Label:</b> | N/A |
| <b>Well Plate Label:</b>  | N/A |

| <i>Acquisition Information</i>     |                   |
|------------------------------------|-------------------|
| <b>Slice Orientation:</b>          | coronal_head_foot |
| <b>Field of View, FOV (cm):</b>    | 12.0/4.0          |
| <b>Slice Thickness, SI (mm):</b>   | 5.0               |
| <b>Number of Averages, NEX:</b>    | 4                 |
| <b>Matrix Size:</b>                | 256/256           |
| <b>Repetition Time, TR (msec):</b> | 3000              |
| <b>Echo Time, TE (msec):</b>       | 20                |
| <b>Pulse Angle:</b>                | N/A               |

| <i>Raw Data</i>                   |  |
|-----------------------------------|--|
| <b>Proton Density, M0':</b>       |  |
| <b>T1 Relaxation Time (msec):</b> |  |
| <b>T2 Relaxation Time (msec):</b> |  |
| <b>Measured Diffusion:</b>        |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |

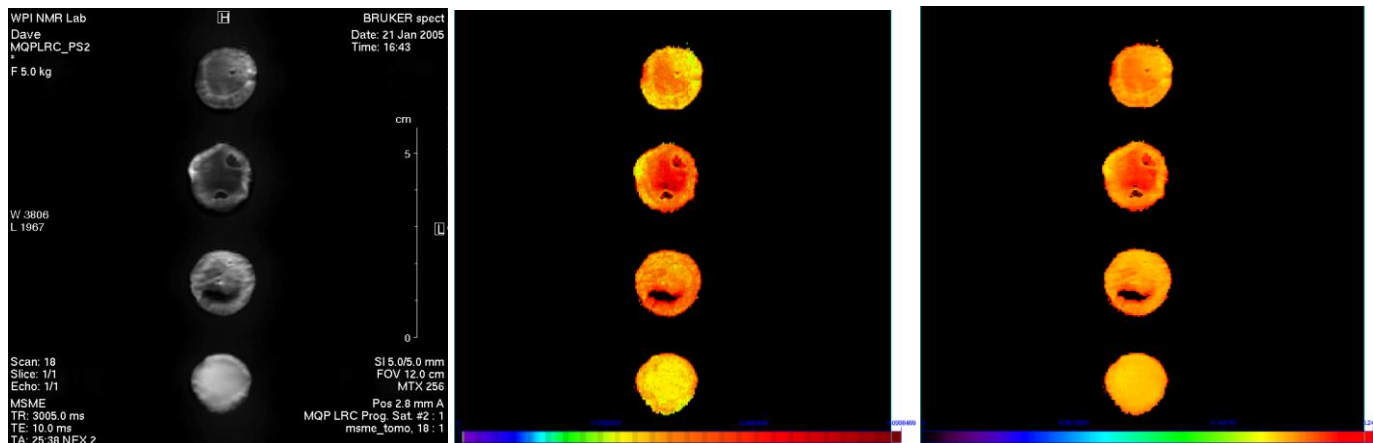
### *Description*

The image on the left is the first set of control samples that were imaged. This scan was taken with high TR values, and is the last scan of a progressive saturation sequence of scans. For the other scans in the sequence, please see the next page. The image on the right is the T1 map for this set of samples.

The top two sponges in both images are UV crosslinked for 30 minutes. The bottom two are un-crosslinked.

| <i>Sample Informaton</i>    |                        |
|-----------------------------|------------------------|
| <b>Material:</b>            | Bovine Collagen Type I |
| <b>Fabrication Method:</b>  | Liquid Nitrogen (LN2)  |
| <b>Fabrication Date:</b>    |                        |
| <b>Batch ID:</b>            |                        |
| <b>Crosslinked:</b>         | Yes                    |
| <b>Crosslinking Method:</b> | UV for 30 min          |

| <i>Sample Preparation</i>  |         |
|----------------------------|---------|
| <b>Degraded:</b>           | No      |
| <b>Condition:</b>          | Good    |
| <b>Hydrating Solution:</b> | 1 X PBS |
| <b>Hydration Method:</b>   | Vacuum  |



|                   |                                                       |
|-------------------|-------------------------------------------------------|
| <b>Experiment</b> | <b>Date:</b> January 21, 2005<br><b>Time:</b> 4:43 pm |
|-------------------|-------------------------------------------------------|

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|---------------------|------------------------------------------------------------------------------|
| <b>General Data</b> | <b>Condition:</b> O.K.<br><b>Imaged:</b> <input checked="" type="checkbox"/> |
|---------------------|------------------------------------------------------------------------------|

| <b>Holder Data</b>        |     |
|---------------------------|-----|
| <b>Holder:</b>            | N/A |
| <b>Holder Case Label:</b> | N/A |
| <b>Well Plate Label:</b>  | N/A |

| <b>Acquisition Information</b>     |                   |
|------------------------------------|-------------------|
| <b>Slice Orientation:</b>          | Coronal_head_foot |
| <b>Field of View, FOV (cm):</b>    | 12.0/12.0         |
| <b>Slice Thickness, SI (mm):</b>   | 5.0               |
| <b>Number of Averages, NEX:</b>    | 2                 |
| <b>Matrix Size:</b>                | 256/256           |
| <b>Repetition Time, TR (msec):</b> | 3000              |
| <b>Echo Time, TE (msec):</b>       | 10                |
| <b>Pulse Angle:</b>                | N/A               |

| <b>Raw Data</b>                   |             |
|-----------------------------------|-------------|
| <b>Proton Density, M0':</b>       | 0.03 – 0.08 |
| <b>T1 Relaxation Time (msec):</b> | 185 - 223   |
| <b>T2 Relaxation Time (msec):</b> |             |
| <b>Measured Diffusion:</b>        |             |
| :                                 |             |
| :                                 |             |
| :                                 |             |
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### Description

The image on the left is second set of preliminary images for both crosslinked and uncrosslinked sponges. The middle image shows the proton density map and the image on the right shows the T1 map obtained from the data

