

May 20, 2011

via Edgar

Mr. Eric Atallah, Staff Accountant
Division of Corporate Finance
United State Securities and Exchange Commission
100 F Street N.E.
Washington, D.C. 20549

**RE: STERIS Corporation (“STERIS” or “Company”)
Form 10-K for the year ended March 31, 2010 (Filed May 28, 2010)
Form 10-Q for the quarter ended December 31, 2010
File No. 1-14643**

Dear Mr. Atallah:

This letter is being filed in response to the comment received from the Staff of the Securities and Exchange Commission (the “Commission”) by letter dated May 4, 2011 with respect to the Company's Form 10-K for the year ended March 31, 2010 filed with the SEC on May 28, 2010 and Form 10-Q for the quarter ended December 31, 2010.

The numbered paragraph and headings below correspond to the headings set forth in the Comment Letter. The Staff's comment is set forth in bold type, followed by the Company's response to the comment.

In connection with responding to your comment, the Company acknowledges that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceedings initiated by the Commission or any person under the federal securities laws of the United States.

The Company may also present and refer in any manner to this letter and related communications in any proceeding brought by or against the Company. In addition, STERIS believes that its prior disclosures in its public filings were appropriate and in compliance with applicable regulations, and nothing in this response should be construed as an admission of any violation or non-compliance.

Form 10-Q for the Quarter Ended December 31, 2010

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 23

Matters Affecting Comparability, page 25

- 1. We note your response to prior comment 1. We are unable to agree with your analysis regarding the need to amend each of your June 30, September 30, and December 31, 2010 Forms 10-Q. Specifically, we believe that the presentation in those filings presents the non-GAAP measures with greater prominence than the corresponding GAAP measures, which is not permitted by Item 10(e) of Regulation S-K as further discussed in the Staff's non-GAAP Financial Measures Compliance and Disclosure Interpretation 102.10.**

Please amend each of your June 30, September 30, and December 31, 2010 Forms 10-Q to remove the non-GAAP income statement presentation and include a discussion of the results of operations that presents the GAAP results with equal or greater prominence.

Response: We will file amended June 30, September 30, and December 31, 2010 Forms 10-Q as requested. In these and other future filings, we will modify our presentation to eliminate the current tabular presentation of the non-GAAP financial measures. The MD&A section titled, "Matters Affecting Comparability" will continue to include a narrative discussion of the two items, the SYSTEM 1 Rebate Program and class action settlement, that have significantly impacted the Company's fiscal 2011 operating results and measures. The disclosures required by Item 10(e) of Regulation S-K will be provided in a separate, new section of MD&A titled, "Non-GAAP Financial Measures." This section will include disclosure of the reasons why management believes the non-GAAP financial measures provide useful information to investors as well as a reconciliation of each non-GAAP financial measure used by management in the MD&A to its most directly comparable GAAP financial measure.

In addition, in future filings, we will begin the discussion of each financial measure within the MD&A section titled, "Results of Operations," with a discussion of the GAAP financial measure. We will also modify any tabular presentation within this section to present GAAP financial measures and include a narrative discussion of non-GAAP financial measures, with a cross-reference to the reconciliation of such financial measure, when we believe that non-GAAP financial measures would provide useful information for an investor to understand our results and trends.

The format will be consistent with the sample provided to you in our comment letter response dated April 15, 2010. We anticipate filing our Form 10-K for the 2011 fiscal year by May 31, 2011 and filing the requested amendments of the June 30, September 30, and December 31, 2010 Forms 10-Q in the month of June 2011.

We take our responsibility to comply with the Commission's regulations very seriously. Our intention is to provide a clear and complete discussion of our financial condition and results of operations for the reader in compliance with the Commission's regulations.

Please again refer to the introduction to this response and contact me with any further questions or comments.

STERIS Corporation

/s/ Michael J. Tokich

Senior Vice President and Chief Financial Officer