

Scaling Chart

*Remember that in your model everything becomes 10,000 times bigger than it is in real life.

Object	Size in nanometers (nm)	Size in micrometers (μm)	Size in millimeters (mm)	Model scale size* (mm)
Human antibody ²	15	0.015	0.000015	0.15
Coronavirus Sars-Cov-2 ⁵	120	0.12	0.00012	1.2
Wavelength of blue light ²	440-500	0.44-0.5	0.00044-0.0005	4.4-5
<i>Escherichia coli</i> bacterium ¹	1,000-2,000	1-2	0.001-0.002	10-20
Yeast cell ²	3,000-4,000	3-4	0.003-0.004	30-40
Human red blood cell ²	7,000	7	0.007	70
Diameter spider web silk ²	3,000-8,000	3-8	0.003-0.008	30-80
Fog or mist water droplet ²	8,000-11,000	8-11	0.008-0.011	80-110
Human hair diameter ²	17,000-180,000	17-180	0.017-0.18	170-1,800
Thickness sheet of copy paper ³	100,000	100	0.1	1,000
Fine sand particle ⁴	125,000-250,000	125-250	0.125-0.250	1,200-2,500
Average grain of table salt ²	500,000	500	0.5	5,000
Pencil dot (1 mm lead)	1,000,000	1,000	1	10,000
Red ant ²	5,000,000	5,000	5	50,000
Length sunflower seed ²	7,100,000	7,100	7.1	71,000
Length of coffee bean ²	10,000,000	10,000	10	100,000

Sources [accessed August 14, 2020]: ¹ M. Riley, [Correlates of Smallest Sizes for Microorganisms](#), ² Wikipedia, [Orders of magnitude \(length\)](#),

³ [Paper Weight Chart](#), ⁴ Wikipedia, [Grain size](#), ⁵ [Encyclopedia Britannica: Coronavirus](#)