



# **GALase III**

## **Instruction Manual**

**Catalog Number**  
**170-6513**

**BIO-RAD**

# Table of Contents

<b>Section 1</b>	<b>Introduction .....</b>	<b>1</b>
<b>Section 2</b>	<b>Kit Components and Specifications ....</b>	<b>2</b>
<b>Section 3</b>	<b>Protocol.....</b>	<b>3</b>
<b>Section 4</b>	<b>Product Information.....</b>	<b>4</b>
<b>Section 5</b>	<b>Technical Assistance.....</b>	<b>5</b>

# Section 1

## Introduction

GALase III is an *E. coli* expressed recombinant  $\beta$ 1–4 galactosidase. It will remove all terminal non-reducing  $\beta$ 1–4 galactose from complex carbohydrates. Reaction buffer and protocol are provided.



R = oligosaccharide

## Section 2 Kit Components and Specifications

<b>Component</b>	<b>GALase III</b>	<b>5x Reaction Buffer pH 6</b>
<b>Specificity</b>	Terminal non-reducing $\beta$ 1-4 galactose from oligosaccharides	N/A
<b>Concentration</b>	1.5 U*/ml (in 20 mM Tris pH 7.5, 25 mM NaCl)	250 mM sodium phosphate, pH 6.0
<b>Volume</b>	40 $\mu$ l	200 $\mu$ l
<b>Storage</b>	4 °C	4 °C
<b>Shelf Life</b>	9 months	1 year

\*One unit (U) is defined as the amount of enzyme required to catalyze the release of 1  $\mu$ mole of p-nitrophenol from p-nitrophenol- $\beta$ -D-galacto-pyranoside per minute at 37 °C, pH 5.0.

## Section 3 Protocol

1. Prepare oligosaccharide sample (up to 1 nanomole).  
Dried Sample: Resuspend 1 nanomole of oligosaccharide in 14  $\mu$ l of distilled water. Add 4  $\mu$ l of 5x Reaction Buffer, pH 6.  
Liquid Sample: Dilute 14  $\mu$ l of oligosaccharide solution (containing up to 1 nanomole) with 4  $\mu$ l of 5x Reaction Buffer, pH 6.
2. Add 2  $\mu$ l GALase III to the reaction vial. Total reaction volume is 20  $\mu$ l.
3. Incubate at 37 °C for 1 hour.
4. To test for completion of the enzymatic reaction compare the mobility of the oligosaccharide with and without GALase III digestion. Use an N- or O-Linked Oligosaccharide Profiling Kit (catalog numbers 170-6501 or 170-6815) to analyze oligosaccharide mobility shifts.

**Note:** To cleave more than one nanomole of substrate increase reaction volume, enzyme quantity, and incubation time proportionately.

## Section 4 Product Information

<b>Catalog Number</b>	<b>Product Description</b>
<b><i>Carbohydrate Analysis Kits</i></b>	
170-6490	<b>Immun-Blot® Kit for Glycoprotein Detection</b>
170-6500	<b>Enzymatic Deglycosylation Kit</b>
170-6508	<b>Deglycosylation Enhancement Kit</b>
170-6513	<b>GALase III</b> , 1.5 U/ml, 0.04 ml
170-6880	<b>HEXase I</b> , 42 U/ml, 0.04 ml
170-6881	<b>O-Glycosidase DS</b> , 1 U/ml, 0.04 ml
170-6882	<b>NANase II</b> , 5 U/ml, 0.04 ml
170-6883	<b>PNGase F</b> , 2.5 U/ml, 0.04 ml
170-6501	<b>N-Linked Oligosaccharide Profiling Kit</b>
170-6510	<b>N-Linked Oligosaccharide Sequencing Kit</b>
170-6502	<b>N-Linked Oligosaccharide Gel Refill</b> , 6
170-6514	<b>N-Linked Oligosaccharide Gel and Buffer Refill</b>

<b>Catalog Number</b>	<b>Product Description</b>
170-6815	<b>O-Linked Oligosaccharide Profiling Kit</b>
170-6816	<b>O-Linked Oligosaccharide Gel and Buffer Refill Pack</b>
170-6817	<b>O-Linked Oligosaccharide Gel Refill Pack</b>
170-6503	<b>Oligosaccharide Electrophoresis Buffer Refill</b>
170-6811	<b>Monosaccharide Compositional Analysis Kit</b>
170-6812	<b>Monosaccharide Gel and Buffer Refill Pack</b>
170-6813	<b>Monosaccharide Gel Refill Pack</b>
170-6814	<b>Monosaccharide Buffer Refill Pack</b>
<b><i>Carbohydrate Analysis Instruments</i></b>	
170-6555	<b>Glyco Doc™ Imager</b> , 100/120 V
170-6557	<b>Glyco Doc Imaging System</b> , 100/120 V
170-6559	<b>Glyco Doc Analytical Software</b>

## Section 5 Technical Support

If you require additional technical assistance contact your local Bio-Rad representative or in the US dial 1-800 4BIORAD.