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Constant Systems Cell Disruptors

From Research, Through Pilot and Production Scale

Constant Systems (CSL) Cell Disruptors are an effective option for Scientists working with yeast, and high volumes of bacteria and insect cells for protein purification.

Contant Systems Cell Disruptors offer reliable and consistent cell disruption via the application of a constant pressure throughout the entirety of the processed sample, made possible by use of a hydraulic control system.

Once a sample is drawn into the high pressure cylinder, pressure is built until it reaches the value set by the user, at which point a piston forces the sample through a fixed orifice at high velocity before it impacts on a cooled heat exchange surface, after which it flows through an outlet for collection.

The cell disruptors incorporate several different mechanisms of lysis to ensure maximum efficiency is achieved by a single pass wherever possible. These mechanisms are illustrated in the following video:

Watch Video

Benefits:

- Up to 99% yeast cell lysis in 1 pass
- Highly reproducible
- Scalable - from 1mL to Production volumes
- Excellent for algae, yeast, bacteria, plant and insect Cells

What Customers are saying:

"We're extremely satisfied with our Constant Systems One Shot disrupter and use it routinely to lyse tough bacterial samples - including Lactococcus lactis and Bacillus spores. The instrument is manufactured to high standard, and is reliable and easy to use. Very impressed overall!" - ***University of Cambridge, England – One Shot 2014***

"The Constant Systems Cell Disruptor allows us to process up to 10L or Yeast in 1 hour in a single pass while maintaining cool temperature. This technology allows us to produce more recombinant protein and address complex biological problems." - ***The Scripps Research Institute***

"We have been using our 1.1kW model since 2008 to disrupt E.coli, mammalian, insect and yeast cells and we are very pleased with the results. Other users have reported very good results with algal cells and, in the OneShot mode, even whole (small) insects. The disruptor handles all of these samples with ease and delivers efficient and reproducible lysis that allows us all to prepare high quality proteins, including membrane proteins. It has been so successful in terms of consistency and reliability that researchers from almost every other lab in the institute come to use it. Technical support and servicing arrangements are excellent with rapid, direct responses, although we rarely need either." - ***IRB Barcelona, Spain – Benchtop 2014***

Find Out More

Pressure BioSciences is the exclusive distributor of Constant Systems High Pressure Cell Disruption Systems in North, Central, and South America.

RECAP US HUPO 2016

The 12th Annual US HUPO held in Boston, MA was an excellent opportunity to showcase PCT-HD. PCT-HD combines two of our core applications: tissue homogenization and accelerated protein digestion.

Find Out More

Our Technology Partners SCIEX sponsored a lunchtime workshop where we showcased the PCT-HD workflow and how it incorporates into high throughput proteomics applications with SWATH Data Acquisition.

View Presentation

During the Poster session we presented with our collaborators from PROTIFI data showing that high pressure accelerates enzymatic digestion using Tryp-N.

Download Poster

Upcoming Events

64th ASMS Conference on Mass Spectrometry and Allied Topics
June 4-9,2016. Henry B. Gonzalez Convention Center- San Antonio, Tx
Booth: #819
Hospitality Suite: Monday - Wednesday; Hyatt Grand Regency- Mission B
Breakfast Seminar Wednesday 6/8 -
Introducing the new 2320EXT (EXTREME) for Biomarker Discovery

8th Annual Bioprocessing Summit. August 15-19, 2016. Westin Boston Waterfront, Boston, MA.
Featuring Constant Systems Cell Disruptors
Booth: TBD

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