

Abstract Submitted
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Shock compression and recovery of microorganism-loaded broths and an emulsion¹ PAUL HAZELL, Cranfield University, CLIFF BEVERIDGE, KATHY GROVES, Leatherhead Foods International, CRANFIELD UNIVERSITY COLLABORATION, LEATHERHEAD FOODS INTERNATIONAL COLLABORATION — The microorganisms *Escherichia coli*, *Enterococcus faecalis* and *Zygosaccharomyces bailii* and an oil-based emulsion, have been subjected to shock compression using the flyer-plate technique to initial pressures of 0.8 GPa (in the suspension). In each experiment, a stainless steel capsule was used to contain the broths and allow for recovery without contamination. Where cavitation was suppressed by virtue of simultaneous shock and quasi-static compression, no kill was observed. By introducing an air gap behind the suspension, limited kill was measured in the yeast. Results also suggest that emulsification occurs in oil-based emulsions that are subjected to shock.

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