

July 7, 2005

United States Securities and Exchange Commission
Division of Corporation Finance
450 Fifth St., N.W.
Washington, DC 20549
Attn: Mr. Jim B. Rosenberg, Sr. Assistant Chief Accountant

Re: Enzo Biochem, Inc.
Form 10-K for the FYE 7/31/04, filed 10/14/04
File no. 001-09974
Comment Letter dated 6/16/05

Ladies and Gentlemen:

In response to your requests made in a letter dated June 16, 2005, we are pleased to provide you with the following information:

QUESTION 1A. QUANTIFY CHANGES IN ESTIMATES OF PRIOR PERIOD CONTRACTUAL ADJUSTMENTS

The process the Company uses to determine its estimate of the contractual allowances for its laboratory services is based upon a rolling monthly weighted average of historical reimbursement statistics. The Company calculates the weighted average of these statistics over a twenty four month period. This statistics development process captures the aggregate reimbursements (cash applied) for a given month and compares that to the original gross invoiced amounts (the gross billing is based upon the same standard fee schedule for all payers) in the aggregate, by the respective billable party categories (i.e. Medicare and third party payers). The Company calculates monthly the relationship between the original aggregate amounts billed and the aggregate reimbursement amounts and uses this to determine the expected percentage which will be collected, by billable party. The reciprocal percentage of the expected percentage is the estimate of contractual allowance percentage used by the Company.

The Company adjusts for final settlements on a prospective basis by adjusting the contractual allowance percentage using the aforementioned rolling monthly weighted average historical reimbursement statistics. The Company's process captures the actual aggregate settlements on a monthly basis as the reimbursements are received and applied to the aggregate open accounts receivable; whereby the above weighted average is consistently being adjusted for the future period on an on going basis. The Company also reviews these statistics by billable party quarterly to determine if there are any adverse trends and for any reimbursement policy changes for any given billable party and makes the necessary change to the contractual allowance percentage.

During the fiscal years ended July 31, 2004, 2003, and 2002, the contractual allowance percentages, determined using the rolling monthly weighted average historical reimbursement statistics, were 60.9%, 56.7%, and 51.4%, respectively.

Q1B. QUANTIFY THE REASONABLY POSSIBLE EFFECTS THAT A CHANGE IN ESTIMATE OF UNSETTLED AMOUNTS FROM 3RD PARTY PAYERS AS OF THE LATEST BALANCE SHEET DATE COULD HAVE ON FINANCIAL POSITION AND OPERATIONS

The Company projects (by using a sensitivity analysis) that each 1% change in the contractual allowance percentage could result in a change in the net accounts receivable and clinical laboratory services revenue of \$340,000, as of and for the fiscal year ended July 31, 2004. The Company will disclose a sensitivity analysis effect in future MD&A discussions.

Q1C. QUANTIFY PAYER MIX CONCENTRATIONS AND RELATED AGING OF ACCOUNTS RECEIVABLE.

The Company's gross billing for laboratory services is based upon the Company's standard fee schedule which is used for all patient payers, self payers, third party payers and Medicare providers. The aging of the accounts receivable is maintained using the gross billed amount and is aged by the invoice date. See Table 1: Gross Billing Payer Mix Concentration and Table 2 Aging of Gross Accounts Receivable for fiscal years ending July 31, 2004, 2003, and 2002.

Q1D. AMOUNTS PENDING APPROVAL FROM THIRD PARTY PAYERS

The Company views its net accounts receivable as the total amount pending future approval from third party payers. See Table 3: Accounts Receivable Net of Allowances as of July 31, 2004, 2003, 2002. The Company includes in self pay its self payers plus amounts that have been denied by third party payers, balance billing for unpaid amounts from third party payers, and deductibles and co-payments. The Company does not maintain historical percentages for amounts that get reclassified into self pay. See Table 4: Bridging Gross Accounts

Receivable to Net for Clinical Lab Operations for the respective fiscal years.

Q2. ALLOWANCE FOR DOUBTFUL ACCOUNTS

The Company utilizes a historical collection analysis to establish allowances for doubtful accounts for each receivable category, which considers the aging of the receivables and results in an increase in the allowances as the aging of the related receivables increases. The Company believes collection of receivables from self payers is subject to credit risk and the patient's ability to pay.

The allowance for doubtful accounts also includes the uncollectible balances from third party payers for the insufficient diagnosis information received from the ordering physician, which result in denials of payment. In addition, the allowance is increased when a receivable from a third party or HMO remains open due to a denial of coverage based upon the provider relationships. The Company writes off 100% of all accounts receivable (for all payers) over 300 days as it assumes all these accounts are uncollectible. The written off amounts are kept on the aging for internal purposes. The Company also sets up reserves for accounts under 300 days old. The Company adjusts the estimate for any recoveries on an ongoing basis through the above historical collection analysis.

