

Appendix

Biomedical Science and Engineering #61

Phantoms in medicine: The case of ophthalmology

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Appendix Table 1. Some parameters of the human eye.

	Eye components	Value
Radius of curvature (mm)	Cornea (anterior surface)	7.8
	Cornea (posterior surface)	6.2
	Sclera	12.7
	Crystalline lens (anterior surface)	9.2 – 12.2
	Crystalline lens (posterior surface)	5.4 – 12.2
	Retina	11.7
Thickness (mm)	Sclera	1
	Choroid (anterior part)	0.1
	Choroid (posterior part)	0.2
	Retina	0.1
Refractive index	Cornea	1.377
	Aqueous Humor	1.337
	Crystalline Lens Capsule	1.380
	Crystalline Lens	1.437
	Vitreous Body	1.336
Elastic modulus [MPa]	Anterior part of the sclera	2.9 ± 1.4
	Posterior part of the sclera	1.8 ± 1.1
	Choroid	0.6 ± 0.28
	Retina	$\approx 20 \cdot 10^{-3}$

Appendix Table 2. Acoustic properties of the constituents of the eye.

	Speed [m·s⁻¹]	Z [10⁶ kg·m⁻²·s⁻¹]	α [dB·cm⁻¹]
Vitreous humor	1523	1.52	0.06
Aqueous humor	1532	1.50	0.06
Crystalline lens	1640-1673	1.84	0.78
Adipose tissue	1450	1.38	0.63
Blood	1570	1.61	0.18
Soft tissues (average value)	1540	1.63	0.7
Water	1480	1.48	0.002
Air	330	$4 \cdot 10^{-4}$	12