CONSTANT SYSTEMS
CELL DISRUPTION MADE EASY

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CF Range


Yeast


E.coli


Mammalian/Insect Cells


Plant Cells



Did you know...

the CF range delivers unmatched reproducibility through fixed parameters and fully unattended operation?
No more babysitting. No more airlocks.

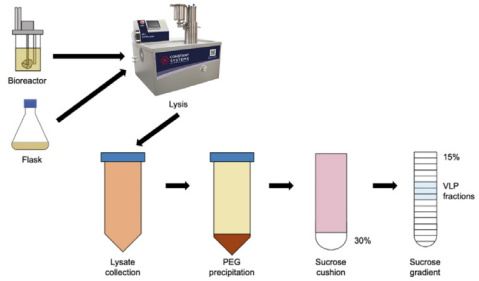
CF - Continuous Flow Processing

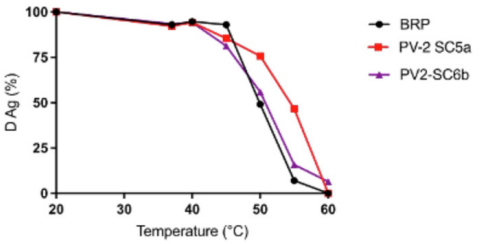
The CF Cell Disruptor Series delivers precise, scalable Continuous Flow Processing for cell disruption across research and production environments. Available in two models – CF1 (up to 6 L/hour) and CF2 (up to 24 L/hour) both feature HMI control, 40 Ksi (2700 bar) maximum pressure, integrated cooling, 200 mL inlet reservoir, and auto shutdown for safe, consistent operation. With Constant Systems' hydraulic control, each sample is processed at exact set pressures, ensuring uniform, reproducible results–typically in a single pass. Both models handle fluid and re-suspended samples, ideal for bacteria, yeast, and algae, with the CF1 suited for 15 mL–10 L volumes and CF2 for 15 mL–100 L, each featuring a lockable trolley/castors and optional or integrated peristaltic pumps for reliable, continuous flow.

Why choose the CF platform for your critical protein extraction methods?
Sample lysis efficiency, extraction of functional protein and speed defines yield. This is only possible by combining consistent (set) pressure dynamics, a fixed orifice cell disruption path and efficient cooling of your sample – unique to Constant Systems.

Maintaining thermal stability of engineered virus like particles (VLPs) is described in a recent publication.

Fig. 1: VLP purification schematic.





The above workflow describes how the CF1 system was used to extract recombinant VLP from yeast. The data shows why it was critical to protect the released VLPs from heat denaturation or a change in structural conformation which impacts the immunogenicity of the VLP. The limit for this VLP is 40°C.

Together with our range of chillers, effective and immediate cooling in our design of the CF1. This lab was able to generate viable VLP for phase 1 clinical trials.

This efficiency and yield translate well in most laboratories whose efforts are to derive active proteins, whether this is in bioprocessing, membrane protein research, food or bio reclamation research.

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