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Q3 CONTROLS AND PROCEDURES, PAGE 34

We will modify the final paragraph of the Controls and Procedures disclosure in our future filings, as follows:

Conclusions. Based upon the Controls and Procedures Evaluation, our CEO and CFO have each concluded that: 1.) our Disclosure Controls and Procedures are effectively designed to ensure that information required to be disclosed in the reports the Company files or submits is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms; 2.) our Disclosure Controls and Procedures ensure that information required to be disclosed is accumulated and communicated to management, including the CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure; and 3.) our Internal Controls are effective to provide reasonable assurance that our financial statements are fairly presented in conformity with generally accepted accounting principles.

Q4 POLICY FOR DETERMINING WHEN AN ALLOWANCE IS RECOGNIZED FOR A RECEIVABLE OR WHEN ONE IS WRITTEN OFF

The allowance for doubtful accounts is estimated based on our historical collection experience using a retrospective collection analysis, and accounts receivable aging models based on thresholds for age. The Company utilizes historical uncollectible amounts by payer mix and uses this data to determine the allowance for doubtful accounts by respective payer mix. The Company writes off 100% of all accounts receivable (for all payers) over 300 days as it assumes all these accounts are uncollectible. The written off amounts are kept on the aging for internal purposes. The Company also provides for accounts under 300 days old.

Q5 - REVENUE RECOGNITION, PAGE F-8

The Company has certain non exclusive supply agreements with distributors. These distributors report their shipments of products to their customers and their corresponding manufacturing and processing costs for these shipped products. The Company records the revenue from these supply agreements net of the distributors' manufacturing and processing costs.

During the fiscal years ended July 31, 2004, 2003, and 2002, the manufacturing and processing cost of these products sold was \$7.4 million, \$7.0 million, and \$6.5 million, respectively.

With respect to EITF 01-9, issues 3-6:

Issue 3--Under what circumstances should up-front nonrefundable consideration given by a vendor to a customer be recognized as an asset of the vendor rather than an immediate charge in the vendor's income statement?

We have never paid up-front nonrefundable consideration to any of our distributors or their customers.

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Issue 4--If a vendor offers a sales incentive voluntarily and without charge to customers that is exercisable by a customer as a result of a single exchange transaction, when should the vendor recognize and how should the vendor measure the cost of the sales incentive if it will not result in a loss on the sale of a product or service?

We do not offer sales incentives.

Issue 5--For the sales incentive described in Issue 4, when should the vendor recognize and how should the vendor measure the cost of the sales incentive if it will result in a loss on the sale of a product or service?

Not applicable.

Issue 6--If a vendor offers a customer a rebate or refund of a specified amount of cash consideration that is redeemable only if the customer completes a specified cumulative level of revenue transactions or remains a customer for a specified time period, when should the vendor recognize and how should the vendor measure the cost of the offer?

We don't offer rebates or refunds for any reason.

Q6 NOTE 7 - LITIGATION, PAGES F-13 TO F-15

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The second paragraph of the note describes a shareholder complaint alleging, among other things, securities fraud, and is entitled Glaser et al. vs. Gross and officers and directors of Enzo.

As required by Reg 229.103 of Reg S-K, the information provided includes: the name of the court in which proceedings are pending, date proceedings were instituted, the principal parties to the proceedings, a description of the facts underlying the proceedings, and the relief sought, which is in excess of 10% of our consolidated current assets.

The company believes it has complied with SFAS 5, paragraphs 8-10, because, in the opinion of management, it is not probable that a liability has been incurred and therefore no accrual has been made for a loss contingency. It is also the opinion of management that there is a less than reasonable possibility that a loss has been incurred and therefore, no estimate of the possible loss or range of loss has been given.

The sixth paragraph of the note describes a complaint made by Roche against Enzo. The information provided includes: the name of the court in which proceedings are pending, date proceedings were instituted, the principal parties to the proceedings, a description of the facts underlying the proceedings, and the relief sought.

It is the opinion of management that it is not probable that a liability has been incurred and therefore no accrual has been made for a loss contingency. It is also the opinion of management that there is a less than reasonable possibility that a loss has been incurred and therefore, no estimate of the possible loss or range of loss has been given.

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The status of these complaints was updated in Part II, Item 1 of our April 30, 2005 10-Q filing made on June 9, 2005. Developments described in that filing strengthen management's opinion that there is a less than reasonable possibility that any losses have been incurred.

