

Table 1: Data values for the random first Piola-Kirchhoff shear stress $P_{12}(k)$ (MPa) of rubberlike material [1].

k	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.08	0.9	1	1.1	1.2	1.3	1.4	1.5
	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
$\underline{P_{12}(k)}$	0.09	0.14	0.19	0.23	0.28	0.32	0.36	0.40	0.44	0.48	0.51	0.55	0.58	0.61	0.65
(mean)	0.68	0.71	0.74	0.76	0.79	0.82	0.85	0.87	0.90	0.93	0.96	0.97	0.99	1.00	1.03
$\ P_{12}(k)\ $	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
(std deviation)	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05

Table 2: Data values for the random nonlinear shear modulus $\tilde{\mu}(a)$ (kPa) of mouse brain tissue [2].

a	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
$\underline{\tilde{\mu}(a)}$	0.754	0.567	0.457	0.295	0.191	0.154	0.169	0.167	0.181
(mean)									
$\ \tilde{\mu}(a)\ $	0.027	0.045	0.045	0.023	0.037	0.028	0.024	0.023	0.043
(std deviation)									

Table 3: Data values for the random nonlinear shear modulus $\tilde{\mu}(a)$ (kPa) of human brain tissue [3].

a	0.75	0.80	0.85	0.90	0.95	1	1.05	1.10	1.15	1.20	1.25
$\underline{\tilde{\mu}(a)}$	1.1254	0.9211	0.7766	0.6134	0.4330	0.3379	0.2142	0.2331	0.2520	0.2835	0.3101
(mean)											
$\ \tilde{\mu}(a)\ $	0.1012	0.0822	0.0666	0.0561	0.0481	0.0396	0.0270	0.0235	0.0204	0.0203	0.0158
(std deviation)											

References

- [1] Nunes ICS, Moreira DC. 2013. Simple shear under large deformation: experimental and theoretical analyses, European Journal of Mechanics A/Solids 42, 315-322.
- [2] Mihai LA, Chin L, Janmey PA, Goriely A. 2015. A comparison of hyperelastic constitutive models applicable to brain and fat tissues, Journal of the Royal Society Interface 12, 20150486.
- [3] Mihai LA, Budday S, Holzapfel GA, Kuhl E, Goriely A. 2017. A family of hyperelastic models for human brain tissue, Journal of Mechanics and Physics of Solids 106, 60-79.

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