Bromine Diffusion

September 24, 2014

A capsule of bromine is broken in a fume cupboard. After $500\,\mathrm{s}$ the bromine has diffused a distance of $0.2\,\mathrm{m}$. Given that the room temperature is $25\,\mathrm{^{\circ}C}$, calculate the number of collisions a typical bromine molecule undergoes in this time and the average distance it travels between collisions.