



## *Advancing Emulsion Product Performance*

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**V**elocys has developed and tested an innovative emulsification technology that can enable improved product formulations. The Velocys technology is unlike traditional methods of formulating emulsions, which apply high energy intensity to immiscible fluids to form small droplets. Mass and heat transfer limitations with conventional hardware lead to limitations with emulsions formulations or product microstructures that can be practically achieved in the final product. Velocys' emulsification process adds discontinuous phase droplets to the continuous phase, one droplet at a time, using arrays of microchannels. The resulting product properties are controlled through selection of processing conditions. Critical processing parameters, such as mixing energy, mixing time, and heating or cooling are closely controlled and remain constant for process scale-up. Furthermore, this technology can be used as a screening tool for exploring an expanded suite of processing conditions to enable previously inaccessible product formulations with shear-sensitive materials and controlled droplet size distribution. This presentation will discuss the application of this technology to emulsions for use in personal and health care applications.