

Solids

Name	Formula	Temperature °C (λ)	n
Agate	SiO ₂	25	1.53-1.54
Aluminium oxide	Al ₂ O ₃	25	1.76
Aluminium phosphate	AlPO ₄	25	1.53
Amber		25	1.55
Amethyst	SiO ₂ ::Fe ³⁺	25	1.54
Aquamarine	Be ₃ Al ₂ (SiO ₃) ₆ ::Fe	25	1.56-1.60
Beryl	Be ₃ Al ₂ (SiO ₃) ₆	25	1.56-1.60
Calcium fluoride (Fluorite)	CaF ₂	25	1.43
Cornea (human)		37	1.3375
Crown glass		25	1.52
Cryolite	Na ₃ AlF ₆	25	1.338
Cubic zirconia	ZrO ₂	25	2.15-2.18
Diamond	C	25	2.417
Emerald	Be ₃ Al ₂ (SiO ₃) ₆ ::Cr	25	1.576-1.582
Flint glass		25	1.62
Gallium arsenide	GaAs	25	3.927
Gallium phosphide	GaP	25	3.5
Germanium	Ge	25	4.01
Ice	H ₂ O	25	1.309
Iodine	I ₂	25	3.34
Lapis lazuli		25	1.5
Lens (human)		37	1.386-1.406
Light flint glass		25	1.58
Malachite	Cu ₂ CO ₃ (OH) ₂	25	1.655-1.909
Nylon	...-NH-C(=O)-(CH ₂) _n - C(=O)-NH-(CH ₂) _m -...	25	1.53
Obsidian		25	1.50
Opal	SiO ₂ ·nH ₂ O	25	1.45
PET Polyethylene terephthalate	(C ₁₀ H ₈ O ₄) _n	25	1.575
Pirex® glass (borosilicate)		25	1.470
PMMA Poly(methyl methacrylate)	(C ₅ O ₂ H ₈) _n	25	1.491
Polycarbonate	(OC(OC ₆ H ₄) ₂ CMe ₂) _n	25	1.585
Polystyrene	(C ₈ H ₈) _n	25	1.55-1.59
Quartz	SiO ₂	25	1.544
Ruby	Al ₂ O ₃	25	1.77
Shapphire	Al ₂ O ₃	25	1.762-1.778
Silicon	Si	25	4.01
Silver chloride	AgCl	25	2.0668
Sodium chloride	NaCl	25	1.544
Teflon	(C ₂ F ₄) _n	25	1.36
Titanium dioxide (Rutile)	TiO ₂	25	2.496
Topaz	Al ₂ SiO ₄ (F,OH) ₂	25	1.606
Tourmaline		25	1.610-1.675
Turquoise	CuAl ₆ (PO ₄) ₄ (OH) ₈ ·4H ₂ O	25	1.61
Zinc oxide	ZnO	25 (390 nm)	2.4
Zircon	ZrSiO ₄	25	1.923

