

Study of the correlation between a number of splines from honey drop and liquid properties

In fluid mechanics, the stains of liquid drop serve us much information such as impact direction, impact velocities or liquid properties, through their mechanisms. In the perpendicular impact, splines, the spreading mechanism of the liquid out of the circumference, can be observed. There are a number of research studies demonstrating the generation of the splines and determining the spread factor along with Reynold and Weber numbers of a particular liquid drop. In this study, a number of splines generated by honey perpendicularly dropped to a porous surface are also investigated in terms of its relation to Reynold and Weber numbers. Honey is a common liquid which can be kept for a long time and also easy to vary liquid properties. The impact surface is porous because it offers a clear observation of the splines. Stains of honey drop are captured by a camera and the captured images are then analyzed by ImageJ program to count the splines. Finally a number of splines are plotted as function of Reynold and Weber numbers to reveal their correlation.

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