

February 24, 2017

VIA EDGAR
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Attn: Suzanne Hayes

**Re: ProPhase Labs, Inc.
Preliminary Proxy Statement on Schedule 14A
Filed January 31, 2017
File No. 000-21617**

Dear Ms. Hayes:

On behalf of our client, ProPhase Labs, Inc. (the "Company"), we submit this letter in response to comments from the staff (the "Staff") of the Securities and Exchange Commission issued in its letter dated February 14, 2017 (the "Comment Letter") relating to the above-referenced Preliminary Proxy Statement on Schedule 14A (the "Preliminary Proxy Statement"). We are concurrently submitting via EDGAR this letter and an amended Preliminary Proxy Statement on Schedule 14A (the "Amended Preliminary Proxy Statement").

Set forth below in bold are comments from the Comment Letter. For your convenience, each of the numbered paragraphs below corresponds to the numbered comment in the Comment Letter and includes the caption used in the Comment Letter. Immediately following each comment is the Company's response to that comment. Defined terms used but not otherwise defined herein have the meanings ascribed to such terms in the Amended Preliminary Proxy Statement.

General

- 1. We note your outstanding application for confidential treatment of portions of the Asset Purchase Agreement and Manufacturing Agreement filed as Appendix A to the proxy statement. Please note that the application should be resolved prior to mailing your proxy statement.**

We acknowledge the Staff's comment and respectfully advise the Staff that the confidential treatment order (File No. 000-21617 - CF#34653) relating to portions of the Asset Purchase Agreement and Manufacturing Agreement filed as Appendix A to the proxy statement was issued on February 16, 2017.

- 2. Please update your financial statements to the extent required by Article 8-08 of Regulation S-X.**

We acknowledge the Staff's comment and respectfully advise the Staff that the Amended Preliminary Proxy Statement includes the updated financial statements required by Article 8-08 of Regulation S-X under the headings "Unaudited Pro Forma Financial Information," beginning on page 51, and "Index to Unaudited Financial Statements of Cold-EEZE[®] Business Division," beginning on page 62.

Proposal No. 1 – Sale of the Acquired Assets

Background of the Sale of the Acquired Assets, page 25

3. **Please revise your background discussion to provide further detail regarding the bids you received from the four potential acquirers referenced in the first paragraph on page 26 as well as the reasons why you did not pursue them. Additionally, please disclose the basis for your conclusion that the Mylan bid was more favorable than the other bids you received and that a transaction with Mylan was more likely to be consummated.**

We acknowledge the Staff's comment and respectfully advise the Staff that the Amended Preliminary Proxy Statement includes additional detail beginning on page 25 under the heading "Background of the Sale of the Acquired Assets" regarding the bids received from the four potential acquirers referenced in the Amended Preliminary Proxy Statement as well as the reasons why the Company did not pursue certain of them. The Amended Preliminary Proxy Statement also describes the basis for the Company's conclusion that the Mylan bid was more favorable than the other bids the Company received and that a transaction with Mylan was more likely to be consummated than a transaction with any of the other bidders.

Should you have any questions concerning any of the foregoing, please contact me by telephone at (212) 549-0393.

Sincerely,

/s/ Aron Izower

Aron Izower
Reed Smith LLP

cc: Ted Karkus
Chairman and CEO of ProPhase Labs, Inc.
