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Single droplet breakup in a rotor-stator mixer

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## **ACCEPTED MANUSCRIPT**

#### Single droplet breakup in a rotor-stator mixer

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#### Highlights

Unique measurement of droplet breakup and stability inside a rotor-stator mixer.

Analysis of breakup probability and the location of droplet breakup.

Relationship between the number of fragments and disruptive hydrodynamic stress.

Multiple fragmentation observed close to thermodynamic equilibrium size.

Keywords: droplet breakup, turbulence, rotor-stator mixer

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