Supplementary Information for "Scaling laws to predict humidity-induced swelling and stiffness in hydrogels"

September 20, 2021

1 Chemicals

The chemicals used in the preparation of hydrogels are listed below:
Acrylamide (AAm)
N,N' - Methylenebis(acrylamide) (MBA)
Ammonium Persulfate (APS)
N,N,N',N' - teramethylethane - 1,2 - dimine (TEMED)
N,N - Dimethylacrylamide (DMA)
All chemicals used in this paper are purchasd from Sigma-Aldrich Co.

2 Figures

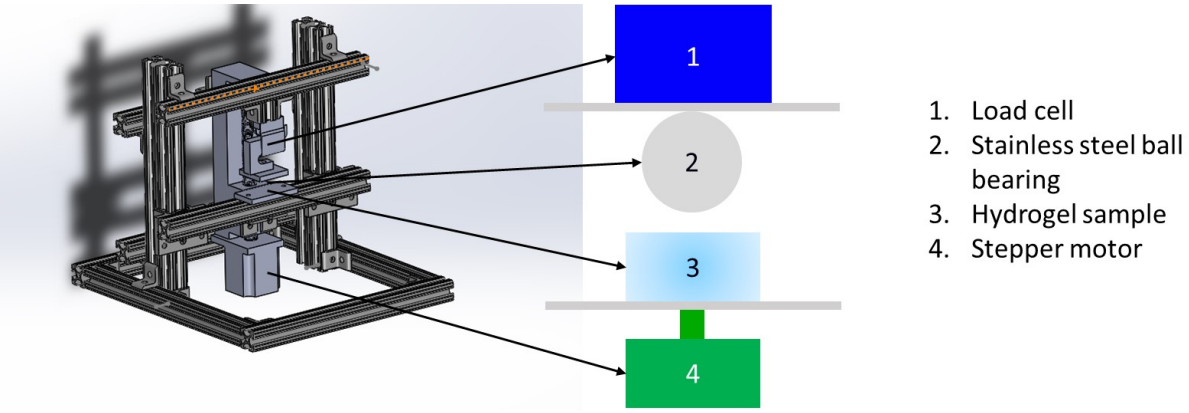

Figure S1: Indentation testing setup

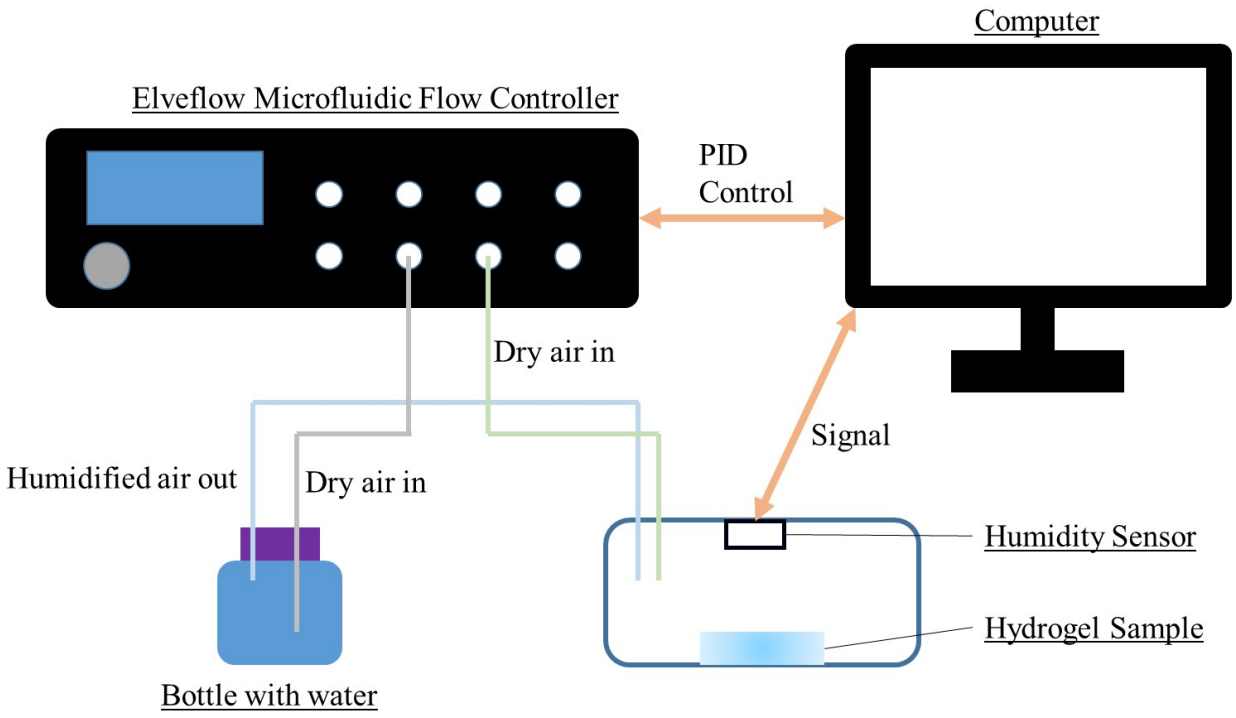

Figure S2: Humidity-controlled chamber setup

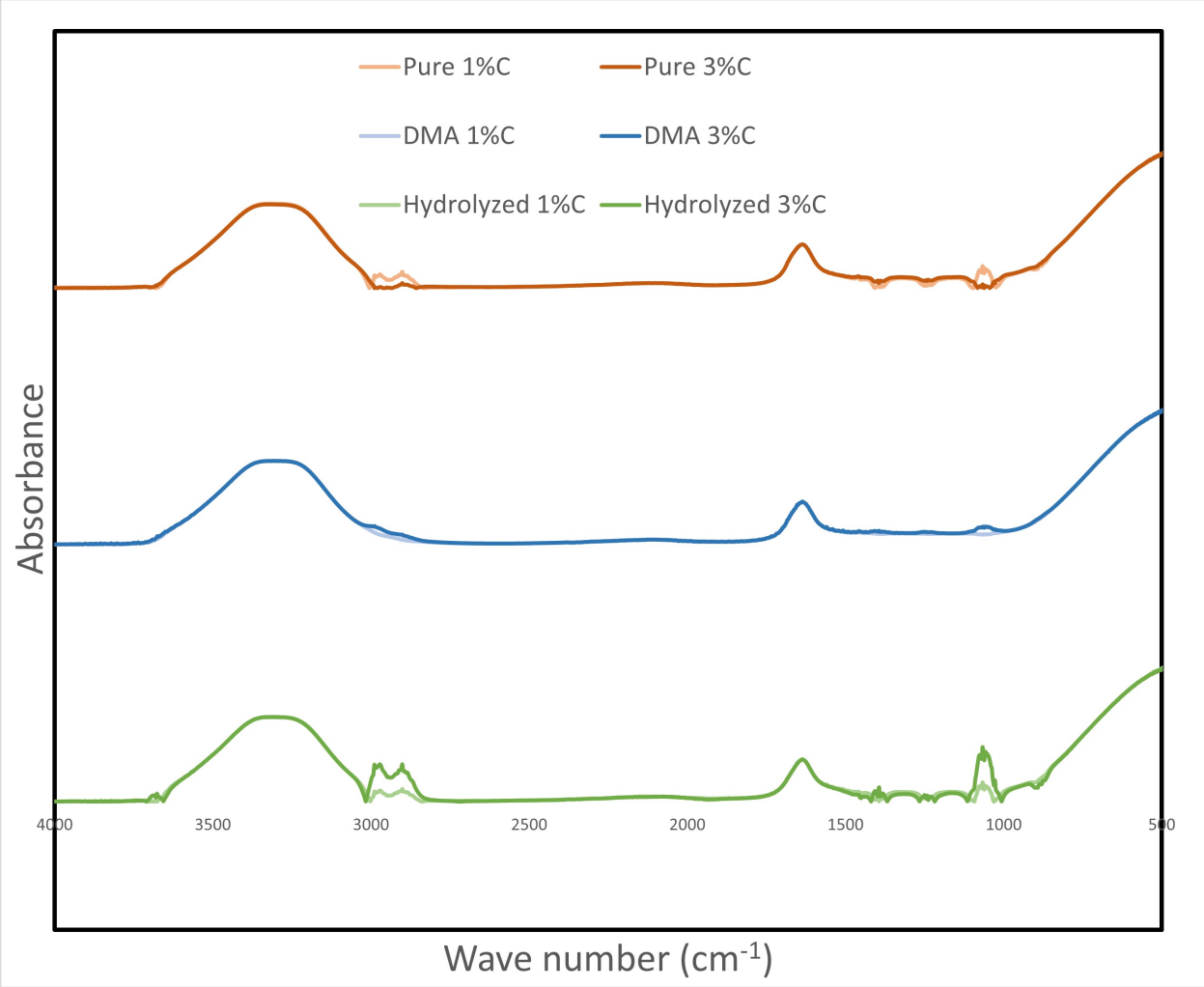

Figure S3: FTIR spectra indicate three different hydrogel polymer mesh families.

