

THERMO FISHER SCIENTIFIC INC.

Form 4

August 29, 2007

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
CASPER MARC N

2. Issuer Name and Ticker or Trading Symbol
THERMO FISHER SCIENTIFIC INC. [TMO]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
81 WYMAN STREET, P.O. BOX 9046

3. Date of Earliest Transaction (Month/Day/Year)
08/28/2007

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
Executive Vice President

(Street)
WALTHAM, MA 024549046

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

(City) (State) (Zip)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|-----------|---|
| | | | | (A) or (D) | Price | | | | |
| | | | | Code | V | Amount | | | |
| Common Stock | 08/28/2007 | | M | | 50,000 | A | \$ 27.4 | 99,078.53 | D |
| Common Stock | 08/28/2007 | | S ⁽¹⁾ | | 14,000 | D | \$ 52 | 85,078.53 | D |
| Common Stock | 08/28/2007 | | S ⁽¹⁾ | | 2,300 | D | \$ 52.02 | 82,778.53 | D |
| Common Stock | 08/28/2007 | | S ⁽¹⁾ | | 6,300 | D | \$ 52.03 | 76,478.53 | D |
| Common Stock | 08/28/2007 | | S ⁽¹⁾ | | 3,600 | D | \$ 52.05 | 72,878.53 | D |

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| | | | | | | | |
|--------------|------------|------------------|-------|---|----------|-----------|---|
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 5,200 | D | \$ 52.06 | 67,678.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 5,400 | D | \$ 52.07 | 62,278.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 4,200 | D | \$ 52.08 | 58,078.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 2,000 | D | \$ 52.1 | 56,078.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 200 | D | \$ 52.13 | 55,878.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 4,400 | D | \$ 52.16 | 51,478.53 | D |
| Common Stock | 08/28/2007 | S ⁽¹⁾ | 2,400 | D | \$ 52.19 | 49,078.53 | D |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

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(9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|-------------------------------|
| Stock Option (Right to Buy) | \$ 27.4 | 08/28/2007 | | M | 50,000 | ⁽²⁾ 02/25/2012 | Common Stock | 50,000 |

Reporting Owners

| Reporting Owner Name / Address | Relationships |
|--------------------------------|---|
| CASPER MARC N | Director 10% Owner Officer Executive Vice President Other |

81 WYMAN STREET
P.O. BOX 9046
WALTHAM, MA 024549046

Signatures

By: Barbara J. Lucas, Attorney-in-Fact for Marc N.
Casper

08/29/2007

__Signature of Reporting Person

Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).
 - ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on August 22, 2007.
 - (2) Immediately

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.
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