

# Limit of Collection Determination for ELSD in the Reveleris™ Flash System

## Introduction

The Reveleris™ system uses RevealX™ Detection Technology (patents pending) to collect fractions from non-chromophoric compounds using an ELSD. The minimum threshold value for the ELSD to detect these compounds is 3mV. We ran tests to determine the minimum sample concentration needed for detection in order to trigger the fractions to be collected.

## Experimental Conditions

Dilutions of 1mg/mL concentration of cholesterol acetate were made to 0.75mg/mL, 0.5mg/mL, and 0.25mg/mL concentrations. 1mL of each of these resulting concentrations, as well as 1 mg/mL, were loaded using a 10 mL syringe on a Reveleris™ 4g cartridge in four separate runs. The resulting concentrations loaded were 1mg, 0.75mg, 0.50mg, and 0.25mg on the column.

The flowrate was 18mL/min and the method was isocratic using 95% hexane: 5% ethyl acetate. Each run was 2 minutes long.

## Results

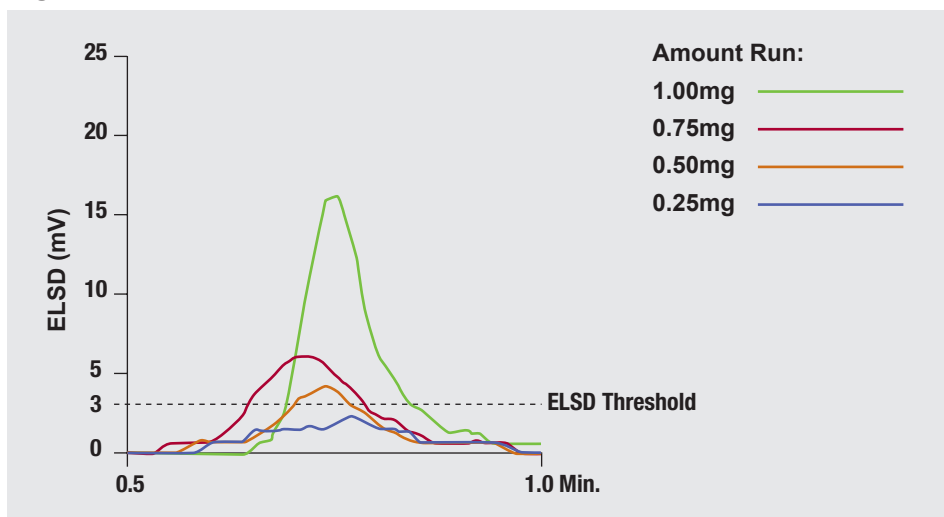
As shown in the data in Figure 1, the ELSD detected and collected cholesterol acetate at 1mg, 0.75mg and 0.5mg. The sample was detected at a concentration of 0.25mg, but this did not meet the threshold of 3mV to trigger collection.

## Conclusion

Although the signal response by ELSD can vary according to the type of compound, cholesterol acetate was used to determine the minimum concentration of sample required to be detected and trigger fraction collection. The ELSD easily detected cholesterol acetate at concentrations of 1mg and 0.75mg. The minimum concentration for cholesterol acetate that was detected by ELSD in order to trigger collection was 0.5mg on column.



Figure 1



[www.discoverysciences.com](http://www.discoverysciences.com)

ALITECH® is a trademark, registered in the United States and/or other countries, of Alltech Associates, Inc. REVELERIS™, and REVEALX™ are trademarks of Alltech Associates, Inc. GRACE®, and GRACE DAVISON® are trademarks, registered in the United States and/or other countries, of W. R. Grace & Co.-Conn. GRACE DAVISON DISCOVERY SCIENCES™ is a trademark of W. R. Grace & Co.-Conn. This trademark list has been compiled using available published information as of the publication date of this brochure and may not accurately reflect current trademark ownership. Alltech Associates, Inc. is a wholly owned subsidiary of W. R. Grace & Co.-Conn. Grace Davison Discovery Sciences is a product group of W. R. Grace & Co.-Conn., which now includes all product lines formerly sold under the Alltech brand. © Copyright 2009 Alltech Associates, Inc. All rights reserved. The information presented herein is derived from our testing and experience. It is offered for your consideration and verification. Since operating conditions vary significantly, and are not under our control, we disclaim all warranties on the results that may be obtained from the use of our products. W. R. Grace & Co.-Conn. and its subsidiaries can not be held responsible for any damage or injury occurring as a result of improper installation or use of its products. Grace reserves the right to change prices and/or specifications without prior notification.

10/2009 M308

**W. R. Grace & Co.-Conn.**  
7500 Grace Drive, Columbia, MD 21044

Grace Davison Discovery Sciences Regional Headquarters:

**IN THE AMERICAS:**  
2051 Waukegan Road  
Deerfield, IL 60015-1899  
Tel: 1 847 948 8600  
Fax: 1 847 948 1078  
Email: [discoverysciences@grace.com](mailto:discoverysciences@grace.com)

**IN EUROPE:**  
Brandstraat 12  
B-9160 Lokeren, Belgium  
Tel: +32 (0)9-340-65 65  
Fax: +32 (0)9 340 65 60  
Email: [discoverysciences.EU@grace.com](mailto:discoverysciences.EU@grace.com)

**IN ASIA:**  
19th Floor, K.Wah Center  
1010 Huai Hai Zhong Road  
Shanghai, 200031 PRC  
Tel: 86 21 5467 4678  
Fax: 86 21 5405 1500  
Email: [dsbiz.asia@grace.com](mailto:dsbiz.asia@grace.com)

**IN INDIA:**  
17 Commerce Center  
Opposite Krishna Hospital, Paud Road  
Pune, 411038 India  
Tel: +91 20 6644 9900  
Fax: +91 20 2544 1740  
Email: [ananth.sc@grace.com](mailto:ananth.sc@grace.com)

**IN AUSTRALIA/NEW ZEALAND:**  
2 Kerr Court  
Rowville, 3178  
Victoria, Australia  
Tel: +61 3 9237 6100  
Fax: +61 3 9237 6101  
Email: [discoverysciences.AU@grace.com](mailto:discoverysciences.AU@grace.com)