John Cash, Accounting Branch Chief Division of Corporation Finance United States Securities and Exchange Commission Washington, D.C. 20549

Re: Cabot Corporation File No. 1-5667

Dear Mr. Cash:

This letter is being submitted in response to the Staff's comment letter of June 23, 2016 in respect of Cabot Corporation's Form 10-K for the fiscal year ended September 30, 2015 and Item 2.02 Form 8-K filed May 2, 2016. For ease of reference, we have restated the Staff's comments before our responses below.

Form 10-K for the Year Ended September 30, 2015

Item 6. Selected Financial Data, page 20

- We have the following comments regarding the presentation of your non-GAAP measures Adjusted Return on Invested Capital and Adjusted Return on Net Assets:
- In accordance with Item 10(e)(1)(A) and (B) of Regulation S-K, please present, with equal or greater prominence, the most directly comparable financial measures calculated and presented in accordance with Generally Accepted Accounting Principles (GAAP) and a reconciliation of the differences between the non-GAAP financial measure with the most directly comparable GAAP financial measure;

Cabot Response:

We acknowledge the Staff's comment and in future filings, when we present Adjusted Return on Net Assets or Adjusted Return on Invested Capital, we will include, with equal prominence, the most directly comparable financial measure calculated using amounts determined in accordance with Generally Accepted Accounting Principles (GAAP) and present a quantitative reconciliation with the most directly comparable GAAP financial measure. The following represents an example of the quantitative reconciliation of Adjusted Return on Net Assets, which will reflect all periods presented:

	20XX
Return on Net Assets	
Income (loss) from continuing operations(a)	\$ X
Net assets(b)	\$ X
Return on net assets	<u>X</u> %
Adjusted Return on Net Assets	
Adjusted net income (loss)(a):	
Income (loss) from continuing operations	\$ X
Less: Certain items, net of tax benefit(c) \$X	X
Adjusted net income (loss)	\$ X
Adjusted net assets(d):	
Adjusted net working capital(e)	\$ X
Net property, plant and equipment	X
Assets held for rent	X
Equity affiliates	X
Adjusted net assets	\$ X
Adjusted return on net assets	X%

- (a) Income (loss) from continuing operations and Adjusted net income (loss) are aggregated four quarter rolling amounts.
- (b) Net assets represents Total stockholders' equity.
- (c) Tax impact on certain items is discussed in note XX.
- (d) Each component of adjusted net assets is calculated by averaging previous five quarter ending balances.
- (e) Adjusted net working capital is the average previous five quarter ending balances of Accounts receivable plus Inventory less Accounts payable and accruals.

As presented in Notes (4) and (5), we note these non-GAAP measures include the after-tax impact of the items identified without a clear
explanation for how the tax effect is calculated. These presentations may be inconsistent with the updated Compliance and Disclosure
Interpretations issued on May 17, 2016. Please review this quidance when preparing your future filings; and

Cabot Response:

We acknowledge the Staff's comment and in future filings, we will present the income tax effect on the items identified and explain how the tax effect was derived.

• Management believes these non-GAAP financial measures are useful to investors as a measure of performance and the effectiveness of your use of capital. Please revise your disclosure in future filings to provide adequately detailed information specific to your circumstances as to why these non-GAAP measures are useful to investors. Refer to Item 10(e)(1)(i)(C) of Regulation S-K.

Cabot Response:

We acknowledge the Staff's comment with respect to adjusted Return on Net Assets ("RONA") and adjusted Return on Invested Capital ("ROIC"), as well as with respect to other non-GAAP measures we have included in our filings, and when we provide non-GAAP measures in future filings we will provide adequately detailed information specific to our circumstances as to why these measures are useful to investors. In this regard, we direct the Staff's attention to our response to Comment 6, where we have provided a preliminary draft of the disclosure we expect to provide in future filings explaining why we believe adjusted EPS is a useful measure to our investors. We would expect to include a similar level of disclosure in our description of why each of our non-GAAP measures is useful to our investors.

