

# IMCSzyme® 3P

genetically modified  $\beta$ -glucuronidase

Catalog Number	Quantity
04-ESF3P-002	2 mg
04-ESF3P-020	20 mg
04-ESF3P-250	250 mg

## Certificate of Analysis

Lot Number:

Test Date:

Exp. Date:

Activity(U/mL):

## Product Description:

IMCSzyme is a genetically modified  $\beta$ -glucuronidase from *E. coli* supplied in lyophilized form. This enzyme is a type of hydrolase that catalyzes the cleavage of  $\beta$ -D-glucuronic acid from the drug metabolites. This product contains a sequence optimized  $\beta$ -glucuronidase with high purity and enhanced catalytic activity.

## Product Specifications:

Physical description:	Dry Film
Specific Activity (units*/mL):	> 50,000
Shelf life**:	Up to 12 Months
Storage temperature:	2 - 8 °C
Sulfatase Activity:	None Detected †

## Quality Approval

Jimmie Braxton:

Quality Control Manager

Edith Jones:

Sr. Quality Assurance Specialist

\* One modified Fishman unit will liberate 1 microgram of phenolphthalein from phenolphthalein glucuronide per hour at 25 °C at pH 6.8 (30 minute assay)

\*\* Shelf life for unopened product in its original sealed packaging

† Sulfatase activity measured using para-nitroacetol sulfate with 10  $\mu$ g of purified enzyme at pH 6.8, 55 °C (1 hour).

## Usage Guidelines:

- Prior to reconstituting the enzyme, bring the bottle to room temperature.
- Add ultrapure water (Type 1, 18.2  $\Omega$ ) to the bottle to obtain 1 mg/mL. Close the cap and gently swirl the enzyme into solution. **DO NOT VORTEX.**
- Allow the bottle to sit at room temperature (20-25 °C) for 15 minutes.
- The hydrolysis efficiency is optimal at temperatures ranging between 40-60 °C. It is also stable against organic solvents (up to 20% methanol and 10% acetonitrile).
- Use supplied rapid hydrolysis buffer.
- Prepare master mix containing buffer, internal standard and enzyme solutions.
- Add master mix to sample solution.

## Product Contents and Storage Guidelines: Lyophilized Enzyme (in original container):

The lyophilized enzyme contains patent pending buffer for high stability and azide as a preservative. When reconstituted with 2 mL of water, the final azide concentration is 0.02%. Product is shipped with ice packs. The product is stable up to 12 months in its original, sealed package. Store at 2 - 8 °C.

## Reconstituted Enzyme Solution:

Reconstituted enzyme solution stored at 2 - 8 °C. **DO NOT FREEZE** the enzyme solution. Discard or re-check enzyme activity within 30 days after reconstituting. Avoid exposure to direct light. Avoid multiple warming and chilling cycles.

## Rapid Hydrolysis Buffer:

Filter sterilized buffer solution to be used with the enzyme solution. Stable at 2 - 30 °C up to 1 year in its sealed package. Discard within 30 days after first opening.

## Aseptic Handling Guidelines:

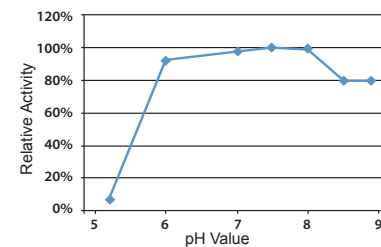
IMCS products undergo strict quality control to ensure their sterility, but they can become contaminated while handling. Follow the guidelines below for sterile handling to avoid contamination.

- Use only sterile glassware and other equipment.
- Avoid pouring reagents directly from bottles or flasks.
- Keep your pipettes at your work area. Use sterile glass or disposable plastic pipettes and a pipettor to work with liquids.
- Use each pipette only once to avoid cross contamination.
- Always cap the bottles and flasks after use. Seal multi-well plates with tape or place them in resealable bags to prevent microorganisms and airborne contaminants from gaining entry.

## Aseptic Handling Guidelines (cont.):

- Never uncover a sterile flask, bottle, petri dish, etc. until the instant you are ready to use it and never leave it open to the environment. Return the cover as soon as you are finished.
- If you remove a cap or cover, and have to put it down on the work surface, place the cap with opening facing down.
- Perform your experiments as rapidly as possible to minimize contamination.

## Optimal pH Range:



## Enzyme Purity:



SDS-PAGE of enzymes (2  $\mu$ L per lane) separated on 4-20% acrylamide Tris-glycine at 150 V for 60 minutes.

## Contact and Support

For questions, concerns or technical support please contact us by email at [custserv@imcstips.com](mailto:custserv@imcstips.com) or by calling 888-560-2073 Monday - Friday from 9 a.m. - 5 p.m. EST. or contact the sales representative for your area. You can also contact us for help on improving your workflow. **SDS available online at [www.imcstips.com/resources](http://www.imcstips.com/resources)**

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## Product Warranty & Satisfaction Guarantee

IMCS warrants this product confirmed to the information contained in this publication at the time of quality test date. The same efficient enzymatic hydrolysis results can not be guaranteed without the use of our supplied buffer.

US Patents Pending  
IMCSzyme® is a registered trademark of Integrated  
Micro-Chromatography Systems, LLC in the U.S. and other countries.



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