



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 3030

October 13, 2010

Mr. Steven W. Peterson  
Chief Financial Officer  
Mesa Laboratories, Inc.  
12100 West Sixth Avenue  
Lakewood, Colorado 80228

RE: **Mesa Laboratories, Inc.**  
**Form 10-K for the fiscal year ended March 31, 2010**  
**Filed June 29, 2010**  
**File No. 000-11740**

Dear Mr. Peterson:

We have completed our review of your Form 10-K and related filings and do not have any further comments at this time.

Sincerely,

Jeffrey Jaramillo  
Accounting Branch Chief