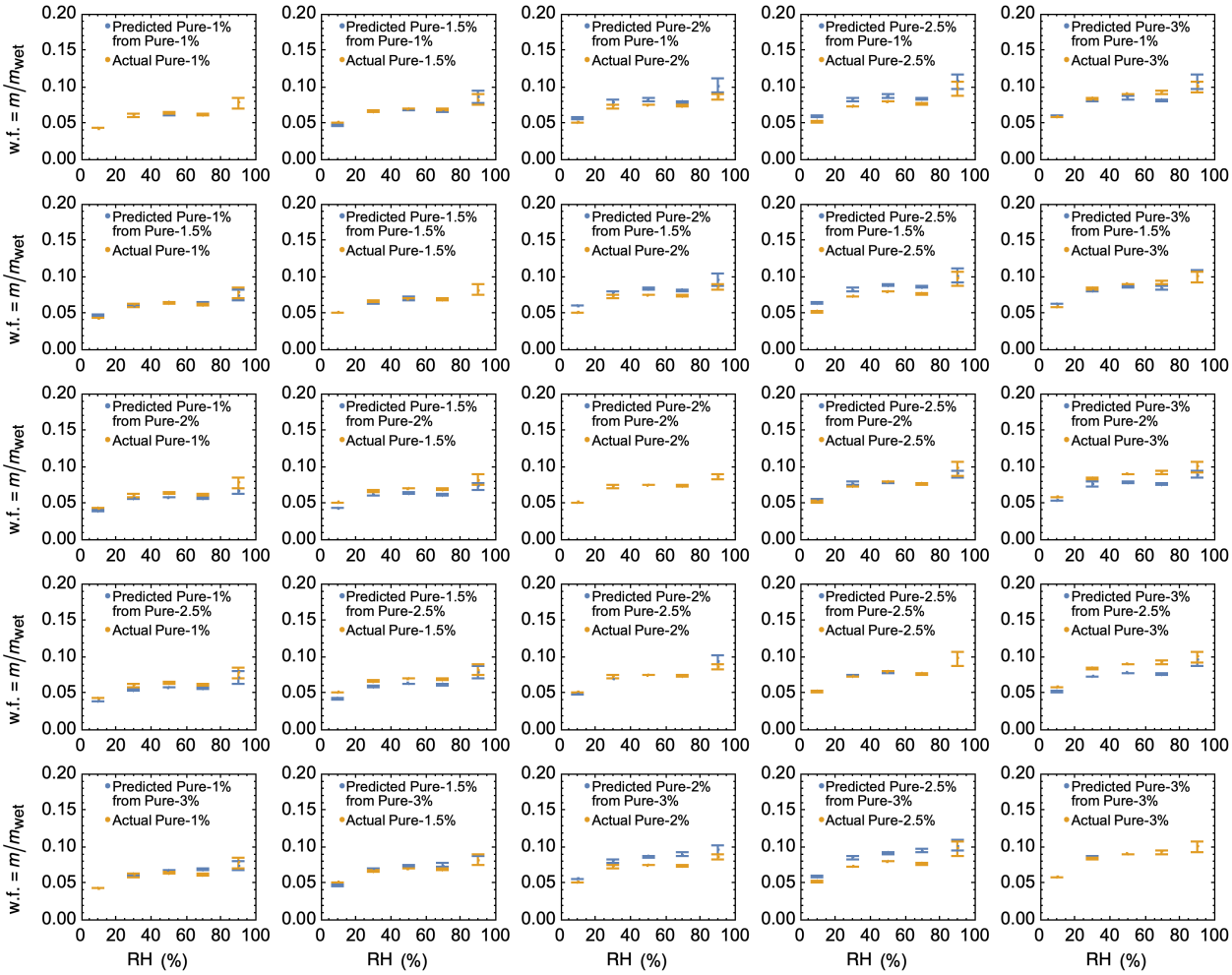

Figure S4: All prediction data (Pure PAAm Hydrogel) compared with actual data shows close agreement.

