



DIVISION OF  
CORPORATION FINANCE

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

February 28, 2011

Glenn P. Muir  
Chief Financial Officer  
Hologic, Inc.  
35 Crosby Drive  
Bedford, MA 01730

**Re: Hologic, Inc.**  
**Form 10-K for the fiscal year ended September 25, 2010**  
**Filed November 24, 2010**  
**File No. 000-18281**

Dear Mr. Muir:

We have completed our review of your filings and do not have any further comments at this time.

Sincerely,

Amanda Ravitz  
Assistant Director