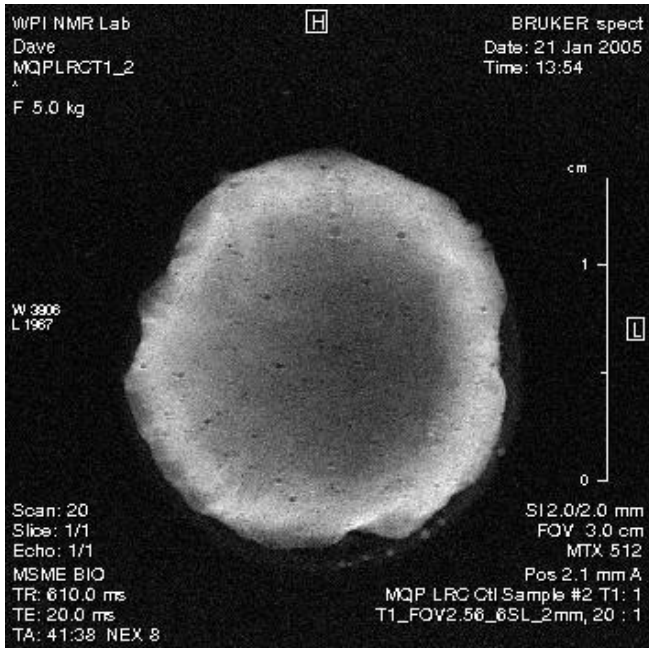
The top two sponges in both images are UV crosslinked for 30 minutes. The bottom two are un-crosslinked.

### Sample Information

|                             |                        |
|-----------------------------|------------------------|
| <b>Material:</b>            | Bovine Collagen Type I |
| <b>Fabrication Method:</b>  | Freeze dried with LN2  |
| <b>Fabrication Date:</b>    |                        |
| <b>Batch ID:</b>            |                        |
| <b>Crosslinked:</b>         | Yes                    |
| <b>Crosslinking Method:</b> | UV for 30 min          |

### Sample Preparation

|                            |         |
|----------------------------|---------|
| <b>Degraded:</b>           | No      |
| <b>Condition:</b>          | O.K.    |
| <b>Hydrating Solution:</b> | 1 X PBS |
| <b>Hydration Method:</b>   | Vacuum  |



|                   |                                                       |
|-------------------|-------------------------------------------------------|
| <b>Experiment</b> | <b>Date:</b> January 21, 2005<br><b>Time:</b> 1:54 pm |
|-------------------|-------------------------------------------------------|

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|---------------------|------------------------------------------------------------------------------|
| <b>General Data</b> | <b>Condition:</b> Good<br><b>Imaged:</b> <input checked="" type="checkbox"/> |
|---------------------|------------------------------------------------------------------------------|

| <b>Holder Data</b>        |     |
|---------------------------|-----|
| <b>Holder:</b>            | N/A |
| <b>Holder Case Label:</b> | N/A |
| <b>Well Plate Label:</b>  | N/A |

| <b>Acquisition Information</b>     |                   |
|------------------------------------|-------------------|
| <b>Slice Orientation:</b>          | Coronal_head_foot |
| <b>Field of View, FOV (cm):</b>    | 3.0/3.0           |
| <b>Slice Thickness, SI (mm):</b>   | 2.0               |
| <b>Number of Averages, NEX:</b>    | 8                 |
| <b>Matrix Size:</b>                | 512x512           |
| <b>Repetition Time, TR (msec):</b> | 610               |
| <b>Echo Time, TE (msec):</b>       | 20                |
| <b>Pulse Angle:</b>                | N/A               |

| <b>Raw Data</b>                   |  |
|-----------------------------------|--|
| <b>Proton Density, M0':</b>       |  |
| <b>T1 Relaxation Time (msec):</b> |  |
| <b>T2 Relaxation Time (msec):</b> |  |
| <b>Measured Diffusion:</b>        |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |

### Description

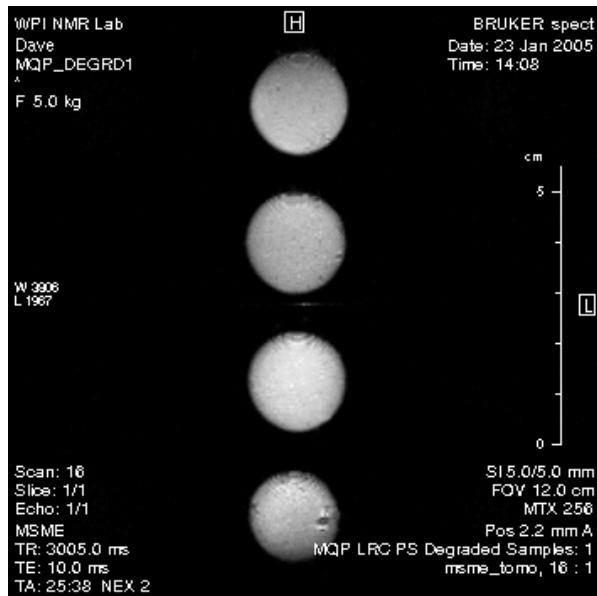
This is a T1-weighted, 512x512 image of a control sample. The sponge was placed in a contact lens case and the lid was snapped on to prevent dehydration. The contact lens case was then placed within a 4-turn surface coil, and secured with medical tape to ensure the sample stayed stationary during imaging.

### Sample Information

|                             |                        |
|-----------------------------|------------------------|
| <b>Material:</b>            | Bovine Collagen Type I |
| <b>Fabrication Method:</b>  | Freeze dried with LN2  |
| <b>Fabrication Date:</b>    |                        |
| <b>Batch ID:</b>            | Batch 1                |
| <b>Crosslinked:</b>         | No                     |
| <b>Crosslinking Method:</b> | N/A                    |

### Sample Preparation

|                            |         |
|----------------------------|---------|
| <b>Degraded:</b>           | No      |
| <b>Condition:</b>          | Good    |
| <b>Hydrating Solution:</b> | 1 X PBS |
| <b>Hydration Method:</b>   | Vacuum  |



|                   |                                                       |
|-------------------|-------------------------------------------------------|
| <b>Experiment</b> | <b>Date:</b> January 23, 2005<br><b>Time:</b> 2:08 pm |
|-------------------|-------------------------------------------------------|

