

April 27, 2012

Via Federal Express and EDGAR

Division of Corporation Finance
Securities and Exchange Commission
100 F. Street, N.E.
Washington, D.C. 20549-7010
Attn.: Ms. Pam Long, Associate Director

**RE: CryoPort, Inc.
Registration Statement on Form S-1
Filed March 23, 2012
File No. 333-180326**

Dear Ms. Long:

On behalf of our client, CryoPort, Inc. (the "Company"), we are responding to the comments of the Staff of the Securities and Exchange Commission (the "Commission") as set forth in your letter dated April 12, 2012 to Larry G. Stambaugh, Chief Executive Officer of the Company, with respect to the Company's Registration Statement on Form S-1, as filed with the Commission on March 23, 2012. We have enclosed for your reference Pre-Effective Amendment No. 1 to Form S-1/A which has been revised to reflect the Commission's comments (the "Amended Form S-1") and has been filed with the Commission on the date hereof. For your convenience, the Commission's comments have been repeated herein in bold, with the Company's response immediately following each of the Commission's comments.

General

- 1. Regarding the Registration Statement on Form S-1 (File No. 333-173263) which became effective on April 28, 2011 and served as a post-effective amendment to two registration statements on Form S-1 through application of Securities Act Rule 429 (File No. 333-162350 and File No. 333-170027), we note that your prospectus appears to have been in use for more than nine months after the April 28, 2011 effective date. We further note that the audited financial statements contained therein, which are as of and for the fiscal year ended March 31, 2010, are older than 16 months and that you do not appear to have subsequently updated the audited financial statements in the prospectus pursuant to Section 10(a)(3) of the Securities Act of 1933, as amended, by filing a post-effective amendment to the registration statement until now. Please tell us whether any offers or sales were made pursuant to the prospectus during the period in which your financial statements were not current. For additional guidance, please refer to Question 139.28 of the Securities Act Sections Compliance and Disclosure Interpretations found at <http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm>.**

The Company's Registration Statement on Form S-1 (File No. 333-173263) relates solely to the resale of (i) outstanding shares of common stock held by stockholders of the Company ("Outstanding Common Shares"), (ii) the resale of shares of common stock underlying warrants held by stockholders of the Company ("Warrant Shares"), and (iii) the resale of certain warrants issued in connection with a prior public offering, and the resale of the shares of common stock underlying such warrants ("Tradable Warrants and Underlying Common Shares"). According to the Company's transfer agent, approximately 118,685 Outstanding Common Shares were offered and sold following January 28, 2012, the date after which the financial statements included in the Registration Statement's prospectus ceased being current. The Company believes that these sales were proper, as such Outstanding Common Shares were eligible for unlimited public resales under Rule 144(b)(1)(i) of the Securities Act of 1933, as amended (the "Securities Act"), at the time they were resold by the selling stockholders, as such shares had been held for more than six months, none of the selling stockholders were, or within the three months prior to such sale were, affiliates of the Company and the current public information requirements of Rule 144(c) of the Securities Act had been satisfied. The Company has confirmed that no Warrant Shares nor Tradable Warrants and Underlying Common Shares were offered or sold following January 28, 2012.

Security Ownership of Certain Beneficial Owners and Management, page 60

- 2. Based on your Selling Security Holder Table disclosure on page 64, it appears that BridgePointe Masters Fund Ltd and Deerfield Special Situations Fund International Limited each hold more than 5% of the company's outstanding stock. Please tell us why they are not listed in the beneficial ownership table, or otherwise revise your disclosure accordingly.**

The Company notes the Commission's comment and has revised the beneficial ownership table to add Deerfield Special Situations Fund International Limited and Deerfield Special Situations Fund L.P. With respect to BridgePointe Master Fund Ltd., the Company advises the Commission that BridgePointe's beneficial ownership as of March 15, 2012 was actually 4.96%. The Company has revised the Selling Security Holder Table to correct BridgePointe's beneficial ownership percentage.

Selling Security Holder Table, page 64

- 3. Please revise your disclosure to identify the person or persons who have voting and/or investment control over the shares owned by Brio Capital LP, Broms Financial, LLC, and Celtic Enterprises LTD. Please refer to Question 140.02 of Regulation S-K Compliance and Disclosure Interpretations found at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.**

The Company notes the Commission's comment and has revised the Selling Security Holder Table to footnote the person or persons who have voting and/or investment control over the shares owned by Brio Capital LP, Broms Financial, LLC and Celtic Enterprises LTD.

If you have any questions regarding the above, please do not hesitate to give me a call at (714) 427-7402.

Very truly yours,

/s/ Mark R. Ziebell
Mark R. Ziebell

cc: Robert S. Stefanovich
Chief Financial Officer