With respect to adjusted RONA, we calculate this measure by dividing adjusted net income (loss) by adjusted net assets. In the numerator of the calculation, we exclude certain items of income and expense that management does not consider representative of our ongoing results. We direct the Staff's attention to our response to Comment 6 where we have provided a preliminary draft of the disclosure we expect to provide in future filings explaining why we exclude these certain items from these non-GAAP measures of financial performance and why management believes these non-GAAP measures are useful to investors.

With respect to our calculation of adjusted net assets, in this calculation we only include our operational assets (principally Net property, plant and equipment and Working capital) that are under management's control in the management of the business and are the drivers of our operating results. In addition, we calculate Net assets on a rolling five quarters average to normalize the impact of large inter-period movements, such as our management of working capital or volatility in feedstock prices. Adjusted RONA is also a key metric used to measure performance under our management incentive compensation programs, and accordingly, we believe it is useful to our investors.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 24

Definition of Terms and Non-GAAP Financial Measures, page 29

2. You indicate that Total Segment EBIT is a non-GAAP financial measure that provides useful supplemental information for your investors as it is an important indicator of your operational strength and performance. Please revise your disclosure in future filings to provide adequately detailed information specific to your circumstances as to why this non-GAAP measure is useful to investors. Refer to Item 10(e)(1)(i)(C) of Regulation S-K.

Cabot Response:

We acknowledge the Staff's comment. If and when we present Total Segment EBIT as a non-GAAP financial measure in future filings, we will revise our disclosure to provide adequately detailed information specific to our Company's circumstances as to why this non-GAAP measure is useful to investors in accordance with Item 10(e)(1)(i)(C) of Regulation S-K.

Provision for Income Taxes and Reconciliation of Effective Tax Rate to Operating Tax Rate, page 32

3. We note that you have provided a reconciliation of your effective tax rate to your operating tax rate, a non-GAAP financial measure. Please identify the nature of the unusual or infrequent items, items related to uncertain tax positions and other discrete items in each period. We also note that this presentation may be inconsistent with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review this guidance when preparing your future filings.

Cabot Response:

In future filings, we will disclose the nature of the unusual or infrequent items, items related to uncertain tax positions and other discrete items included in our reconciliation of the effective tax rate to the operating tax rate. The nature of these items in the reconciliation included in our Form 10-K for the year ended September 30, 2015 was as follows:

- (i) Unusual or infrequent items included tax benefits from items such as extraordinary dividends from subsidiaries, the renewal of U.S. Research and Experimental credit, and the release of valuation allowance and interest on uncertain tax positions.
- (ii) Items related to uncertain tax positions included tax benefits from items such as uncertain tax positions accrual reversals due to the expiration of statutes of limitations and settlement of tax audits, offset by a charge for the accrual of interest on uncertain tax positions.
- (iii) Other discrete tax items included tax charges for items such as charges for various return to provisions true ups related to tax return filings, changes in tax laws or status, changes in judgment on the realizability of certain deferred tax assets and/or unremitted foreign earnings.

Form 8-K Filed May 2, 2016

4. Please address the above comments on your earnings release as well, as applicable.

Cabot Response:

In our response to the Staff's comment number 6, we have provided, by way of illustration, draft disclosure of the type we expect to include in future filings to provide adequately detailed information specific to our circumstances as to why our non-GAAP measures are useful to investors. In future earnings releases, if and when we present Total Segment EBIT, we will revise our disclosure to provide adequately detailed information specific to our Company's circumstances as to why this non-GAAP measure is useful to investors in accordance with Item 10(e)(1)(i)(C) of Regulation S-K. Additionally, in future earnings releases, we will disclose the nature of the unusual or infrequent items, items related to uncertain tax positions and other discrete items included in our reconciliation of the effective tax rate to the operating tax rate.

- 5. We remind you that Item 10(e)(1)(i)(a) of Regulation S-K indicates that you should not present non-GAAP financial measures with greater prominence than the most directly comparable GAAP financial measures. The following presentations appear inconsistent with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review this quidance when preparing your next earnings release:
- You present non-GAAP adjusted EPS before your GAAP diluted EPS in your earnings release headline;

Cabot Response:

We acknowledge the Staff's comment and in future earnings releases we will present our GAAP diluted EPS before our non-GAAP adjusted EPS.

