

The Effect of Bond Number To Critical Marangoni Number

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Abstract

We choose a 2 mm diameter liquid bridge as a small Bond number liquid bridge and a 6mm diameter liquid bridge as a big one. Changing their heights, different critical Marangoni numbers have be got for different Bond numbers. In experiments the upper rod was heated and the temperature rising rates were controlled low enough to avoid their influence on the critical Marangoni number. For geometric similarity between big liquid bridge and small one, volume rate $V/V_0 = 0.7$ was chosen. If $V/V_0 = 1.0$ was chosen, the 6mm diameter big liquid have large stomach diameter, its profile will be too far from that of the 2mm diameter small liquid bridge.

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