



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

April 18, 2011

Via U.S. Mail

Larry G. Stambaugh
Chief Executive Officer
Cryoport, Inc.
20382 Barents Sea Circle
Lake Forest, CA 92630

**Re: Cryoport, Inc.
Registration Statement on Form S-1
Filed: April 1, 2011
File No.: 333-173263**

Dear Mr. Stambaugh:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. Regarding the Registration Statement on Form S-1 (File No. 333-162350), which was initially filed on October 6, 2009 and became effective on February 25, 2010, we note that your prospectus appears to have been in use for more than nine months after the February 25, 2010 effective date of the registration statement. We further note that the audited financial statements contained therein, which are as of and for the fiscal year ended March 31, 2008, 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. Please advise us as to whether any offers or

sales were made pursuant to the prospectus during the period in which the financial statements were not current. Please refer to Section 10(a)(3) of the Securities Act and Question 113.01 of our Securities Act Forms Compliance and Disclosure Interpretations, which are available on our website.

Calculation of Registration Fee

2. We note footnote (1) disclosure to the Calculation of Registration Fee table. Please revise the footnote disclosure to specify the exact dollar amount of the fee that had been paid previously and is being applied to the new registration statement. In this regard, please see footnote 21 in SEC Release No. 33-7168.

Prospectus Summary, page 1

3. Please disclose here that the auditors have issued a going concern opinion. We note “Our auditors have expressed doubt about our ability to continue as a going concern” risk factor on page five.
4. Please include in this section a brief summary of the material terms of 2010 and 2011 private placements, describing how the securities were acquired by the selling stockholders. To the extent applicable, please disclose any material differences between the terms of the two exempt offerings. With respect to the tradable warrants, please indicate that they were issued in connection with the company’s IPO.

Risk Factors, page 5

The sale of substantial shares of our common stock may depress our stock price, page 7

5. Please address under a separate caption the dilutive effect that the exercise of the warrants may have on the existing stockholders. Please quantify such effect to the extent possible.

Security Ownership of Certain Beneficial Owners, page 53

6. Based on your disclosure here, it appears that your beneficial owners hold 12.49% of your outstanding stock. Please reconcile this disclosure with the disclosure in “Certain of our existing stockholders own and have the right to acquire a substantial number of shares...” risk factor on page 13 where you disclose a beneficial ownership percentage of 15.1%.
7. Based on your Selling Security Holder Table disclosure on page 57, it appears that AQR Diversified Arbitrage Fund and Emergent Financial Group, Inc. 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.
8. To the extent that the “Percentage of Shares Owned” column is intended to indicate the

ownership percentage of the selling stockholders prior to the offering, please complete your disclosure accordingly.

9. Rule 429(a) of the Securities Act requires that the combined prospectus in the latest registration statement must include all of the information that currently would be required in a prospectus relating to all offering(s) that it covers. As such, please revise the footnote disclosures to identify for each selling stockholder the transaction and the number of shares each selling stockholder acquired in that transaction.

Part II, page II-1

Exhibits, page II-5

10. Please file as exhibits to the registration statement each form of warrant agreement issued in the 2010 and 2011 private placements.

Exhibit 5.1 - Opinion of Counsel

11. Please have counsel clarify for us the purpose of the following statement in the final paragraph of its opinion: "We are furnishing this opinion to the Company solely in connection with the Registration Statement." We are concerned that this statement might be an impermissible attempt to limit the ability of investors to rely on the opinion.

Exhibit 10.31

12. Please include a footnote in the exhibit index to indicate that certain portions of this exhibit have been omitted based upon a request for confidential treatment. We note that on March 24, 2011 the Commission issued an order granting confidential treatment with respect to this exhibit.

Undertakings, page II-10

13. Please remove the undertakings set forth in Item 512(a)(6) of Regulation S-K, as well as the undertakings related to reliance on Rule 430A, as inapplicable. Please revise your disclosure to include the Item 512(a)(5)(ii) undertakings.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Era Anagnosti, Staff Attorney, at (202) 551-3369 or Dieter King, Senior Staff Attorney, at (202) 551-3338 with any questions.

Sincerely,

Pamela A. Long
Assistant Director

cc: Mark R. Ziebell, Esq. (Via Facsimile at (714) 427-7799)
Snell & Wilmer L.L.P.