

Abstract Submitted
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The effect of viscosity on the contraction of the stalk of *Vorticella Convallaria*¹ DEEPENDRA KANTHA, DAVID VAN WINKLE, Center for Materials Research and Technology and Department of Physics, Florida State University — The contraction of the stalk of *Vorticella Convallaria* behaves as one of the most powerful single cell biological engines. Contractions in three different viscous mediums were recorded by a PhantomV5 camera (Vision Research) on a bright field microscope with 20X objective. The contractions were recorded as cines (image sequences) with the image resolution of 256 pixels X 128 pixels at 7000 pictures per second. The maximum variation in maximum velocity of one organism was 5.2 cm/s and the minimum variation for a different organism was 0.4 cm/s for the same viscous medium. It occurred at 2-3ms after the start of contraction. The force of contraction and the force constant were calculated as a function of the time to see the effect of viscosity on the contraction of the stalk. This experiment needs further investigation to see the net effect of viscosity on the contraction of the stalk.

¹Research Corporation

David Van Winkle
Center for Materials Research and Technology and Department of Physics, Florida State University

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