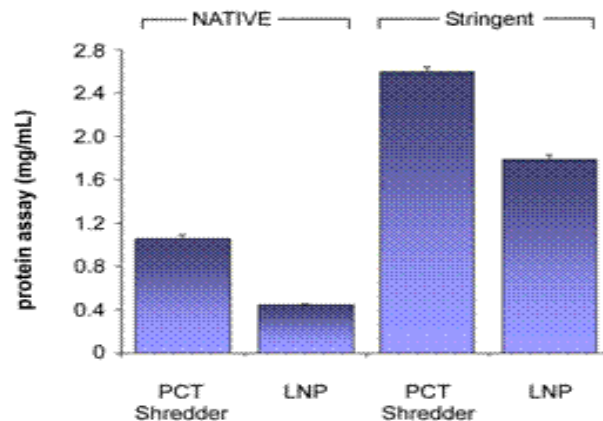


# ProteoSolve-CE Stringent

*A Kit for the Extraction of Denatured Protein from C. elegans*

The nematode *Caenorhabditis elegans* is so resistant to lysis that specimens aboard the Space Shuttle Columbia were the only survivors of the disastrous crash [1]. However, using the ProteoSolve-CE Stringent Kit in combination with a PBI Shredder System results in nearly total disruption of the nematodes, including resilient larval stages and worm embryos. The ProteoSolve-CE Stringent Kit was developed for the effective disruption of *Caenorhabditis elegans* cuticle. While higher protein yields may be obtained when sample processing includes an optional pressure cycling step, disruption of *C. elegans* using the ProteoSolve-CE Stringent Kit with a PBI Shredder System, can yield excellent results. PBI scientists have demonstrated that the ProteoSolve-CE Stringent Lysis Reagent facilitates the extensive disruption of nematode cuticles resulting in as much as one order of magnitude greater protein yields than are obtained in physiological buffers (e.g. PBS, TBS, and HEPES). In addition, The ProteoSolve-CE Stringent Lysis Reagent is compatible with two-dimensional gel electrophoresis (2DGE).



**Extraction of protein from *C. elegans* using a PBI Shredder and ProteoSolve-CE Stringent or ProteoSolve-CE Native Kits from PBI results in greater yield of protein than extraction with mortar and pestle with liquid nitrogen (LNP).**

The ProteoSolve-CE Stringent Kit includes ProteoSolve-CE Stringent Lysis Reagent, ProteoSolve-CE ion exchange (IEX) Resin, ProteoSolve-CE Reducing Reagent, CE SiC Abrasive and Shredder PULSE Tubes. ProteoSolve-CE Stringent Lysis Reagent is a “high stringency” urea-based reagent that uses a proprietary detergent and a reducing agent to maximize protein yields from cells and tissues. The Kit was designed for use in conjunction with a PBI Shredder. Even higher protein yields may be obtained when sample processing includes an optional pressure cycling technology (PCT) step in a PBI NEP3229 or NEP2320 Barocycler.

## Features & Benefits:

- **ProteoSolve-CE Stringent: A “Powerful” Kit for High Yields of Denatured Protein**
- **Increase the Number of Unique Proteins on a 2D Gel**
- **Use the Synergy of Pressure, Chemistry and Mechanical Force to Optimize Yield**

## Specifications of the ProteoSolve-CE STRINGENT Kit

Bottle A	ProteoSolve-CE Stringent Lysis Reagent	Makes 18 mL	Number of Extractions/Kit	12
Bottle B	ProteoSolve-CE IEX Resin	1 gram	Storage Conditions	4°C
Bottle C	ProteoSolve-CE Reducing Reagent	0.3 grams	Tissue Sample Amount/Tube	Up to 500 mg
Bottle Si	CE SiC Abrasive	1.3 grams	Additional Equipment Required	<i>The PCT Shredder or The SHREDDER SG3</i>
			Optional Equipment	Barocycler NEP2320 or Barocycler NEP3229

## For Research Use Only

## Not for Use in Diagnostic Procedures

**Note:** The ProteoSolve-CE Stringent Kit works in conjunction with either *The PCT Shredder* or *The SHREDDER SG3*. Higher protein yields may be obtained when shredding is followed by an optional pressure cycling technology (PCT) step in a PBI NEP3229 or NEP2320 Barocycler. Both PBI Shredders and Barocyclers are sold separately.

## References:

1. Szewczyk, N.J. *et al.* (2005) *Astrobiology*, 5, 690-705.
2. Smejkal, G.B. *et al.* (2008) *HUPO World Congress, Amsterdam, August 16-20, 2008*.
3. *The PCT Shredder Manual*
4. *The SHREDDER SG3 Manual*
5. *The NEP2320 or NEP3229 Barocycler Manual (Optional)*

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