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|---------------------|------------------------------------------------------------------------------|
| <b>General Data</b> | <b>Condition:</b> Good<br><b>Imaged:</b> <input checked="" type="checkbox"/> |
|---------------------|------------------------------------------------------------------------------|

| <b>Holder Data</b>        |  |
|---------------------------|--|
| <b>Holder:</b>            |  |
| <b>Holder Case Label:</b> |  |
| <b>Well Plate Label:</b>  |  |

| <b>Acquisition Information</b>     |                   |
|------------------------------------|-------------------|
| <b>Slice Orientation:</b>          | Coronal_head_foot |
| <b>Field of View, FOV (cm):</b>    | 12.0/12.0         |
| <b>Slice Thickness, SI (mm):</b>   | 5.0               |
| <b>Number of Averages, NEX:</b>    | 2                 |
| <b>Matrix Size:</b>                | 256x256           |
| <b>Repetition Time, TR (msec):</b> | 3000              |
| <b>Echo Time, TE (msec):</b>       | 10                |
| <b>Pulse Angle:</b>                | N/A               |

| <b>Raw Data</b>                   |  |
|-----------------------------------|--|
| <b>Proton Density, M0':</b>       |  |
| <b>T1 Relaxation Time (msec):</b> |  |
| <b>T2 Relaxation Time (msec):</b> |  |
| <b>Measured Diffusion:</b>        |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |
| :                                 |  |

### Description

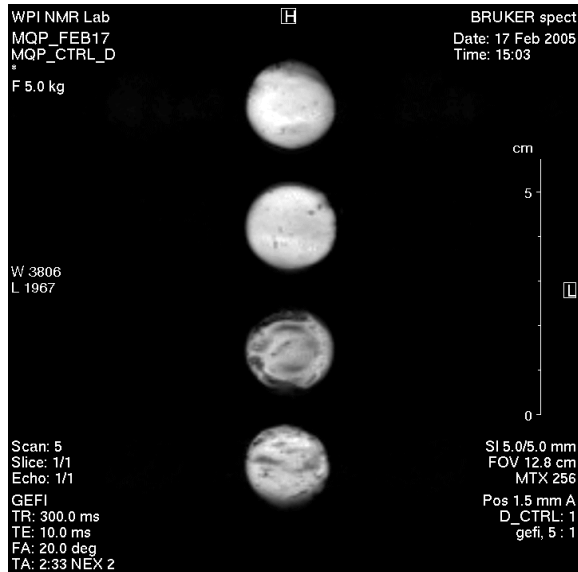
This is a T1 weighted image the of first set of degraded samples. It is the final scan of a progressive saturation sequence of scans. The top sponge was estimated to be 25% degraded, the second sponge from the top at 50% degraded, the next at 75% degraded and the bottom sponge at 100% degraded.

### Sample Informaton

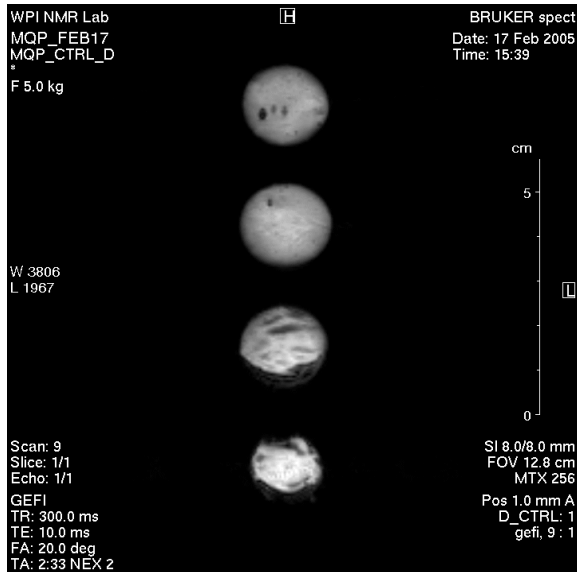
|                             |                        |
|-----------------------------|------------------------|
| <b>Material:</b>            | Bovine Collagen Type I |
| <b>Fabrication Method:</b>  | Liquid Nitrogen (LN2)  |
| <b>Fabrication Date:</b>    |                        |
| <b>Batch ID:</b>            |                        |
| <b>Crosslinked:</b>         | No                     |
| <b>Crosslinking Method:</b> | N/A                    |

### Sample Preparation

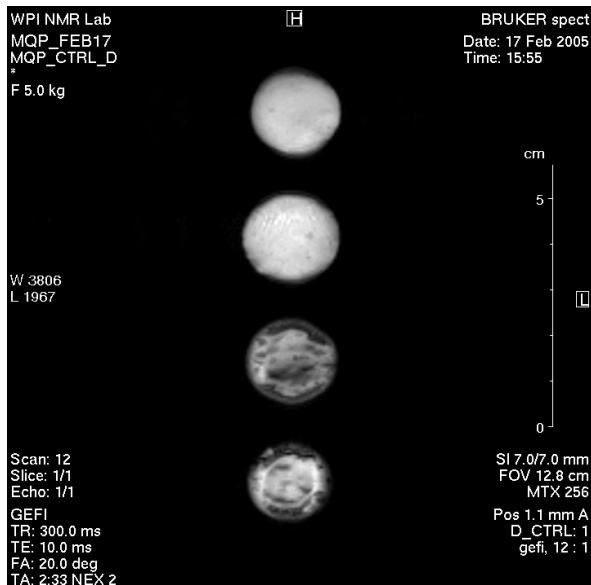
|                            |            |
|----------------------------|------------|
| <b>Degraded:</b>           | Yes        |
| <b>Condition:</b>          | Good       |
| <b>Hydrating Solution:</b> | 1 X PBS    |
| <b>Hydration Method:</b>   | De-gassing |



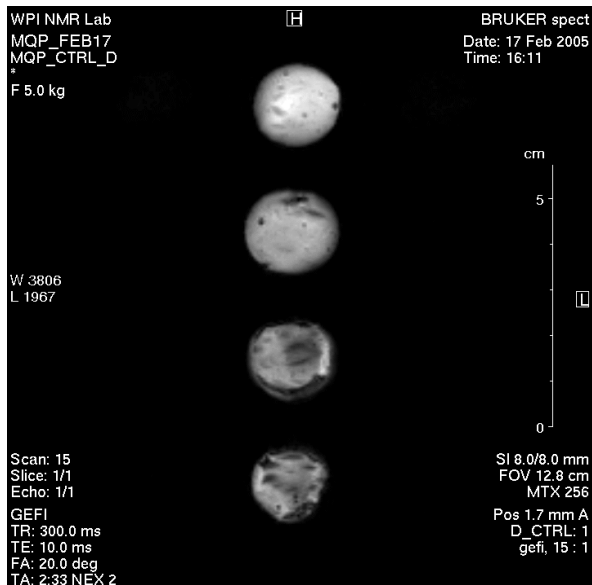
| Experiment                     | Date: February 17, 2005<br>Time: 3:03 pm                       | Description                                                                                                                                                                               |
|--------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Data                   | Condition: Good<br>Imaged: <input checked="" type="checkbox"/> | These sponges were fast scanned using gradient fast echo techniques to ensure homogeneity. The sponges in C1 and C2 were not cross-linked. The sponges in C3 and C4 were UV cross-linked. |
| <b>Holder Data</b>             |                                                                |                                                                                                                                                                                           |
| Holder:                        | C                                                              |                                                                                                                                                                                           |
| Holder Case Label:             | C1-C4                                                          |                                                                                                                                                                                           |
| Well Plate Label:              | 1:A4, B1 2:A3, A4                                              |                                                                                                                                                                                           |
| <b>Acquisition Information</b> |                                                                |                                                                                                                                                                                           |
| Slice Orientation:             | coronal_head_foot                                              |                                                                                                                                                                                           |
| Field of View, FOV (cm):       | 12.0/12.0                                                      |                                                                                                                                                                                           |
| Slice Thickness, SI (mm):      | 5.0/5.0                                                        |                                                                                                                                                                                           |
| Number of Averages, NEX:       | 2                                                              |                                                                                                                                                                                           |
| Matrix Size:                   | 256x256                                                        |                                                                                                                                                                                           |
| Repetition Time, TR (msec):    | 300                                                            |                                                                                                                                                                                           |
| Echo Time, TE (msec):          | 10                                                             |                                                                                                                                                                                           |
| Pulse Angle:                   | $\leq 20^\circ$                                                |                                                                                                                                                                                           |
| <b>Raw Data</b>                |                                                                |                                                                                                                                                                                           |
| Proton Density, M0':           |                                                                |                                                                                                                                                                                           |
| T1 Relaxation Time (msec):     |                                                                |                                                                                                                                                                                           |
| T2 Relaxation Time (msec):     |                                                                |                                                                                                                                                                                           |
| Measured Diffusion:            |                                                                |                                                                                                                                                                                           |
| :                              |                                                                |                                                                                                                                                                                           |
| :                              |                                                                |                                                                                                                                                                                           |
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| <b>Sample Information</b>      |                                                                |                                                                                                                                                                                           |
| Material:                      | Bovine Collagen Type I                                         |                                                                                                                                                                                           |
| Fabrication Method:            | freeze drying LN2                                              |                                                                                                                                                                                           |
| Fabrication Date:              | 2/15/05                                                        |                                                                                                                                                                                           |
| Batch ID:                      |                                                                |                                                                                                                                                                                           |
| Crosslinked:                   | Yes, C3 and C4                                                 |                                                                                                                                                                                           |
| Crosslinking Method:           | UV for 30 min                                                  |                                                                                                                                                                                           |
| <b>Sample Preparation</b>      |                                                                |                                                                                                                                                                                           |
| Degraded:                      | No                                                             |                                                                                                                                                                                           |
| Condition:                     | Good                                                           |                                                                                                                                                                                           |
| Hydrating Solution:            | 1 X PBS                                                        |                                                                                                                                                                                           |
| Hydration Method:              | Vacuum                                                         |                                                                                                                                                                                           |



| <i>Experiment</i>                  |                                                        | <i>Description</i>                                                                                                                                                                               |                        |
|------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                                    | <b>Date:</b> February 17, 2005<br><b>Time:</b> 3:39 pm | <p>These sponges were fast scanned using gradient fast echo techniques to ensure homogeneity. The sponges in F1 and F2 were not cross-linked. The sponges in F3 and F4 were UV cross-linked.</p> |                        |
| <i>General Data</i>                |                                                        |                                                                                                                                                                                                  |                        |
| <b>Condition:</b> Good             | <b>Imaged:</b> <input checked="" type="checkbox"/>     |                                                                                                                                                                                                  |                        |
| <i>Holder Data</i>                 |                                                        |                                                                                                                                                                                                  |                        |
| <b>Holder:</b>                     | F                                                      |                                                                                                                                                                                                  |                        |
| <b>Holder Case Label:</b>          | F1-F4                                                  |                                                                                                                                                                                                  |                        |
| <b>Well Plate Label:</b>           | 1:B2, B3 2:B1, B2                                      |                                                                                                                                                                                                  |                        |
| <i>Acquisition Information</i>     |                                                        |                                                                                                                                                                                                  |                        |
| <b>Slice Orientation:</b>          | Coronal_head_foot                                      |                                                                                                                                                                                                  |                        |
| <b>Field of View, FOV (cm):</b>    | 12.0/12.0                                              |                                                                                                                                                                                                  |                        |
| <b>Slice Thickness, SI (mm):</b>   | 8.0/8.0                                                |                                                                                                                                                                                                  |                        |
| <b>Number of Averages, NEX:</b>    | 2                                                      |                                                                                                                                                                                                  |                        |
| <b>Matrix Size:</b>                | 256x256                                                |                                                                                                                                                                                                  |                        |
| <b>Repetition Time, TR (msec):</b> | 300                                                    |                                                                                                                                                                                                  |                        |
| <b>Echo Time, TE (msec):</b>       | 10                                                     |                                                                                                                                                                                                  |                        |
| <b>Pulse Angle:</b>                | $\leq 20^\circ$                                        |                                                                                                                                                                                                  |                        |
| <i>Raw Data</i>                    |                                                        | <i>Sample Information</i>                                                                                                                                                                        |                        |
| <b>Proton Density, M0':</b>        |                                                        | <b>Material:</b>                                                                                                                                                                                 | Bovine Collagen Type I |
| <b>T1 Relaxation Time (msec):</b>  |                                                        | <b>Fabrication Method:</b>                                                                                                                                                                       | freeze drying LN2      |
| <b>T2 Relaxation Time (msec):</b>  |                                                        | <b>Fabrication Date:</b>                                                                                                                                                                         | 2/15/05                |
| <b>Measured Diffusion:</b>         |                                                        | <b>Batch ID:</b>                                                                                                                                                                                 |                        |
| :                                  |                                                        | <b>Crosslinked:</b>                                                                                                                                                                              | Yes, F3 and F4         |
| :                                  |                                                        | <b>Crosslinking Method:</b>                                                                                                                                                                      | UV for 30 min          |
| :                                  |                                                        | <i>Sample Preparation</i>                                                                                                                                                                        |                        |
| :                                  |                                                        | <b>Degraded:</b>                                                                                                                                                                                 | No                     |
| :                                  |                                                        | <b>Condition:</b>                                                                                                                                                                                | Good                   |
| :                                  |                                                        | <b>Hydrating Solution:</b>                                                                                                                                                                       | 1 X PBS                |
| :                                  |                                                        | <b>Hydration Method:</b>                                                                                                                                                                         | Vacuum                 |

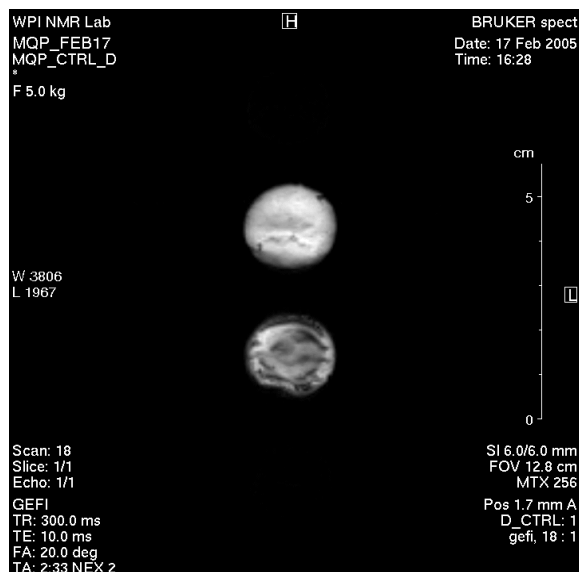


| <i>Experiment</i>                  |                        | <i>Date:</i> February 17, 2005<br><i>Time:</i> 3:55 pm |  | <i>Description</i>                                                                                                                                                                               |  |
|------------------------------------|------------------------|--------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <i>General Data</i>                |                        | <i>Condition:</i> Good                                 |  | <p>These sponges were fast scanned using gradient fast echo techniques to ensure homogeneity. The sponges in E1 and E2 were not cross-linked. The sponges in E3 and E4 were UV cross-linked.</p> |  |
|                                    |                        | <i>Imaged:</i> <input checked="" type="checkbox"/>     |  |                                                                                                                                                                                                  |  |
| <i>Holder Data</i>                 |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Holder:</i>                     | E                      |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Holder Case Label:</i>          | E1-E4                  |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Well Plate Label:</i>           | 1:C1, C2 2:B3, B4      |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Acquisition Information</i>     |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Slice Orientation:</i>          | Coronal_head_foot      |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Field of View, FOV (cm):</i>    | 12.0/12.0              |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Slice Thickness, SI (mm):</i>   | 7.0/7.0                |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Number of Averages, NEX:</i>    | 2                      |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Matrix Size:</i>                | 256x256                |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Repetition Time, TR (msec):</i> | 300                    |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Echo Time, TE (msec):</i>       | 10                     |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Pulse Angle:</i>                | ≤ 20°                  |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Raw Data</i>                    |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Proton Density, M0':</i>        |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>T1 Relaxation Time (msec):</i>  |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>T2 Relaxation Time (msec):</i>  |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Measured Diffusion:</i>         |                        |                                                        |  |                                                                                                                                                                                                  |  |
| :                                  |                        |                                                        |  |                                                                                                                                                                                                  |  |
| :                                  |                        |                                                        |  |                                                                                                                                                                                                  |  |
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| :                                  |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Sample Information</i>          |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Material:</i>                   | Bovine Collagen Type I |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Fabrication Method:</i>         | freeze drying LN2      |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Fabrication Date:</i>           | 2/15/05                |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Batch ID:</i>                   |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Crosslinked:</i>                | Yes, E3 and E4         |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Crosslinking Method:</i>        | UV for 30 min          |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Sample Preparation</i>          |                        |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Degraded:</i>                   | No                     |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Condition:</i>                  | Good                   |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Hydrating Solution:</i>         | 1 X PBS                |                                                        |  |                                                                                                                                                                                                  |  |
| <i>Hydration Method:</i>           | Vacuum                 |                                                        |  |                                                                                                                                                                                                  |  |

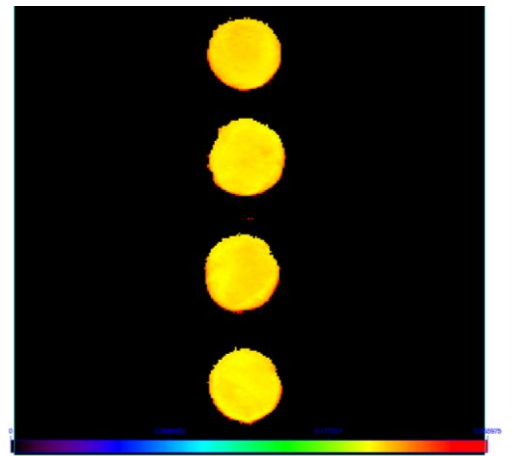
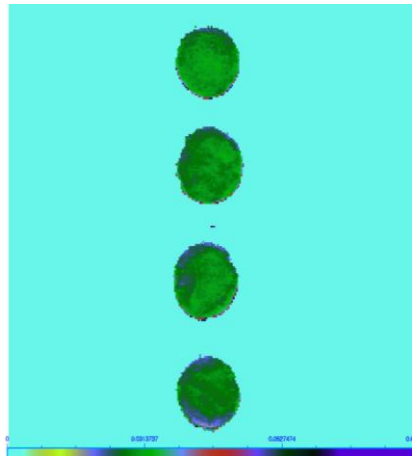
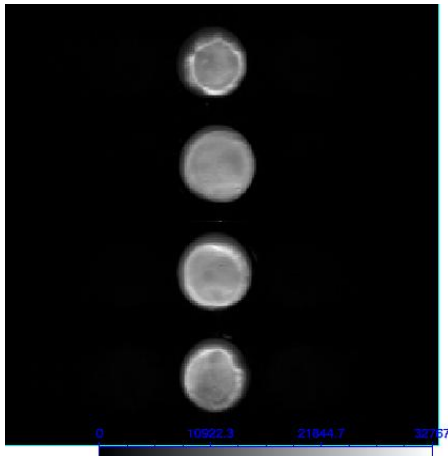


| <i>Experiment</i>                  |                        | <i>Date:</i> February 17, 2005<br><i>Time:</i> 4:11 pm |  | <i>Description</i>                                                                                                                                                                              |  |
|------------------------------------|------------------------|--------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <i>General Data</i>                |                        | <i>Condition:</i> Good                                 |  | <p>These sponges were fast scanned with gradient fast echo techniques to ensure homogeneity. The sponges in D1 and D2 were not cross-linked. The sponges in D3 and D4 were UV cross-linked.</p> |  |
|                                    |                        | <i>Imaged:</i> <input checked="" type="checkbox"/>     |  |                                                                                                                                                                                                 |  |
| <i>Holder Data</i>                 |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Holder:</i>                     | D                      |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Holder Case Label:</i>          | D1-D4                  |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Well Plate Label:</i>           | 1:A2, A3 2:A1, A2      |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Acquisition Information</i>     |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Slice Orientation:</i>          | Coronal_head_foot      |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Field of View, FOV (cm):</i>    | 12.0/12.0              |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Slice Thickness, SI (mm):</i>   | 8.0/8.0                |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Number of Averages, NEX:</i>    | 2                      |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Matrix Size:</i>                | 256x256                |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Repetition Time, TR (msec):</i> | 300                    |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Echo Time, TE (msec):</i>       | 10                     |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Pulse Angle:</i>                | ≤ 20°                  |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Raw Data</i>                    |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Proton Density, M0':</i>        |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>T1 Relaxation Time (msec):</i>  |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>T2 Relaxation Time (msec):</i>  |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Measured Diffusion:</i>         |                        |                                                        |  |                                                                                                                                                                                                 |  |
| :                                  |                        |                                                        |  |                                                                                                                                                                                                 |  |
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| <i>Sample Informaton</i>           |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Material:</i>                   | Bovine Collagen Type I |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Fabrication Method:</i>         | freeze drying LN2      |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Fabrication Date:</i>           | 2/15/05                |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Batch ID:</i>                   |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Crosslinked:</i>                | Yes, D3 and D4         |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Crosslinking Method:</i>        | UV for 30 min          |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Sample Preparation</i>          |                        |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Degraded:</i>                   | No                     |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Condition:</i>                  | Good                   |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Hydrating Solution:</i>         | 1 X PBS                |                                                        |  |                                                                                                                                                                                                 |  |
| <i>Hydration Method:</i>           | Vacuum                 |                                                        |  |                                                                                                                                                                                                 |  |





| <i>Experiment</i>                  |                        | <b>Date:</b> February 17, 2005<br><b>Time:</b> 4:28 pm                       |  | <i>Description</i>                                                                                                                                                                                        |  |
|------------------------------------|------------------------|------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <i>General Data</i>                |                        | <b>Condition:</b> Good<br><b>Imaged:</b> <input checked="" type="checkbox"/> |  | <p>These sponges were fast scanned using gradient fast echo techniques to ensure homogeneity. The sponge in G2 was not cross-linked. The sponge in G3 was UV cross-linked. G1 and G4 were left empty.</p> |  |
| <i>Holder Data</i>                 |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Holder:</b>                     | G                      |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Holder Case Label:</b>          | G2-G3                  |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Well Plate Label:</b>           | 1:C3 2:C1              |                                                                              |  |                                                                                                                                                                                                           |  |
| <i>Acquisition Information</i>     |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Slice Orientation:</b>          | Coronal_head_foot      |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Field of View, FOV (cm):</b>    | 12.0/12.0              |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Slice Thickness, SI (mm):</b>   | 6.0                    |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Number of Averages, NEX:</b>    | 2                      |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Matrix Size:</b>                | 256x256                |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Repetition Time, TR (msec):</b> | 300                    |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Echo Time, TE (msec):</b>       | 10                     |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Pulse Angle:</b>                | ≤ 20°                  |                                                                              |  |                                                                                                                                                                                                           |  |
| <i>Raw Data</i>                    |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Proton Density, M0':</b>        |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>T1 Relaxation Time (msec):</b>  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>T2 Relaxation Time (msec):</b>  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Measured Diffusion:</b>         |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| :                                  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| :                                  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
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| :                                  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| :                                  |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <i>Sample Information</i>          |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Material:</b>                   | Bovine Collagen Type I |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Fabrication Method:</b>         | freeze drying LN2      |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Fabrication Date:</b>           | 2/15/05                |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Batch ID:</b>                   |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Crosslinked:</b>                | Yes, G3 only           |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Crosslinking Method:</b>        | UV for 30 min          |                                                                              |  |                                                                                                                                                                                                           |  |
| <i>Sample Preparation</i>          |                        |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Degraded:</b>                   | No                     |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Condition:</b>                  | Good                   |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Hydrating Solution:</b>         | 1 X PBS                |                                                                              |  |                                                                                                                                                                                                           |  |
| <b>Hydration Method:</b>           | Vacuum                 |                                                                              |  |                                                                                                                                                                                                           |  |



|                   |                                                |
|-------------------|------------------------------------------------|
| <b>Experiment</b> | <b>Date:</b> 2/25/2005<br><b>Time:</b> 4:00 pm |
|-------------------|------------------------------------------------|

|                     |                                                    |
|---------------------|----------------------------------------------------|
| <b>General Data</b> | <b>Condition:</b>                                  |
|                     | <b>Imaged:</b> <input checked="" type="checkbox"/> |

| <b>Holder Data</b>        |                         |
|---------------------------|-------------------------|
| <b>Holder:</b>            | B                       |
| <b>Holder Case Label:</b> | B1-4                    |
| <b>Well Plate Label:</b>  | Plate 2: B1, A3, C2, A2 |

| <b>Acquisition Information</b>     |                   |
|------------------------------------|-------------------|
| <b>Slice Orientation:</b>          | Coronal Head Foot |
| <b>Field of View, FOV (cm):</b>    | 12                |
| <b>Slice Thickness, SI (mm):</b>   | 6                 |
| <b>Number of Averages, NEX:</b>    | 2                 |
| <b>Matrix Size:</b>                | 256x256           |
| <b>Repetition Time, TR (msec):</b> | 3000              |
| <b>Echo Time, TE (msec):</b>       | 20                |
| <b>Pulse Angle:</b>                |                   |

| <b>Raw Data</b>                   |           |
|-----------------------------------|-----------|
| <b>Proton Density, M0':</b>       | .019-.032 |
| <b>T1 Relaxation Time (msec):</b> | 198-262   |
| <b>T2 Relaxation Time (msec):</b> |           |
| <b>Measured Diffusion:</b>        |           |
| :                                 |           |
| :                                 |           |
| :                                 |           |
| :                                 |           |
| :                                 |           |

