

THORATEC CORP  
Form RW  
July 31, 2009

**Thoratec Corporation**  
6035 Stoneridge Drive  
Pleasanton, California 94588

July 31, 2009

**VIA EDGAR AND FAX**

United States Securities and Exchange Commission  
Division of Corporation Finance  
Mail Stop 3030  
Washington, D.C. 20549

Re: Thoratec Corporation  
Withdrawal of Registration Statement on Form S-4  
(Registration No. 333-159034)

Ladies and Gentlemen:

In accordance with Rule 477 of the Securities Act of 1933, as amended (the **Securities Act**), Thoratec Corporation, a California corporation (the **Company**), hereby requests withdrawal of the Registration Statement on Form S-4 (File No. 333-159034) (the **Registration Statement**), as initially filed with the Securities and Exchange Commission (the **Commission**) on May 7, 2009 and as amended on June 16, 2009, July 14, 2009, and July 29, 2009, together with all exhibits thereto, with such request to be deemed granted by the Commission upon filing of this application.

The Company requests that the Commission consent to this application on the grounds that the withdrawal of the Registration Statement is consistent with the public interest and the protection of investors. The Company has elected to withdraw the Registration Statement in light of the termination on July 31, 2009 of the Agreement and Plan of Merger, dated as of February 12, 2009, by and among the Company, HeartWare International, Inc., a Delaware corporation, Thomas Merger Sub I, Inc., a Delaware corporation and a wholly owned subsidiary of the Company and Thomas Merger Sub II, Inc., a Delaware corporation and a wholly owned subsidiary of the Company, to which the Registration Statement relates. The Registration Statement was never declared effective and no sales of securities have been made pursuant thereto.

The Company requests in accordance with Rule 457(p) of the Securities Act that all fees paid to the Commission in connection with the filing of the Registration Statement be credited to the Company for future use.

We appreciate your assistance, and should you need any additional information, please do not hesitate to call Tad J. Freese of Latham & Watkins LLP at (650) 463-3060.

Respectfully submitted,

/s/ Gerhard F. Burbach

Gerhard F. Burbach  
President and Chief Executive Officer

cc: Tad J. Freese, *Latham & Watkins LLP*