Supplemental Material 1 to

Theoretical analysis of fractional viscoelastic flow in circular pipes: general solutions

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Here we compare velocity profiles in a circular pipe for Newtonian and fractional Maxwell fluids. Fractional Maxwell fluid dynamics is described by two fractional orders, α and β. For Newtonian fluid $\alpha = 1$, $\beta = 1$. In animations S1-S4 velocity profile for Newtonian fluid is shown in red, while those for fractional Maxwell fluid are given in green. For all fractional Maxwell fluid velocity profiles $\alpha = 1$, while $\beta = 0.2, 0.4, 0.6, 0.8$ for S1-S4, respectively. For all animations $\omega 0 \equiv \tilde{\omega}$ and $\tilde{\omega} = 0...1000$.