In connection to our response to your comments, we acknowledge that:

- o The Company is responsible for the adequacy and accuracy of the disclosures in the Form 10-K.
- o Staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the 10-K filing.
- o The Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Very truly yours,

/s/ Barry W. Weiner
President, Chief Financial Officer and Director

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TABLE 1

<TABLE>
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CATEGORY	7/31/2004		7/31/2003		7/31/2002
<S>	<C>	<C>	<C>	<C>	<C>
<C>					
MEDICARE 28%	31,231,104	32%	29,495,752	32%	26,825,154
THIRD PARTY PAYERS 38%	38,075,053	39%	35,218,146	38%	36,426,400
PATIENT-SELF PAY 11%	10,766,915	11%	10,385,728	11%	10,885,916
HMO'S 23%	18,625,752	19%	17,113,657	19%	22,617,119
TOTAL 100%	98,698,824	100%	92,213,283	100%	96,754,589

</TABLE>

<TABLE>
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TABLE 2 ENZO CLINICAL LABS, INC
AGING OF GROSS ACCOUNTS RECEIVABLE AS OF 07/31/2004

As % CATEGORY	<C>	<C>	<C>	<C>	<C>	<C>
		31 to 60	61 to 90	91 to 120	Greater than 120	Grand total
MEDICARE 31%	4,485,639	3,282,602	1,279,771	936,898	5,638,539	15,623,449
THIRD PARTY PAYERS 21%	5,692,879	3,608,284	591,901	430,836	223,416	10,547,316
PATIENT-SELF PAY 22%	2,320,132	988,526	609,957	442,580	6,513,234	10,874,429
HMO'S 26%	2,167,120	2,196,744	849,797	1,655,237	5,857,900	12,726,798
TOTAL 100%	14,665,770	10,076,156	3,331,426	3,465,551	18,233,089	49,771,992

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ENZO CLINICAL LABS, INC
AGING OF GROSS ACCOUNTS RECEIVABLE AS OF 07/31/2003

As % CATEGORY	<C>	<C>	<C>	<C>	<C>	<C>
		31 to 60	61 to 90	91 to 120	Greater than 120	Grand total
MEDICARE 17%	3,597,991	1,114,349	728,684	852,398	2,327,078	8,620,500
THIRD PARTY PAYERS 17%	4,987,937	1,855,847	587,766	399,351	1,165,388	8,996,289
PATIENT-SELF PAY	2,593,674	1,411,242	625,837	845,335	8,410,099	13,886,187

27% HMO'S 39%	1,870,776	2,245,810	1,352,557	1,291,647	13,708,640	20,469,430
TOTAL 100%	13,050,378	6,627,248	3,294,844	3,388,731	25,611,205	51,972,406

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<CAPTION>

ENZO CLINICAL LABS, INC
AGING OF GROSS ACCOUNTS RECEIVABLE AS OF 07/31/2002

<S> <C>	<C>	<C>	<C>	<C>	<C>	<C>
	30	31 to 60	61 to 90	91 to 120	Greater than 120	Grand total
As % CATEGORY	-----					
MEDICARE 7%	3,180,383	679,424	42,814	51,071	585,623	4,539,315
THIRD PARTY PAYERS 22%	5,061,887	1,333,796	701,876	592,602	6,576,426	14,266,587
PATIENT-SELF PAY 22%	1,516,424	779,172	806,427	572,575	11,011,246	14,685,844
HMO'S 49%	1,912,653	1,099,328	1,188,198	963,368	27,018,281	32,181,828
TOTAL 100%	11,671,347	3,891,720	2,739,315	2,179,616	45,191,576	65,673,574

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Enzo Biochem
Accounts Receivable Net of Allowances

TABLE 3

<TABLE>
<CAPTION>

	7/31/2004	7/31/2003	7/31/2002
<S> CATEGORY	<C>	<C>	<C>
MEDICARE	3,830,010	1,880,098	1,163,661
THIRD PARTY CARRIERS	4,227,131	3,372,415	4,792,067
PATIENT-SELF PAY	4,580,187	6,117,059	5,748,353
HMO'S	479,322	3,025,446	2,119,032
Clinical Labs accounts receivable, net	13,116,650	14,395,018	13,823,113
Life Sciences accounts receivable, net	1,677,717	2,871,295	6,444,402
Consolidated accounts receivable, net	14,794,367	17,266,313	20,267,515

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Enzo Biochem
Bridging Gross Accounts Receivable to Net

TABLE 4

IN \$000'S

7/31/02	7/31/04	7/31/03
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<S>	<C>	<C>	<C>	<C>	<C>
<C>					
Clinical Labs - gross aged accounts receivable		49,772		51,972	
65,674					
Add: unbilled billable receivable		5,426		4,160	
7,595					

		55,198		56,132	
73,269					
Less: uncollectible accounts written off*		(12,539) *		(16,908) *	
(38,524) *					

		42,659		39,224	
34,745					
Contractual allowance @	60.92%	(25,988)	56.70%	(22,240)	51.35%
(17,842)					

		16,671		16,984	
16,903					
Allowance for uncollectible		(3,554)		(2,589)	
(3,080)					

Clinical Labs - accounts receivable, net		13,117		14,395	
13,823					
Life Sciences - accounts receivable, net		1,677		2,871	
6,444					

CONSOLIDATED ACCOUNTS RECEIVABLE, NET		14,794		17,266	
20,267					
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</TABLE>

* The Company assumes all accounts over 300 days are uncollectible and therefore written off. The amounts are kept on the aging for internal purposes