



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

January 13, 2012

Via E-mail

David Lamadrid  
Chief Financial Officer  
CytoSorbents Corporation  
7 Deer Park Drive, Suite K  
Monmouth Junction, New Jersey 08852

**Re: CytoSorbents Corporation  
Registration Statement on Form S-1  
Filed December 21, 2011  
File No. 333-178654**

Dear Mr. Lamadrid:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing your amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Prospectus Summary, page 1

1. Please revise this section to include a quantified discussion of your history of net losses. Please also revise to highlight the going concern language in your auditor's report and to disclose the amount of your accumulated deficit since inception.

Executive Compensation, page 55

2. Please update your executive compensation disclosure for the fiscal year ended December 31, 2011. Refer to Item 402 of Regulation S-K.

Exhibit 5.1

3. Given that the shares to which the registration statement relates have not yet been issued, it is unclear why the opinion does not indicate that the shares, *when sold*, will be legally

issued, fully paid and non-assessable. Please advise or submit a revised opinion of counsel.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing include the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

David Lamadrid  
CytoSorbents Corporation  
January 13, 2012  
Page 3

Please contact Allicia Lam at (202) 551-3316 or Mary Beth Breslin, Senior Attorney, at (202) 551-3625 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Amanda Ravitz  
Assistant Director

cc (via e-mail): Gregg Jaclin, Esq.