



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

January 13, 2011

David V. Smith
Chief Financial Officer
Thoratec Corporation
6035 Stoneridge Drive
Pleasanton, California 94588

Re: Thoratec Corporation
Form 10-K for the fiscal year ended January 2, 2010
Filed February 24, 2010
File No. 0-49798

Dear Mr. Smith:

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

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief