

References (database v4.0, 18.5.2018)

References for the T1 and T2 relaxation times listed in our material properties database. Values for tissues of which the properties are not available in the literature are substituted with values from other tissues. In these cases, the tissue used for the value is listed instead of a reference. The rationale for each individual substitution is provided in the Rationale for Tissue Substitutions.

| Tissue | 1.5T, T1 | 1.5T, T2 | 3.0T, T1 | 3.0T, T2 |
|----------------------|--|--|--|--|
| Blood | Greenman et al., 2003 Messroghli et al., 2004 Rooney et al., 2007 Stanisz et al., 2005 | Stanisz et al., 2005 | Greenman et al., 2003 Kawel et al., 2012 Kawel-Boehm et al., 2015 Stanisz et al., 2005 | Stanisz et al., 2005 |
| Blood Vessel Wall | Barth & Moser, 1997 | Barth & Moser, 1997 Zhao et al., 2007 | Lu et al., 2003 Lu et al., 2004 | Not in Database |
| Bone Marrow (Red) | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | Not in Database |
| Bone Marrow (Yellow) | Gold et al., 2004 | Gold et al., 2004 | Gold et al., 2004 | Not in Database |
| Brain (Grey Matter) | Henderson et al., 1999 Kingsley et al., 1998 Rooney et al., 2007 Stanisz et al., 2005 Steen et al., 2000 Thayyil et al., 2012 Whittall et al., 1997 Wright et al., 2007 | Peters et al., 2007 Stanisz et al., 2005 Thayyil et al., 2012 Whittall et al., 1997 | Ethofer et al., 2003 Gelman et al., 2001 Lee et al., 2006 Wansapura et al., 1999 Wright et al., 2007 | Gelman et al., 1999 Lee et al., 2006 Peters et al., 2007 Stanisz et al., 2005 Wansapura et al., 1999 |
| Brain (White Matter) | Henderson et al., 1999 Kingsley et al., 1998 Rooney et al., 2007 Steen et al., 2000 Thayyil et al., 2012 Whittall et al., 1997 Wright et al., 2007 | Peters et al., 2007 Stanisz et al., 2005 Thayyil et al., 2012 Whittall et al., 1997 | Ethofer et al., 2003 Gelman et al., 2001 Lee et al., 2006 Wansapura et al., 1999 Wright et al., 2007 | Gelman et al., 1999 Lee et al., 2006 Peters et al., 2007 Wansapura et al., 1999 |

N/A: A value exists in the database for a certain tissue parameter but its reference is no longer traceable, **None:** The property is not existent for the tissue in question, **Not in Database:** Values for that property are not yet included in the material properties database.

