Reviewer’s report

Title: Evaluating the use of Fluorescent Imaging for the Quantification of Dental Fluorosis.

Version: 1 Date: 12 August 2012

Reviewer: Lin Bin

Reviewer’s report:

The author studied the feasibility of QLF in the field of quantified assessment of dental fluorosis. QLF is a noninvasive method developed to diagnose the dental carious lesion based on the autofluorescence multiscattering inside the teeth tissue under the excitation of blue light. The spatial distribution could be affected by the unsound tissue because of increment of scattering coefficient. Certainly the dental fluorosis, which manifests a white spot, can be imaged clearly using QLF. The work in this paper is meaningful and can give us the advise to evaluate the effectiveness of QLF from the statistic cases analysis.

(1) The QLF image of typical dental fluorosis should be given in the paper to visualize the readers and the definition of Areach, #Fch and #Qch from the images is necessary to understand deeply the parameters.

(2) The experimental setup shown in Figure 2, the components of detector, light source and sample should be labeled. And another question is that QLF technology is developed by Inspektor in Netherlands, and it is a commercial medical product. It is wondering if the results reported based QLF in the paper is based on the self-developed experimental setup shown in figure 2. If so, how to guarantee the universality of self-developed technology.

(3) Figure 4 depicted the relationship of specificity and sensitivity, please detailed explain the significance of the figure and label the every curve.

(4) The images in the paper should be improved according to the Journal.

In general, the work reported in the paper is constructive and sound for the aim to investigate the QLF in assessment of dental fluorosis. In my opinion, the paper could be published.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

'I declare that I have no competing interests