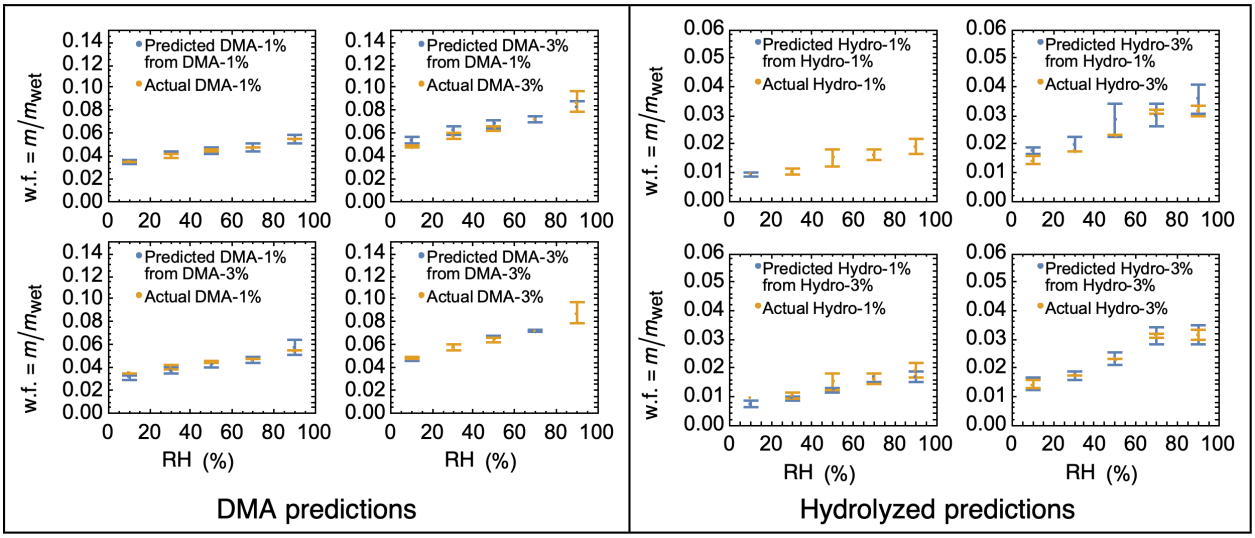

Figure S5: All prediction data (PAAm Hydrogel with DMA (left) or hydrolysis (right)) compared with actual data shows close agreement.