

# Halt™ Protease and Phosphatase Inhibitor Cocktail, EDTA-Free

78441 78445 78447

2054.2

Number	Description
78441	<b>Halt Protease and Phosphatase Inhibitor Cocktail, EDTA-Free (100X)</b> , 1mL, sufficient to treat 100mL of sample
78445	<b>Halt Protease and Phosphatase Inhibitor Cocktail, EDTA-Free (100X)</b> , 5 × 1mL, sufficient to treat 500mL of sample
78447	<b>Halt Protease and Phosphatase Inhibitor Cocktail, EDTA-Free (100X)</b> , 10mL, sufficient to treat 1L of sample

**Storage:** Upon receipt store at 4°C. Product shipped with an ice pack. Do not freeze product.

## Introduction

The Thermo Scientific Halt Protease and Phosphatase Inhibitor Cocktail EDTA-Free prevents enzymatic protein degradation during extraction and purification procedures. The ready-to-use cocktail contains a mixture of several potent inhibitors (Table 1) against the major classes of endogenous proteases and phosphatases. The protease inhibitors target aminopeptidases, cysteine and serine proteases. The phosphatase inhibitors target serine/threonine and protein tyrosine phosphatases.

**Table 1. Protease and phosphatase inhibitors included in the cocktail.**

<u>Inhibitor</u>	<u>Target</u>
Aprotinin	Serine Proteases
Bestatin	Aminopeptidase Proteases
E-64	Cysteine Proteases
Leupeptin	Serine and Cysteine Proteases
Sodium Fluoride	Serine and Threonine Phosphatases
Sodium Orthovanadate	Tyrosine Phosphatases
Sodium Pyrophosphate	Serine and Threonine Phosphatases
β-glycerophosphate	Serine and Threonine Phosphatases

## Important Product Information

- This inhibitor cocktail is generally effective when used at a 1X final concentration; however, samples that contain high levels of proteases or phosphatases might require a more concentrated treatment (i.e., 2-3X).
- Pepstatin A is not included in the cocktail formulation. If you need to inhibit acid proteases, purchase Pepstatin A (see Related Thermo Scientific Products) and add it to the cocktail.

## Procedure

1. Vortex the bottle before use to ensure a homogeneous suspension.
2. Immediately before use, add the cocktail at 10μL/mL directly to the cell lysis buffer or extract to produce a 1X final concentration.

## Troubleshooting

Problem	Possible Cause	Solution
Poor inhibition of protease or phosphatase activity	Sample contains high levels of proteases or phosphatases	Add sufficient cocktail to produce a 2X or 3X final concentration
Cocktail does not provide sufficient protection against a particular protease family	Inhibitor for a specific family is not a component of the cocktail	Add individual inhibitors to the samples for the specific protease
	A specific inhibitor is not at the needed concentration	Use the cocktail at a higher concentration

## Related Thermo Scientific Products

78443	<b>Halt Protease and Phosphatase Inhibitor Single-Use Cocktail, EDTA-free (100X), 100µL × 24 microtubes</b>
78440	<b>Halt Protease and Phosphatase Inhibitor Cocktail, 1mL</b>
78444	<b>Halt Protease and Phosphatase Inhibitor Cocktail, 5mL</b>
78446	<b>Halt Protease and Phosphatase Inhibitor Cocktail, 10mL</b>
88663	<b>Pierce® Protease and Phosphatase Inhibitor Tablets, 20 tablets</b>
88664	<b>Pierce Protease and Phosphatase Inhibitor Tablets, EDTA-free, 20 tablets</b>
87785	<b>Halt Protease Inhibitor Cocktail, EDTA-free (100X), 1mL</b>
87786	<b>Halt Protease Inhibitor Cocktail (100X), 1mL</b>
88660	<b>Pierce Protease Inhibitor Tablets, 30 tablets</b>
88660	<b>Pierce Protease Inhibitor Tablets, EDTA-free, 30 tablets</b>
78428	<b>Halt Phosphatase Inhibitor Single-Use Cocktail (100X), 100µL × 24 microtubes</b>
78420	<b>Halt Phosphatase Inhibitor Cocktail (100X), 1mL</b>
88662	<b>Halt Phosphatase Inhibitor Tablet, 20 tablets</b>
78437	<b>Halt Protease Inhibitor Cocktail, EDTA-free (100X), 5mL</b>
78439	<b>Halt Protease Inhibitor Cocktail, EDTA-free (100X), 10mL</b>
23225	<b>Pierce BCA Protein Assay Kit</b>
78248	<b>B-PER® Bacterial Protein Extraction Reagent, 500mL</b>
78990	<b>Y-PER® Yeast Protein Extraction Reagent, 500mL</b>
89826	<b>Mem-PER® Membrane Protein Extraction Reagent Kit</b>
78833	<b>NE-PER® Nuclear and Cytoplasmic Extraction Kit</b>
78501	<b>M-PER® Mammalian Protein Extraction Reagent, 250mL</b>

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**No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s).**

There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

Current product instructions are available at [www.thermoscientific.com/pierce](http://www.thermoscientific.com/pierce). For a faxed copy, call 800-874-3723 or contact your local distributor.

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