



DIVISION OF  
CORPORATION FINANCE

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

May 21, 2014

Via E-mail

Mr. Taylor C. Harris  
Vice President and Chief Financial Officer  
Thoratec Corporation  
6035 Stoneridge Drive  
Pleasanton, California 94588

RE: **Thoratec Corporation**  
**Form 10-K for Fiscal Year Ended December 28, 2013**  
**Filed February 18, 2014**  
**File No. 000-49798**

Dear Mr. Harris:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filing and 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. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Kevin L. Vaughn

Kevin L. Vaughn  
Accounting Branch Chief