

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13D
(Rule 13d-101)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT
TO RULE 13d-2(a)**

(Amendment No. 6)

Thoratec Corporation

(Name of Issuer)

Common Stock, no par value per share

(Title of Class of Securities)

885175 30 7

(CUSIP Number)

Seth H. Hoogasian, Esq.
General Counsel
Thermo Electron Corporation
81 Wyman Street
Waltham, Massachusetts 02454-9046
(781) 622-1000

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

March 16, 2005

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box .

Note. Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7(b) for other parties to whom copies are to be sent.

(Continued on following pages)

1.	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Thermo Electron Corporation 04-2209186		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* SC		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION State of Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER 1,703,765	
	8.	SHARED VOTING POWER 2,731,779	
	9.	SOLE DISPOSITIVE POWER 4,435,544	
	10.	SHARED DISPOSITIVE POWER -0-	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,435,544		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.2%		
14.	TYPE OF REPORTING PERSON* CO		

*SEE INSTRUCTIONS BEFORE FILLING OUT!

Thermo Electron Corporation, a Delaware corporation (“the “Reporting Person”), hereby amends its statement on Schedule 13D relating to the common stock, no par value per share (the “Common Stock”), of Thoratec Corporation (formerly known as Thoratec Laboratories Corporation), a California corporation (the “Company”).

ITEM 2. Identity and Background.

Item 2 is hereby amended and restated as follows:

This Amendment is being filed by the Reporting Person pursuant to Rule 13d-2 to reflect the change of information previously reported under Item 5 of its Schedule 13D, as amended.

The principal business address and principal office address of the Reporting Person is 81 Wyman Street, Waltham, Massachusetts 02454-9046.

The Reporting Person is a leading provider of analytical and monitoring instruments used in a broad range of applications, from life sciences research to telecommunications to food, drug, and beverage production.

Appendix A attached to hereto sets forth with respect to each executive officer and director of the reporting Person the following information:

- (a) name;
- (b) business address;
- (c) present principal occupation or employment and the name, principal business and address of any corporation or other organization in which such employment is conducted; and
- (d) citizenship.

To the knowledge of the Reporting Person, there is no person who may be deemed to be a controlling person of the Reporting Person.

During the last five years, neither the Reporting Person nor, to the knowledge of the Reporting Person, any executive officer or director of the Reporting Person has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

During the last five years, neither the Reporting Person nor, to the knowledge of the Reporting Person, any executive officer or director of the Reporting Person has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction which resulted in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, Federal or State securities laws or finding any violation with respect to such laws.

ITEM 5. Interest in Securities of the Issuer.

Item 5 is hereby amended as follows:

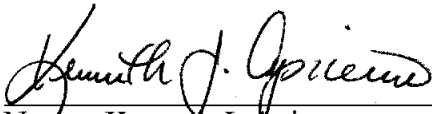
This Amendment is being filed by the Reporting Person pursuant to Rule 13d-2 to reflect an increase in the percentage of Common Stock held by the Reporting Person as a result of the Company's repurchase of Common Stock, which resulted in a net reduction of the total issued and outstanding shares of Common Stock as reported on the Company's Form 10-K for the fiscal year ended January 1, 2005.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: March 24, 2005

THERMO ELECTRON CORPORATION

By: 
Name: Kenneth J. Apicerno
Title: Treasurer

APPENDIX A

Thermo Electron Corporation

The name, present principal occupation or employment and beneficial ownership of shares of common stock of Thoratec Corporation (the "Company") of each director and executive officer of Thermo Electron Corporation ("Thermo Electron") is set forth below. Unless otherwise noted, all such individuals are citizens of the United States. Unless otherwise noted, the business address of each executive officer and director of Thermo Electron is 81 Wyman Street, Waltham, Massachusetts 02454-9046.

Directors

Name/Present Principal Occupation or Employment	Business Address	Beneficial Ownership of Shares of the Company Common Stock		
		Shares Held Outright	Shares Underlying Options Exercisable Prior to March 16, 2005	Total Beneficial Ownership
John L. LaMattina Senior Vice President of Pfizer Inc. and the President of Pfizer Global Research and Development	Pfizer Inc. 50 Pequot Avenue New London, Connecticut 06230	0	0	0
Peter J. Manning Director of Safety Insurance Group Inc.		0	0	0
Jim P. Manzi Chairman of the Board of Thermo Electron and Chairman of Stonegate Capital		0	0	0
Robert A. McCabe Chairman of Pilot Capital Corporation		4,393	0	4,393
Robert W. O'Leary Chairman and Chief Executive Officer of Valeant Pharmaceuticals International	Valeant Pharmaceuticals International 3300 Hyland Avenue Costa Mesa, California 92626	0	0	0
Michael E. Porter Bishop William Lawrence University Professor at Harvard Business School	Harvard Business School Soldiers Field Road Boston, Massachusetts 02163	0	0	0
Elaine S. Ullian President and Chief Executive Officer of Boston Medical Center	Boston Medical Center Talbot 1 One Boston Medical Center Place Boston, Massachusetts 02118	0	0	0
Marijn E. Dekkers⁽¹⁾ President, Chief Executive Officer and Director of Thermo Electron		0	0	0

(1) Mr. Dekkers is a citizen of The Netherlands.

Executive Officers Who are Not Directors

No person is a controlling stockholder of Thermo Electron.

Name/Present Principal Occupation or Employment	Business Address	Beneficial Ownership of Shares of the Company Common Stock		
		Shares Held Outright	Shares Underlying Options Exercisable Prior to March 16, 2005	Total Beneficial Ownership
Guy Broadbent(2) Vice President of Thermo Electron		0	0	0
Marc N. Casper Senior Vice President of Thermo Electron		0	0	0
Seth H. Hoogasian Vice President, General Counsel and Secretary of Thermo Electron		0	0	0
Peter E. Hornstra Corporate Controller and Chief Accounting Officer of Thermo Electron		0	0	0
Stephen G. Sheehan Vice President, Human Resources of Thermo Electron		0	0	0
Peter M. Wilver Vice President and Chief Financial Officer of Thermo Electron		0	0	0
All directors and current executive officers as a group		4,393	0	4,393

(2) Mr. Broadbent is a citizen of the United Kingdom.