• Your narrative appears to place more prominence on non-GAAP financial measures such as adjusted EBITDA and adjusted EPS without providing a discussion of the corresponding GAAP financial measures;

Cabot Response:

We acknowledge the Staff's comment and in future earnings releases, we will revise our narrative to ensure that equal or greater prominence is placed on the corresponding GAAP financial measures.

You do not provide a quantitative reconciliation with respect to your forward-looking non-GAAP measures.

Cabot Response:

We acknowledge the Staff's comment and in future earnings releases and other filings, we will provide a quantitative reconciliation between any forward-looking non-GAAP measures presented and the most directly comparable GAAP measure. The associated reconciling items are currently expected to consist of information that is known and available without unreasonable efforts. In the event that a reconciliation requires "unreasonable efforts" as stated in item 10(e)(1)(i)(B), we will disclose that fact and describe the nature of information that is unavailable.

Explanation of Terms and Use of Non-GAAP Measures

6. You believe that the non-GAAP financial measures adjusted EPS, Total Segment EBIT, operating tax rate and adjusted EBITDA assist your investors in evaluating the changes in your results and the Company's performance. We also note that you believe that Total Segment EBIT provides useful supplemental information for your investors as it is an important indicator of the Company's operations strength and performance. Please revise your disclosure in future filings to provide adequately detailed information specific to your circumstances as to why each of these non-GAAP measures are useful to investors. Refer to Item 10(e)(1)(i)(C) of Regulation S-K.

Cabot Response:

We have set forth below a preliminary draft of the disclosure we expect to include in future filings to provide adequately detailed information specific to our circumstances as to why adjusted EPS is a useful measure for investors. We would expect to include a similar level of disclosure in our description of why the other non-GAAP measures we provide are useful to investors in evaluating the changes in our results and performance.

"Use of non-GAAP financial measures.

To supplement Cabot's consolidated financial statements presented on a generally accepted accounting principles ("GAAP") basis, Cabot provides non-GAAP measures, which include Adjusted EPS, Adjusted EBITDA, Adjusted ROIC, and Adjusted RONA. These non-GAAP financial measures are not computed in accordance with, or as an alternative to, generally accepted accounting principles in the United States. Reconciliations of each of these non-GAAP financial measures to GAAP information are also included.

Management believes these non-GAAP measures provide investors with greater transparency to the information used by Cabot management in its financial and operational decision-making, allow investors to see Cabot's results through the eyes of management, and better enable Cabot's investors to understand Cabot's operating performance and financial condition.

In calculating Adjusted EPS, we exclude from our net income (loss) per share from continuing operations items of expense and income that management does not consider representative of the Company's on-going business operations. Accordingly, reporting earnings on an adjusted basis supplements the GAAP measure of performance and provides additional information related to the underlying performance of the business. For example, certain of the items we exclude are items that we are required by GAAP to recognize in one period that relate to activities extending over several periods or relate to single events that management considers to be unusual and infrequent and not reflective of ongoing operations. We refer to these items as "certain items". Management believes excluding these items facilitates operating performance comparisons from period to period by eliminating differences caused by the existence and timing of certain expense and income items that would not otherwise be apparent on a GAAP basis. Management also uses adjusted EPS as a key measure in evaluating management performance for incentive compensation purposes."

In future filings, the discussion of our non-GAAP measures will provide adequately detailed information specific to our circumstances as to why identified costs or income items are considered certain items. By way of example, we have set forth below detailed information providing our reasons for excluding selected certain items from Adjusted EPS as reported in our earnings release included as an exhibit to the May 2, 2016 Form 8-K.

"Specifically, in calculating Adjusted EPS we have excluded the impact of the following items:

- Global restructuring activities include costs or benefits associated with cost reduction initiatives or plant closures and are primarily related to (i) employee termination costs, (ii) asset impairment charges, (iii) costs to close facilities, including environmental costs and contract termination penalties and (iv) gains realized on the sale of land or equipment. We exclude these costs or benefits because they do not reflect our underlying business operations, they may relate to other periods and not only the period in which they are recognized, and management evaluates the Company's operating performance without the impact of these costs or benefits.
- Foreign currency loss on devaluation represents the impact of controlled currency devaluations on the Company's net monetary assets denominated in that currency. Most recently this has applied to currency exchange rate changes in Argentina and Venezuela. We exclude any loss or gain from these devaluations because they do not reflect our underlying business operations, and management evaluates the Company's operating performance without taking them into account."

