

DIVISION OF CORPORATION FINANCE

July 14, 2023

Hamid Erfanian Chief Executive Officer ENZO BIOCHEM INC 81 Executive Blvd., Suite 3 Farmingdale, New York 11735

Re: ENZO BIOCHEM INC Amendment No. 1 to Registration Statement on Form S-3 Filed July 10, 2023 File No. 333-272727

Dear Hamid Erfanian:

We have reviewed your amended registration statement and have the following 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. If 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. Unless we note otherwise, our references to prior comments are to comments in our June 28, 2023 letter.

Amendment No. 1 to Registration Statement on Form S-3

Cover Page

1. We note your amended disclosure in response to comments 1 and 2, including that the occurrence of an event of default, including failing to consummate the asset sale, may result in the acceleration of the your obligations under the Debentures, and if this were to occur, you may neither have sufficient cash on hand nor have access to liquidity to be able to repay such obligations, which could result in you pursuing, among other options, bankruptcy and liquidation. Please amend your disclosure to clarify the impact on equity holders if you were to file for bankruptcy, including whether equity holders could expect any recovery in bankruptcy.

Hamid Erfanian ENZO BIOCHEM INC July 14, 2023 Page 2

Please contact Jessica Ansart at 202-551-4511 or Katherine Bagley at 202-551-2545 with any questions.

Sincerely,

Division of Corporation Finance Office of Industrial Applications and Services

cc: Dan Woodard