

# BGS™

## “COMPLETE STEROID CONJUGATE HYDROLYSIS IN A SINGLE REAGENT”

**BGS™ - the only dual, recombinant enzyme reagent - specifically designed for simultaneous hydrolysis of  $\beta$ -glucuronides and sulfo-conjugates from urine in a single reaction.**

Enzymatic activity across pH and temperature range demonstrates overlapping conditions for single optimized sample prep, using Finden's BGS reagent.

Our standardized enzyme production processes ensure consistency and reproducibility in final analytical results. In addition to providing complete hydrolysis of both conjugate types in a single protocol, the use of highly-purified recombinant enzymes also eliminates the need for additional reagent purification.

The BGS™ hydrolysis protocol is mild and non-aggressive, minimizing undesired analyte conversions – including generation of “steroid-like” interferences – yet still offering rapid hydrolysis for even hard-to-cleave analytes across a wide range of drug concentrations.

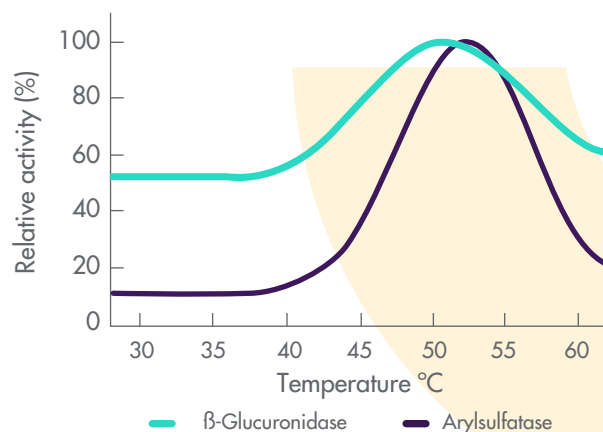
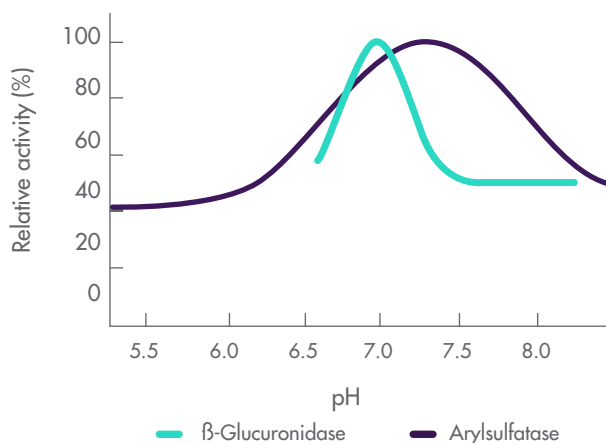
Finden's unique, optimized combination of pure, recombinant  $\beta$ -glucuronidase and pure, recombinant arylsulfatase provides the following advantages to the user:

- Highly-purified enzyme that does not contain contaminants that can cause interfering peaks in your chromatogram or undesirable conversion of analytes.
- Optimized balance of enzymes in a single reagent, allows for concurrent hydrolysis of glucuronides and sulfates in one protocol.
- Complete hydrolysis in one prep provides simplicity, reduced time, error, and labor.
- Facilitates automation for high-throughput laboratories.

### Enzyme Performance:

Analyte	Product	Recovery %	Time (min)
Estrone-Sulfate	BGS™	>80	20
Estrone-Glucuronide	BGS™	>80	10
4-Methylumbelliferyl Sulfate	BGS™	>80	5

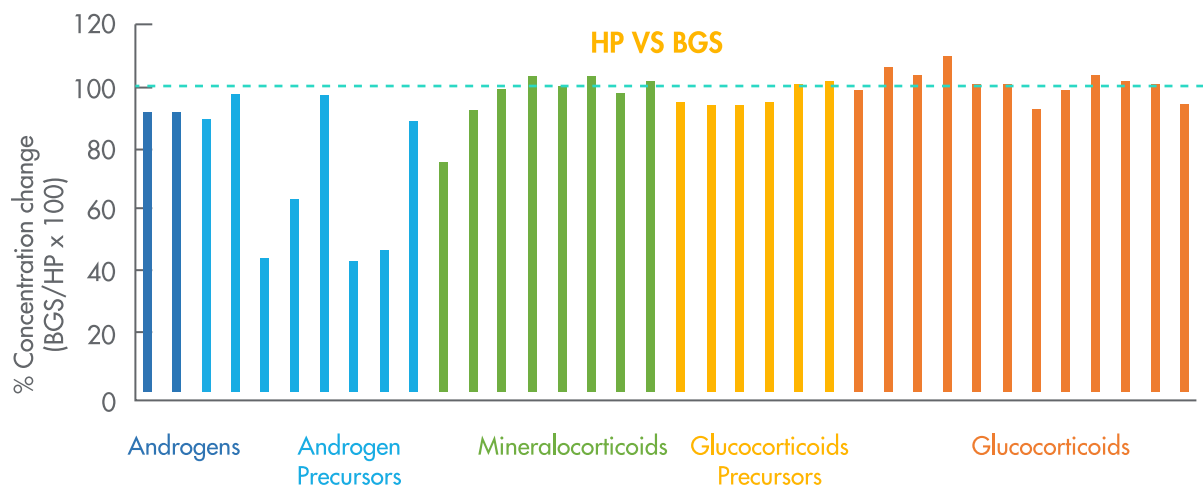
### OPTIMIZED PH AND TEMPERATURE OF $\beta$ -GLUCURONIDASE AND ARYLSULFATASE



# BGS™



## COMPARISON OF URINARY STEROID OUTPUTS FOLLOWING HYDROLYSIS OF QC URINE SAMPLES USING HP VERSUS THE RECOMBINANT BGS ENZYME MIX



- The BGS hydrolysis method involved a shorter incubation (30-minutes) than HP (3-hours).
- HP and BGS performed equally for all examined glucuronides.

F. Shaheen 'Steroid deconjugation by helix pomatia – can we overcome snail speed?' University of Birmingham, 2019.

## BGS™ Specification

Product Form: Solution, 10% (v/v) glycerol  
Temperature Range: 50°C – 55°C  
pH Range: 6.8 – 7.0  
Storage/Stability: 12 months at 2°C – 8°C  
Purity: ≥ 90% of  $\beta$ -Glucuronidase and Arylsulfatase

CONTACT FINDEN KURA TO LEARN MORE ABOUT THE  
PURE RECOMBINANT BETA-GLUCURONIDASE AND  
ARYLSULFATASE MIX FOR STEROIDS AND OTHER DRUGS.

EMAIL US AT: [SALES@KURABIOTECH.COM](mailto:SALES@KURABIOTECH.COM)  
(800) 332-1448

# WE DON'T BELIEVE DRUG TESTING IS EVER ROUTINE



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