



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