Author's response to reviews

Title: An evaluation of UV protection imparted by cotton fabrics dyed with natural colorants.

Authors:

Ajoy K Sarkar (sarkar@cahs.colostate.edu)

Version: 2 Date: 26 September 2004

Author's response to reviews:

Dear BioMed Central Editorial Team:

Thank you for your comments and constructive remarks regarding my manuscript. I have incorporated all recommendations suggested by Dr. Menter in the revised manuscript and submit the same for consideration and publication in BMC Dermatology.

1. Provide UV transmission data for dyed and undyed fabrics (as figures).

Figures 1, 2, and 3 have been included that show transmission in the range 290-400 nm in the absence and presence of colorants for the plain weave, twill weave and sateen weave fabric respectively.

2. Provide a discussion as to how color data can correlate with UPF, which has an endpoint that results from UV irradiation.

3. Reassess the assertion that UPF correlates with K/S values

The results and discussion section has been reorganized to address points 2 and 3. Dr. Menter is correct in stating that K/S values do not correlate with UPF values in the same way for each fabric. Accordingly, the assertion has been changed to reflect the fact that K/S correlates with UPF within the same fabric type but cannot be generalized across fabrics of different weave structures. A primary reason for this observation is the acknowledgement that UPF values are dependent on a multitude of fabric construction factors such as pores in the fabric, thickness, and weight in addition to processing parameters such as dyeing and finishing. Another probable reason is the dependence of K/S on the absorbing properties of colorants in the visible region of the spectrum and that may not influence the absorption characteristics of colorants in the UV region.

4. Update references to skin cancer incidence.

Updated. Please see reference # 2.

5. The last two paragraphs on page 4, all of page 5, and most of page 6 (to the sentence starting with "To the author's knowledge.....") would serve better in the discussion section.

Agree and complied with.

I am thankful to Dr. Menter for an excellent critique of the manuscript. With his help the revised manuscript is noticeably better. I hope you will find the revisions acceptable and suitable for publication.

Sincerely,

Ajoy K. Sarkar