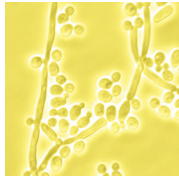


# Zymolyase

## Yeast Lytic Enzyme



**Efficient lysis**  
**Lot to lot conformity**  
**High reproducibility**

**Zymolyase 100T** is an enzyme preparation from a submerged culture of *Arthrobacter luteus* which effectively lyses cell walls of viable yeast cells. This preparation is lyophilized enzyme partially purified by affinity chromatography and contains 100,000 units enzyme/g.

The main enzymatic activity is  $\beta$ -1,3-glucan laminaripentaohydrolase. It hydrolyzes glucose polymers at the  $\beta$ -1,3-glucan linkages releasing laminaripentaose as the principal product.

**Zymolyase 20T** is the same enzyme extract, except that the lyophilized powder is prepared by salting out from the culture fluid with ammonium sulphate and contains 20,000 units enzyme/g.

### Lytic Spectrum by Zymolyase

**1) Susceptible strains in low concentration (0.2 units/ml)**

*Ashbya, Endomyces, Kloeckera, Kluyveromyces, Pullularia, Saccharomyces*

**2) Susceptible strains in high concentration (2.0 units/ml)**

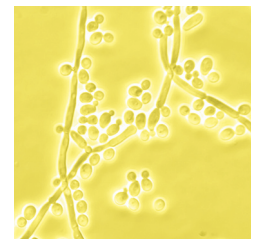
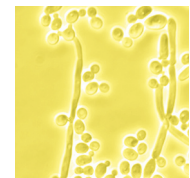
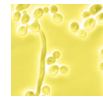
*Candida, Debaryomyces, Eremothecium, Hansenula, Hanseniaspora, Lipomyces, Metschikowia, Saccharomycopsis, Saccharomyces, Schizosaccharomyces, Selenozyma, Trigonopsis, Wickerhamia*

**3) Susceptibility depending on strains**

*Bretanomyces, Cryptococcus, Nadsonia, Pichia, Rodosporidium, Schwanniomyces, Stephanoascus, Torulopsis*

**4) No susceptible strains**

*Bullera, Pityosporum, Rhosotorula, Sporidiobolus, Sporobolomyces, Stigmatomyces, Trichosporon*



Cat. #	Description	Pack size
08320932	ZYMOLYASE 100T	0.25 g
08320931	ZYMOLYASE 100T	0.50 g
08320921	ZYMOLYASE 20T	1 g

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MP Biomedicals Europe, Tel: 00800 7777 9999 • email: [custserv.eur@mpbio.com](mailto:custserv.eur@mpbio.com)





# Technical Note

## Zymolyase sensitivity assay.

Yeast cell integrity depends on a particular external envelope: the cell wall, which is necessary not only for maintaining cell morphology but also for protecting cells from extreme conditions. In response to these changes, precise metabolic pathways are coordinated by the cell.

Zymolyase-mediated cell wall damage is one of the stress factors used to better understand the response to environment changes<sup>(1)</sup> or spore formation process<sup>(2)</sup>.

Some yeast lines are pathogens for humans: the Zymolyase sensitivity assay of *Candida glabrata* has used to understand the resistance mechanism by changing wall composition<sup>(5)</sup>.

## Protoplast/Spheroplast preparation.

Fission yeast is the favored tool of many productive research groups throughout the world, serving as a useful model for the study of fundamental mechanisms, such as genome organization, differential gene regulation, cell-cycle control, signal transduction, or cellular morphogenesis.

Often, the first step needed before to starting analysis techniques is protoplast preparation. Some recent protocols and procedures are:

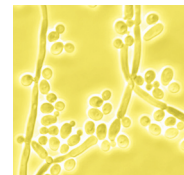
- Immunoprecipitation and western blot analysis<sup>(4, 16)</sup>,
- Vacuolar membranes vesicles<sup>(4)</sup>, or microsomes preparations <sup>(6,10)</sup>,
- Protein purification or chromatin fractionation<sup>(7, 14)</sup>,
- Mitochondria isolation<sup>(8)</sup>
- Immunofluorescence with antibodies<sup>(9, 12)</sup>
- Fluorescent in situ hybridization<sup>(11)</sup>
- Proteasome extracts<sup>(13)</sup>
- Yeast DNA purification<sup>(15)</sup>
- Nuclei isolation and DNA purification<sup>(17)</sup>
- Cytological DNA analysis by DAPI coloration<sup>(3)</sup>

## Other Zymolyase Applications

Yeast transformation, direct PCR on yeast colony, DNA purification.

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