| Tissue | 1.5T, T1 | 1.5T, T2 | 3.0T, T1 | 3.0T, T2 |
|----------------------|--|--|--|---|
| Breast Fat | Delile et al., 2005 Rakow-Penner et al., 2006 | Rakow-Penner et al., 2006 | Rakow-Penner et al., 2006 | Rakow-Penner et al., 2006 |
| Bronchi | Blood Vessel Wall | Blood Vessel Wall | Blood Vessel Wall | Not in Database |
| Cartilage | Gold et al., 2004 Stanisz et al., 2005 | Dunn, 2004 Gold et al., 2004 Stanisz et al., 2005 | Gold et al., 2004 Stanisz et al., 2005 | Gold et al., 2004 Smith et al., 2001 Stanisz et al., 2005 |
| Cerebrospinal Fluid | Henderson et al., 1999 Rooney et al., 2007 | Not in Database | Not in Database | Not in Database |
| Cervix | Uterus | Uterus | Uterus | Uterus |
| Commissura Anterior | Brain (White Matter) | Brain (White Matter) | Brain (White Matter) | Brain (White Matter) |
| Commissura Posterior | Brain (White Matter) | Brain (White Matter) | Brain (White Matter) | Brain (White Matter) |
| Diaphragm | Muscle | Muscle | Muscle | Muscle |
| Ductus Deferens | Blood Vessel Wall | Blood Vessel Wall | Blood Vessel Wall | Not in Database |
| Glandula Vesiculosa | Prostate | Prostate | Prostate | Prostate |
| Heart Lumen | Blood | Blood | Blood | Blood |
| Heart Muscle | Messroghli et al., 2004 Stanisz et al., 2005 | Aherne et al., 1997 Stanisz et al., 2005 | Kawel-Boehm et al., 2015 Kawel et al., 2012 Stanisz et al., 2005 | Stanisz et al., 2005 |
| Hippocampus | Brain (Grey Matter) | Brain (Grey Matter) | Lee et al., 2006 | Lee et al., 2006 |
| Hypothalamus | Brain (Grey Matter) | Brain (Grey Matter) | Brain (Grey Matter) | Brain (Grey Matter) |
| Intervertebral Disc | Cartilage | Kerttula et al., 2001 Marinelli et al., 2009 | Cartilage | Cartilage |
| Kidney (Cortex) | de Bazelaire et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 |
| Kidney (Medulla) | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |
| Larynx | Cartilage | Cartilage | Cartilage | Cartilage |
| Liver | de Bazelaire et al., 2004 de Certaines et al., 1993 Heye et al., 2012 Messroghli et al., 2004 Stanisz et al., 2005 | Cieszanowski et al., 2002 de Bazelaire et al., 2004 de Certaines et al., 1993 Heye et al., 2012 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 |

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| Tissue | 1.5T, T1 | 1.5T, T2 | 3.0T, T1 | 3.0T, T2 |
|------------------------|---|--|---|--|
| Lung | Not in Database | Bergin et al., 1991 | Not in Database | Not in Database |
| Medulla Oblongata | Kingsley et al., 1998 | Not in Database | Lee et al., 2006 | Lee et al., 2006 |
| Meniscus | Cartilage | Cartilage | Cartilage | Cartilage |
| Midbrain | Pons | Not in Database | Pons | Pons |
| Muscle | de Bazelaire et al., 2004 Gold et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Gold et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Stanisz et al., 2005 | de Bazelaire et al., 2004 Gold et al., 2004 Stanisz et al., 2005 |
| Nerve | Kingsley et al., 1998 Stanisz et al., 2005 Steen et al., 2000 | Stanisz et al., 2005 | Stanisz et al., 2005 | Stanisz et al., 2005 |
| Pancreas | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |
| Penis | Blood Vessel Wall | Blood Vessel Wall | Blood Vessel Wall | Not in Database |
| Placenta | Blood | Blood | Blood | Blood |
| Pons | Kingsley et al., 1998 | Not in Database | Lee et al., 2006 | Lee et al., 2006 |
| Prostate | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |
| Salivary Gland | Prostate | Prostate | Prostate | Prostate |
| SAT (Subcutaneous Fat) | de Bazelaire et al., 2004 Gold et al., 2004 | de Bazelaire et al., 2004 Gold et al., 2004 | de Bazelaire et al., 2004 Gold et al., 2004 | de Bazelaire et al., 2004 Gold et al., 2004 |
| Spinal Cord | Stanisz et al., 2005 | Stanisz et al., 2005 | Stanisz et al., 2005 | Stanisz et al., 2005 |
| Spleen | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |
| Thalamus | Kingsley et al., 1998 Rooney et al., 2007 Steen et al., 2000 Thayyil et al., 2012 Whittall et al., 1997 | Thayyil et al., 2012 Whittall et al., 1997 | Gelman et al., 2001 Lee et al., 2006 | Lee et al., 2006 |
| Trachea | Cartilage | Cartilage | Cartilage | Cartilage |
| Ureter\Urethra | Blood Vessel Wall | Blood Vessel Wall | Blood Vessel Wall | Not in Database |
| Uterus | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |
| Vagina | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 | de Bazelaire et al., 2004 |

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