

Cascade Cleavage & Deprotection Module

Product Datasheet

Overview

The Cascade Cleavage & Deprotection Module from Sierra BioSystems streamlines and automates the traditionally separate operations of oligonucleotide cleavage and deprotection. By integrating both steps into a single process, the Cascade delivers dry supports ready for immediate elution and desalting—significantly improving overall workflow efficiency. Its compact footprint, intuitive controls, and broad reagent compatibility make it an ideal solution for a wide range of oligo synthesis protocols.

Key Benefits

- **Single-Step Cleavage & Deprotection:** Eliminates the need for separate procedures with Methylamine and/or Ammonium Hydroxide.
 - **Uniform, High-Quality Results:** Even heat distribution and a failsafe pressure control system ensure consistent product across all plates and columns.
 - **Broad Protocol Compatibility:** Suitable for ammonia-based, ammonia-free, and liquid deprotection workflows, including NH₄OH, NH₄OH:AMA, and methylamine.
 - **Space-Saving Design:** At just 20 x 28 cm, the Cascade accommodates four 96-well plates or 384 columns while minimizing laboratory bench space.
 - **Intuitive Controls:** A user-friendly controller with three separate gas taps and a timed heat controller allows rapid protocol customization.
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Technical Specifications

- **Operating Pressure:** Up to 120 psi
- **Operating Temperature:** Up to 80°C
- **Capacity:**
 - Four standard micro-well plates, e.g. four 96-well plates or 384 columns
- **Dimensions (W x D):** 20 x 28 cm (7.9 x 11 in.)
- **Compatible Reagents:**
 - Gaseous NH₃
 - Liquid NH₄OH, NH₄OH:AMA
 - Add. Methylamine solutions
- **Materials of Construction:** Chemically resistant materials compatible with oligo synthesis reagents. 304 SS. Teflon FEP. Garolite as insulating material.

- **Power Requirements:**

Location	Voltage (VAC)	Frequency	Amperage (A)
USA/Canada	120 ± 10%	50/60 Hz ± 1%	10
Europe	240 ± 10%	50/60 Hz ± 1%	5
Australia	240 ± 10%	50/60 Hz ± 1%	5
Japan	110 ± 10%	50/60 Hz ± 1%	10

Integrated Features

- **Sliding Rails:** Precisely position plates and columns between dual heating plates for even temperature distribution.
 - **Failsafe Pressure System:** Delivers consistent pressure and uniform results.
 - **Included Vacuum Manifold:** Each unit comes with a custom vacuum manifold compatible with the reactive chemistry of oligo synthesis.
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Ordering Information

- **Model:** Cascade Cleavage & Deprotection Module
 - **Included Accessories:** Custom vacuum manifold, user manual, standard fittings
 - **Custom Configurations:** Contact Sierra BioSystems to discuss tailored configurations that meet your specific workflow requirements.
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Contact & Support

For complete downstream processing solutions, additional protocols, or technical support, please visit our website or reach out directly:

Sierra BioSystems, Inc.

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Phone: 1-209-396-1969