### Description

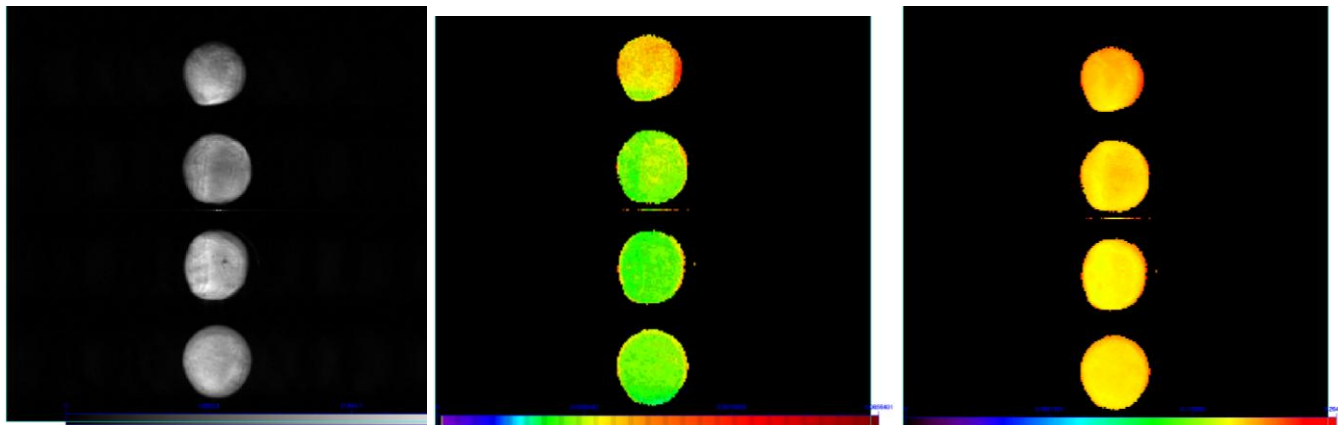
This is the image of the collagen sponges that were cross-linked by UV for 10 minutes on each side. The images on this page are the actual image, then proton density and the T1 weighted image.

### Sample Information

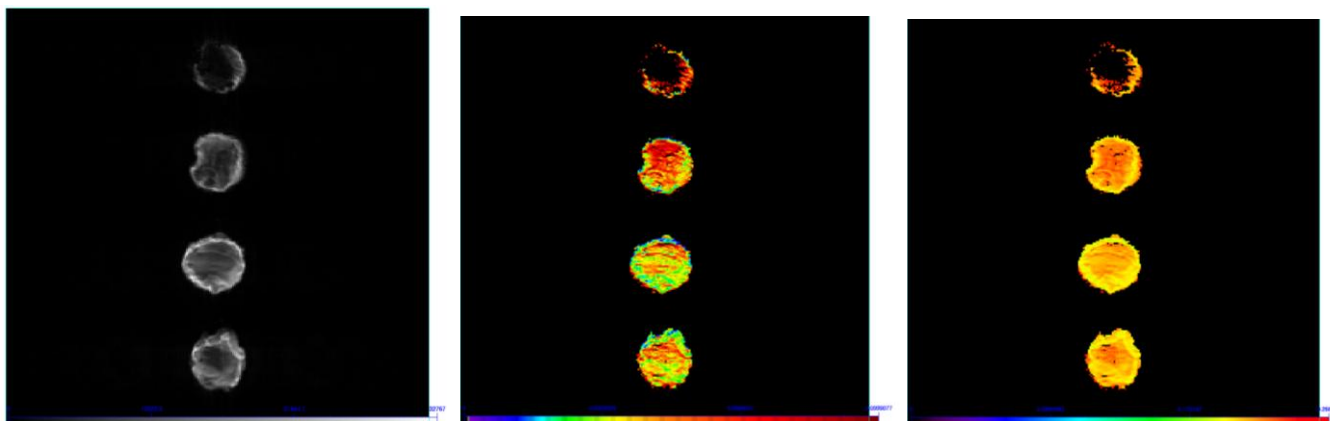
|                             |                         |
|-----------------------------|-------------------------|
| <b>Material:</b>            | Collagen                |
| <b>Fabrication Method:</b>  | LN2 Freeze Drying       |
| <b>Fabrication Date:</b>    | 2/20/05                 |
| <b>Batch ID:</b>            |                         |
| <b>Crosslinked:</b>         | Yes                     |
| <b>Crosslinking Method:</b> | UV 10 minutes each side |

### Sample Preparation

|                            |           |
|----------------------------|-----------|
| <b>Degraded:</b>           | No        |
| <b>Condition:</b>          | Very Good |
| <b>Hydrating Solution:</b> | PBS       |
| <b>Hydration Method:</b>   | Vacuum    |



