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Sommario/riassunto	This SpringerBrief provides an overview of the use of ultrasound in various dairy applications, highlighting their significant benefits for the dairy industry, including energy savings and product improvement. It describes in detail the physical and chemical effects of high- and low-frequency power ultrasound in specific applications such as emulsification, ultrafiltration, crystallisation, inactivation of microbes, functionality modifications of secondary dairy products and fat separation. Although to date the majority of these applications have only been proven in the laboratory, some have been successfully implemented on a larger scale. By offering a concise review that includes the transition from laboratory-scale projects to large-scale

commercialization, this SpringerBrief fills a gap in the literature. Ultrasound processing has the advantage of minimising flavour loss, increasing homogeneity, reducing energy requirements, reducing processing times, enhancing end-product quality, reducing chemical and physical hazards and lowering the environmental impact compared to conventional dairy processes. As a result, the use of ultrasound in the dairy industry has become a hot topic and has generated considerable research interest in recent years. The SpringerBrief is intended for industry professionals, researchers and graduate students with a basic understanding of simple ultrasound, especially those starting on a new topic of research or coming into the field.