Adjusted EBITDA

- 7. Under the caption, Explanation of Terms Used and Use of Non-GAAP measures, you indicate that "Adjusted EBITDA" is a non-GAAP financial measure and refers to earnings before interest, taxes, depreciation and amortization, excluding items that management does not consider representative of the fundamental segment results. We have the following comments in this regard:
- You indicate that a reconciliation of adjusted EBITDA from segment EBIT for the second quarter of fiscal year 2016 is provided on the investor portion of your website. Please revise future filings to include a reconciliation to your most directly comparable GAAP measure and ensure this reconciliation is included in your filing; and

Cabot Response:

We acknowledge the Staff's comment and in future earnings releases, we will include a reconciliation of adjusted EBITDA to Net income, the most comparable GAAP financial measure, in the same earnings release document.

• Under the caption, Cash Performance, you state that you generated adjusted EBITDA of \$117 million during the second quarter of fiscal 2016. Based on the inclusion of this information in your discussion of cash performance, it appears that you also use this measure as a liquidity measure. If so, please provide all the disclosures required by Item 10(e(1)(i)(A),(B) and (C) in future filings.

Cabot Response:

We acknowledge the Staff's comment and in future earnings releases, for any non-GAAP measure that we use as a liquidity measure we will ensure to provide all disclosures required by Item 10(e)(1)(i)(A),(B) and (C).

Table 1: Detail of Certain Items

Table 4: Reconciliation of Operating Tax Rate

Table 5: Reconciliation of Adjusted EPS by Quarter Fiscal 2016 and Fiscal 2015

8. We note that your presentations of certain items include the tax impact of these items without a clear explanation for how the tax effect is calculated. These presentations may be inconsistent with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review this guidance when preparing your next earnings release.

Cabot Response:

We acknowledge the Staff's comment and in future filings, we will explain how the tax effect of certain items is calculated. We note that the tax effect of certain items is determined by (1) starting with the current and deferred income tax expense or benefit, included in Net income attributable to Cabot Corporation, and (2) subtracting the tax expense or benefit on "adjusted earnings". Adjusted earnings is defined as the pre-tax income attributable to Cabot Corporation excluding certain items. The tax expense or benefit on adjusted earnings is calculated by applying the operating tax rate, which includes both current and deferred taxes, as defined under the section Explanation of Terms Used and Use of Non-GAAP Financial Measures of the earnings release.

9. Please explain the nature of the discrete tax-related certain items.

Cabot Response:

The nature of the discrete tax-related items for the period ended March 31, 2016 was as follows:

- (i) Unusual or infrequent items included tax benefits from items such as extraordinary dividends from subsidiaries, the renewal of U.S. Research and Experimental credit, and other non-routine items.
- (ii) Items related to uncertain tax positions included tax benefits from items such as uncertain tax positions accrual reversals due to the expiration of statutes of limitations and settlement of tax audits, offset by a charge for the accrual of interest on uncertain tax positions.

(iii) Other discrete tax items included tax charges for items such as charges for various return to provisions true ups related to tax return filings, changes in tax laws or status, changes in judgment on the realizability of certain deferred tax assets and/or unremitted foreign earnings.

As requested, in connection with responding to the Staff's comments, the Company hereby acknowledges that (i) the Company is responsible for the adequacy and accuracy of the disclosure in its filings, (ii) 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 (iii) the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

We would be happy to discuss any of our responses with you at your convenience. Please do not hesitate to call Jim Kelly, Cabot's Controller, at 617-342-6020 and Jane Bell, Cabot's Corporate Secretary and Chief Counsel – Securities and Governance, at 617-342-6035 with any questions.

Very truly yours,

/s/ Eduardo E. Cordeiro

Eduardo E. Cordeiro
Executive Vice President and Chief Financial Officer

Cc: Sean D. Keohane Brian A. Berube James P. Kelly Jane A. Bell Brian McAllister (Deloitte & Touche LLP)