Liquids

Name	Formula	Temperature °C (λ)	<i>n</i>
Acetaldehyde	CH ₃ CHO	20	1.35
Acetone	CH ₃ -CO-CH ₃	20	1.36
Ammonia	NH ₃	-77 (578 nm)	1.3944
Antimony pentachloride	SbCl ₅	22	1.5925
Argon	Ar	-188	1.2312
Arsenic trichloride	AsCl ₃	16	1.604
Benzene	C ₆ H ₆	20	1.501
Boron trifluoride	BBr ₃	16	1.312
Bromine	Br ₂	15	1.659
Bromine pentafluoride	BrF ₅	25	1.3529
Bromine trifluoride	BrF ₃	25	1.4536
1-Butanol	CH ₃ (CH ₂) ₂ CH ₂ OH	20	1.399
Carbon dioxide	CO ₂	24	1.6630
Carbon disulfide	CS ₂	20	1.62774
Carbon oxysulfide	COS	25	1.3506
Chlorine	Cl ₂	20	1.3834
Chloroform	CHCl ₃	20	1.48
Ethanol	CH ₃ CH ₂ OH	20	1.361
Germanium tetrachloride	GeCl ₄	25	1.4614
Germanium tetrabromide	GeBr ₄	26	1.6269
Glycerol	C ₃ H ₈ O ₃	20	1.4729
Helium	He	-269 (546 nm)	1.02451
1-Heptanol	CH ₃ (CH ₂) ₅ CH ₂ OH	25	1.423
Honey, 13% water content		20	1.504
Honey, 17% water content		20	1.494
Honey, 21% water content		20	1.484
Hydrazine	N ₂ H ₄	22	1.470
Hydrogen	H ₂	-253	1.1096
Hydrogen bromide	HBr	10	1.325
Hydrogen chloride	HCl	18 (581 nm)	1.3287
Hydrogen cyanide	HCN	20	1.26136
Hydrogen fluoride	HF	25	1.1574
Hydrogen iodide	HI	16	1.466
Hydrogen peroxide	H ₂ O ₂	28	1.4061
Hydrogen sulfide	H ₂ S	-80	1.460
Hydrogen sulfide	H ₂ S	20	1.3682
Krypton	Kr	-157 (546 nm)	1.3032
Methanol	CH ₃ OH	20	1.329
Milk		20	1.35
m-Xylene	C ₆ H ₄ (CH ₃) ₂	20	1.49722
o-Xylene	C ₆ H ₄ (CH ₃) ₂	20	1.5058
p-Xylene	C ₆ H ₄ (CH ₃) ₂	20	1.4958
Nitric acid	HNO ₃	25	1.393
Nitric oxide	NO	-90	1.330
Nitrogen	N ₂	-196 (578 nm)	1.19876
Nitrous oxide	N ₂ O	25	1.238
Oxygen	O ₂	-183 (546 nm)	1.2243
Perchloric acid	HClO ₄	50	1.3819
Phosphine	PH ₃	17	1.317
Phosphorus tribromide	PBr ₃	25	1.687
Phosphorus trichloride	PCl ₃	21	1.5122
Phosphorus(III) oxide	P ₂ O ₃	27	1.540
25% Sugar solution		20	1.3723
50% Sugar solution		20	1.4200
75% Sugar solution		20	1.4774

Liquids (continued)

Name	Formula	Temperature °C (λ)	<i>n</i>
Sulfur	S	125	1.9170
Sulfur dichloride	SCl ₂	14	1.557
Sulfur dioxide	SO ₂	25	1.3396
Sulfur hexafluoride	SF ₆	25	1.167
Sulfur trioxide	SO ₃	20	1.40965
Sulfuric acid	H ₂ SO ₄	20	1.4183
Tetrabromosilane	SiBr ₄	31	1.5685
Tetrachloromethane	CCl ₄	25	1.461
Tetrachlorosilane	SiCl ₄	25	1.41156
Tin tetrabromide	SnBr ₄	31	1.6628
Tin tetrachloride	SnCl ₄	25	1.5086
Titanium tetrachloride	TiCl ₄	18	1.6076
Turpentine		25	1.472
Vegetable oil		50	1.47
Water	H ₂ O	0	1.33432
Water	H ₂ O	20	1.33336
Water	H ₂ O	100	1.31861
Xenon	Xe	-112 (546 nm)	1.3918

Gases (1 atm)

Name	Formula	Temperature °C	<i>n</i>
Acetone	CH ₃ -CO-CH ₃	0	1.001090
Air (dry)		0	1.0002924
Ammonia	NH ₃	0	1.000376
Argon	Ar	0	1.000281
Benzene	C ₆ H ₆	0	1.001762
Bromide	Br ₂	0	1.001132
Carbon dioxide	CO ₂	0	1.0004493
Carbon disulfide	CS ₂	0	1.001481
Chloride	Cl ₂	0	1.000773
Chloroform	CHCl ₃	0	1.001450
Deuterium	D	0	1.000137
Ethanol	CH ₃ CH ₂ OH	0	1.000878
Helium	He	0	1.000036
Hydrogen	H ₂	0	1.0001392
Hydrogen chloride	HCl	0	1.000447
Hydrogen sulfide	H ₂ S	0	1.000634
Methane	CH ₄	0	1.000444
Methanol	CH ₃ OH	0	1.000586
Neon	Ne	0	1.000066
Nitric oxide	NO	0	1.000297
Nitrogen	N ₂	0	1.0002990
Nitrous oxide	N ₂ O	0	1.000516
Oxygen	O ₂	0	1.0002709
Pentane	C ₅ H ₁₂	0	1.001711
Sulfur dioxide	SO ₂	0	1.000686
Water (vapor)	H ₂ O	0	1.000256
Xenon	Xe	0	1.000702