

## The New “cOmplete Lysis” Kits for Rapid Cell Lysis and Simultaneous Protein Protection Against Proteases

The cOmplete Lysis-B (2x), cOmplete Lysis-M, and cOmplete Lysis-Y Kits further extend the product family of cOmplete Protease Inhibitor Cocktail Tablets. They enable rapid lysis of bacterial, mammalian, or yeast cells for highly efficient protein extraction and simultaneous protection of extracted proteins against a multitude of proteases in the cell lysate. cOmplete Lysis solutions are ready-to-use cell lysis reagents packaged in kits with cOmplete, Mini, Protease Inhibitor Cocktail Tablets. The products make cell lysis easier and faster than traditional methods such as freeze-thaw cycles, sonication, scraping, or glass beads.



By combining lysis reagents and cOmplete, Mini tablets, a multitude of proteases, including serine proteases, cysteine proteases, and metalloproteases can be inhibited at the time of cell lysis. The Protease Inhibitor Cocktail Tablets eliminate the time-consuming search for the right protease inhibitor. The ready-to-use water-soluble, nontoxic tablets are individually packed in a foil blister-pack format (*EASYPack*) and work optimally with the kit's Lysis Reagent. The extracted proteins can be further purified or analyzed in downstream applications (*e.g.*, immunoassays). The kits are also available without EDTA when they are preferentially used in the isolation process of Poly-His-tagged fusion proteins or subsequent assays.



Product	Pack Size	Cat. No.
<b>cOmplete Lysis-B (2x)</b>	100 ml lysis reagent and 20 tablets	04 719 930 001
<b>cOmplete Lysis-B, EDTA-free</b>	100 ml lysis reagent and 20 tablets	04 719 948 001
<b>cOmplete Lysis-M</b>	200 ml lysis reagent and 20 tablets	04 719 956 001
<b>cOmplete Lysis-M, EDTA-free</b>	200 ml lysis reagent and 20 tablets	04 719 964 001
<b>cOmplete Lysis-Y</b>	200 ml lysis reagent and 20 tablets	04 719 972 001
<b>cOmplete Lysis-Y, EDTA-free</b>	200 ml lysis reagent and 20 tablets	04 719 999 001

### Lysis of Bacterial Cells

The cOmplete Lysis-B (2x) bacterial protein extraction reagent (Lysis-B Reagent) contains a mild, double-concentrated, nonionic detergent in buffer solution (pH 7.5). This reagent allows very efficient and gentle extraction of proteins in small volumes, especially recombinant proteins from bacteria (*e.g.*, *E. coli*). This simple extraction method completely eliminates the need for mechanical disruption (*e.g.*, standard sonification). Rapid cell lysis occurs in just 10 minutes at room temperature. Protein yields obtained with this kit are significantly higher than those obtained by sonication. Lysis-B Reagent is used to extract soluble proteins as well as inclusion bodies from whole bacterial lysates and has also been used successfully to extract proteins from insect cells infected with baculovirus.

### Lysis of Mammalian Cells

cOmplete Lysis-M protein extraction reagent for mammalian cells contains a mild detergent in buffer solution (pH 7.6). It allows very efficient and gentle extraction of proteins from both the cytoplasm and the nucleus of cultured mammalian cells. Efficient lysis of mammalian cells occurs in only five minutes at room temperature, eliminating the need for scraping, sonication, or freeze-thaw cycles. The protein yields obtained with this kit are 20-25% higher compared with three cycles of freeze-thaw, and approximately 20% higher than two minutes of sonication (with 50% pulse).

### Lysis of Yeast Cells

Due to the complex and stable cell wall, yeast protein extraction is difficult and time consuming. cOmplete Lysis-Y protein extraction reagent for yeast cells contains a mild detergent in buffer solution (pH 7.4). It allows very efficient and gentle extraction of proteins from yeast cells and eliminates the need for mechanical disruption (*e.g.*, using glass beads). Efficient lysis occurs in only 20 minutes at room temperature. The protein yields obtained with this kit are two times higher than those obtained by using glass beads. Lysis-Y Reagent has been successfully used to extract soluble proteins from *Saccharomyces cerevisiae*, *Schizosaccharomyces pombe*, *Bacillus subtilis*, and *Escherichia coli* as well as a variety of gram-positive bacteria.

For more information on cOmplete Lysis Kits and our other products for protease inhibition, visit

[www.roche-applied-science.com/proteaseinhibitor](http://www.roche-applied-science.com/proteaseinhibitor) ■