Progenta™ Non-ionic Acid Labile Surfactant I

Product Overview

Progenta Non-ionic Acid Labile Surfactants (NALS) are novel, acid cleavable detergents that are fully compatible with mass spectrometry analysis. The Progenta NALS's have been engineered to provide a safe, robust alternative to detergents (e.g. Triton X-100, Tween 20, and Tergitol® Type NP-40) that are commonly used in protein sample preparation, but that negatively impact subsequent analysis by mass spectrometry. While Triton X and other non-ionic detergents of the polyoxyethylene type might contain contaminations of peroxides, carbonyl compounds and salts, these bound detergents can cause significant impairment of protein analysis by mass spectrometry, as the surfactants can suppress analyte ion signal, promote analyte adduct formation and present PEG polymer chain contaminants during the analysis.

The Progenta Non-ionic Acid Labile Surfactants are fully mass spec compatible and alleviate the problems commonly associated with polyoxyethylene detergents in proteomics studies. At neutral pH, the Progenta NALS functions as a powerful detergent for use in sample preparation, protein solubilization, and cell lysis protocols. After completing the experimental work, the solution is adjusted to a pH of 2.5 - 3 with trifluoroacetic acid (TFA) and incubated for 30 minutes to fully cleave the NALS into small organic molecules that do not inhibit surfactant activity or interfere with analysis by mass spectrometry. Other commercially available acid labile surfactants require incubation in harsher acidic environments of pH 1.0 to 2.0 for up to several hours and may produce an oily pellet or film from the cleavage by-products. Progenta NALS has been specially engineered to provide powerful surfactant performance with the added benefit of quick, simple acid-based detergent cleavage and removal for reproducible results in mass spectrometry-based proteomics studies.

Features and Specifications

Features:

- Rapidly cleaved in just 30 minutes at pH 2.5 - 3.0 in 1% TFA
- NALS cleavage products are fully soluble and do not interfere with mass spectrometry analysis
- Promotes protein solubility and improves enzymatic digestion
- Certified Mass Spec Grade

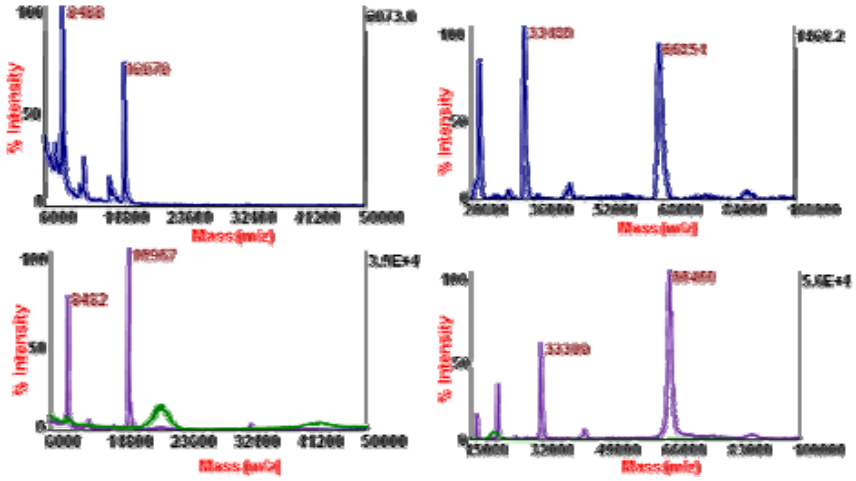
Research Applications:

- Solubilization of proteins and other biomolecules
- Sample preparation and solid phase extraction
- Improved enzymatic digestion of proteins
- Cell lysis and protein extraction from cell lines, tissues, and biological samples
- Extraction of biomolecules from environmental samples

Specifications:

- Critical Micellular Concentration (CMC) = 2.1 mM
- Recommended concentrations for usage: 0.01 - 1.0%

Data Sets



(click image(s) above to enlarge)

Literature

***Please login to download documentation.