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PII: S0260-8774(15)00253-8
DOI: http://dx.doi.org/10.1016/j.jfoodeng.2015.05.035
Reference: JFOE 8193

To appear in: *Journal of Food Engineering*

Received Date: 12 March 2015
Revised Date: 26 May 2015
Accepted Date: 29 May 2015

Please cite this article as: Jimenez-Junca, C., Sher, A., Gumy, J-C., Niranjan, K., Production of milk foams by steam injection: the effects of steam pressure and nozzle design, *Journal of Food Engineering* (2015), doi: http://dx.doi.org/10.1016/j.jfoodeng.2015.05.035

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Production of milk foams by steam injection: the effects of steam pressure and nozzle design

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Abstract

Foam properties depend on the physico-chemical characteristics of the continuous phase, the method of production and process conditions employed; however the preparation of barista-style milk foams in coffee shops by injection of steam uses milk as its main ingredient which limits the control of foam properties by changing the biochemical characteristics of the continuous phase. Therefore, the control of process conditions and nozzle design are the only ways available to produce foams with diverse properties. Milk foams were produced employing different steam pressures (100-280 kPa gauge) and nozzle designs (ejector, plunging-jet and confined-jet nozzles). The foamability of milk, and the stability, bubble size and texture of the foams were investigated. Variations in steam

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