

Review of: "Infrared Spectroscopy (FT-NIR) and t-Distributed Stochastic Neighbor Embedding (t-SNE) as an Analytical Methodology for Rapid Identification of Tea Adulteration"

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Potential competing interests: No potential competing interests to declare.

This research work is of undeniable interest, and the choice of method is pertinent. The context is well presented and very clear. However, the description of the experimental and analytical approach lacks precision on the following points:

- Plant sample preparation:
 - How can you be certain of their identity?
 - Have they been dried? If yes, please provide some details.
 - Have they been ground before sieving?
- Statistical analyses:
 - Plot the spectra in a uniform way from 12000 to 4000 cm⁻¹.
 - Please give more detail about the derivation method (degree, smoothing window...).
 - Please notice that preprocessed spectra are very noisy between 12000 and 8000 cm⁻¹. This part of the spectra should be removed to avoid any bias in the next steps.
 - Specify the spectral zones that differentiate samples in figure 1.
 - In figures 2, 3, and 4, can you explain what the different line colors correspond to?
 - Have you made a link between the PCA loadings and identified wavenumbers in the deconvolutional analysis?

Regarding the conclusion, how do you plan to use such an approach in routine work?