WET AND DRY CUP TEST WITH HYGROSCOPIC MATERIALS: WHAT DO WE REALLY MEASURE

Yuliang Zou (iD), Eléa Moss (iD), Laurent Brochard (iD), Philippe Coussot (iD)

Laboratoire Navier (Ecole des Ponts Paris Tech-Univ Gustave Eiffel-CNRS), Champs-sur-Marne, France

Simulation of water distribution over time for the experiments of Figure 4b

Figure S1 shows the evolution over time of the water distribution for the experiments that went into creating **Figure 4b** in the main text, which was calculated using **Equation S1** (**Eq. 7** from main text), and with the parameters determined from the boundary conditions and fitting (see **Table 1** in the main text).

$$\frac{\partial n}{\partial t} = -\frac{\rho_0 D^*}{\rho_s (1-\varepsilon)\alpha} \frac{\partial^2 n}{\partial x^2} \tag{S1}$$

Figure S1: Simulation of water distribution for the experiments of **Figure 4b** (main text) at different times (indicated in the graphs close to the corresponding curve).

(b)

(c)