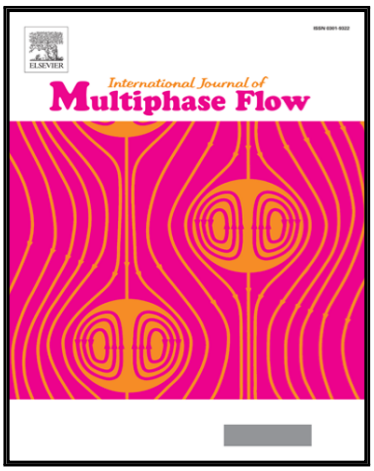

Boundary condition and fuel composition effects on injection processes of high-pressure sprays at the microscopic level

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Highlights

- Actual rate of injection ramp-up clearly affects initial spray penetration
- Spray development and dispersion are linked to injector needle position
- Sprays of ethanol are wider than those of n-dodecane due to in-nozzle cavitation
- End of injection velocity measurements indicate that complete mixing assumption is reasonable in the near-nozzle region