| <i>Experiment</i>                                  |                        | <i>Description</i>                                                                                                                                                                                                                                             |  |
|----------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Date:</b> February 27, 2005                     |                        | The image on the left is the last T1 weighted scan of a progressive saturation of scans. For the other scans, please see the next page. The middle image is representative of the proton density (MO'). The image on the right is the T1 map of these samples. |  |
| <b>Time:</b> 10:00 am                              |                        |                                                                                                                                                                                                                                                                |  |
| <i>General Data</i>                                |                        |                                                                                                                                                                                                                                                                |  |
| <b>Condition:</b> Good                             |                        |                                                                                                                                                                                                                                                                |  |
| <b>Imaged:</b> <input checked="" type="checkbox"/> |                        |                                                                                                                                                                                                                                                                |  |
| <i>Holder Data</i>                                 |                        |                                                                                                                                                                                                                                                                |  |
| <b>Holder:</b>                                     | C                      |                                                                                                                                                                                                                                                                |  |
| <b>Holder Case Label:</b>                          | C                      |                                                                                                                                                                                                                                                                |  |
| <b>Well Plate Label:</b>                           | 4: A4, A1, B2, B3      |                                                                                                                                                                                                                                                                |  |
| <i>Acquisition Information</i>                     |                        |                                                                                                                                                                                                                                                                |  |
| <b>Slice Orientation:</b>                          | Coronal_head_foot      |                                                                                                                                                                                                                                                                |  |
| <b>Field of View, FOV (cm):</b>                    | 12.0/12.0              |                                                                                                                                                                                                                                                                |  |
| <b>Slice Thickness, SI (mm):</b>                   | 6.0                    |                                                                                                                                                                                                                                                                |  |
| <b>Number of Averages, NEX:</b>                    | 2                      |                                                                                                                                                                                                                                                                |  |
| <b>Matrix Size:</b>                                | 256x256                |                                                                                                                                                                                                                                                                |  |
| <b>Repetition Time, TR (msec):</b>                 | 3000                   |                                                                                                                                                                                                                                                                |  |
| <b>Echo Time, TE (msec):</b>                       | 20                     |                                                                                                                                                                                                                                                                |  |
| <b>Pulse Angle:</b>                                | N/A                    |                                                                                                                                                                                                                                                                |  |
| <i>Raw Data</i>                                    |                        |                                                                                                                                                                                                                                                                |  |
| <b>Proton Density, M0':</b>                        | 0.020 – 0.061          |                                                                                                                                                                                                                                                                |  |
| <b>T1 Relaxation Time (msec):</b>                  | 195 - 251              |                                                                                                                                                                                                                                                                |  |
| <b>T2 Relaxation Time (msec):</b>                  |                        |                                                                                                                                                                                                                                                                |  |
| <b>Measured Diffusion:</b>                         | N/A                    |                                                                                                                                                                                                                                                                |  |
| :                                                  |                        |                                                                                                                                                                                                                                                                |  |
| :                                                  |                        |                                                                                                                                                                                                                                                                |  |
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| :                                                  |                        |                                                                                                                                                                                                                                                                |  |
| :                                                  |                        |                                                                                                                                                                                                                                                                |  |
| <i>Sample Informaton</i>                           |                        |                                                                                                                                                                                                                                                                |  |
| <b>Material:</b>                                   | Bovine Collagen Type I |                                                                                                                                                                                                                                                                |  |
| <b>Fabrication Method:</b>                         | freeze drying LN2      |                                                                                                                                                                                                                                                                |  |
| <b>Fabrication Date:</b>                           | 2/22/05                |                                                                                                                                                                                                                                                                |  |
| <b>Batch ID:</b>                                   | N/A                    |                                                                                                                                                                                                                                                                |  |
| <b>Crosslinked:</b>                                | Yes                    |                                                                                                                                                                                                                                                                |  |
| <b>Crosslinking Method:</b>                        | UV for 5 min           |                                                                                                                                                                                                                                                                |  |
| <i>Sample Preparation</i>                          |                        |                                                                                                                                                                                                                                                                |  |
| <b>Degraded:</b>                                   | No                     |                                                                                                                                                                                                                                                                |  |
| <b>Condition:</b>                                  | Good                   |                                                                                                                                                                                                                                                                |  |
| <b>Hydrating Solution:</b>                         | 1 X PBS                |                                                                                                                                                                                                                                                                |  |
| <b>Hydration Method:</b>                           | Vacuum                 |                                                                                                                                                                                                                                                                |  |



| <i>Experiment</i>                  |  | <i>Date:</i> February 27, 2005<br><i>Time:</i> 10:00 am |  | <i>Description</i>                                 |  |
|------------------------------------|--|---------------------------------------------------------|--|----------------------------------------------------|--|
| <i>General Data</i>                |  | <i>Condition:</i> Good                                  |  | <i>Imaged:</i> <input checked="" type="checkbox"/> |  |
| <i>Holder Data</i>                 |  |                                                         |  |                                                    |  |
| <i>Holder:</i>                     |  | D                                                       |  |                                                    |  |
| <i>Holder Case Label:</i>          |  | D1-D4                                                   |  |                                                    |  |
| <i>Well Plate Label:</i>           |  | A4, A1, B1, A3                                          |  |                                                    |  |
| <i>Acquisition Information</i>     |  |                                                         |  |                                                    |  |
| <i>Slice Orientation:</i>          |  | Coronal_head_foot                                       |  |                                                    |  |
| <i>Field of View, FOV (cm):</i>    |  | 12.0/12.0                                               |  |                                                    |  |
| <i>Slice Thickness, SI (mm):</i>   |  | 6.0                                                     |  |                                                    |  |
| <i>Number of Averages, NEX:</i>    |  | 2                                                       |  |                                                    |  |
| <i>Matrix Size:</i>                |  | 256x256                                                 |  |                                                    |  |
| <i>Repetition Time, TR (msec):</i> |  | 3000                                                    |  |                                                    |  |
| <i>Echo Time, TE (msec):</i>       |  | 250                                                     |  |                                                    |  |
| <i>Pulse Angle:</i>                |  | N/A                                                     |  |                                                    |  |
| <i>Raw Data</i>                    |  |                                                         |  |                                                    |  |
| <i>Proton Density, M0':</i>        |  | 0.01 – 0.09                                             |  |                                                    |  |
| <i>T1 Relaxation Time (msec):</i>  |  | 194 - 253                                               |  |                                                    |  |
| <i>T2 Relaxation Time (msec):</i>  |  |                                                         |  |                                                    |  |
| <i>Measured Diffusion:</i>         |  |                                                         |  |                                                    |  |
| :                                  |  |                                                         |  |                                                    |  |
| :                                  |  |                                                         |  |                                                    |  |
| :                                  |  |                                                         |  |                                                    |  |
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| :                                  |  |                                                         |  |                                                    |  |
| <i>Sample Informaton</i>           |  |                                                         |  |                                                    |  |
| <i>Material:</i>                   |  | Bovine Collagen Type I                                  |  |                                                    |  |
| <i>Fabrication Method:</i>         |  | freeze drying LN2                                       |  |                                                    |  |
| <i>Fabrication Date:</i>           |  | 2/22/05                                                 |  |                                                    |  |
| <i>Batch ID:</i>                   |  |                                                         |  |                                                    |  |
| <i>Crosslinked:</i>                |  | Yes                                                     |  |                                                    |  |
| <i>Crosslinking Method:</i>        |  | Carbodiimide                                            |  |                                                    |  |
| <i>Sample Preparation</i>          |  |                                                         |  |                                                    |  |
| <i>Degraded:</i>                   |  | No                                                      |  |                                                    |  |
| <i>Condition:</i>                  |  | Good                                                    |  |                                                    |  |
| <i>Hydrating Solution:</i>         |  | 1 X PBS                                                 |  |                                                    |  |
| <i>Hydration Method:</i>           |  | Vacuum                                                  |  |                                                    |  |

The image on the left is the last T1 weighted scan of a progressive saturation of scans. For the other scans, please see the next page. The center image is the linear fit proton density map. The image on the right is the linear fit T1 map of these samples.