Characterization of an impinging jet into porous media

CONG WANG, Caltech, SALWAN ALHANI, West LA college, MORTEZA GHARIB, Caltech — In this work, characteristic behavior of a liquid jet into porous hydrophobic / hydrophilic particle media is investigated. In porous media, the capillary effect becomes significant, especially when the jet Reynolds Number is low. To analyze the cavity creation phenomena, the effect of jet’s diameter, speed and acceleration as well as particles’ size are carefully studied. Such knowledge of fluid behavior will provide guidance for medicine injection process.

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