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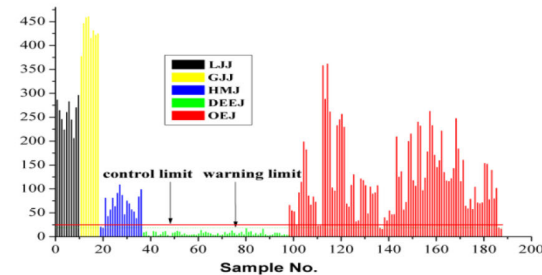
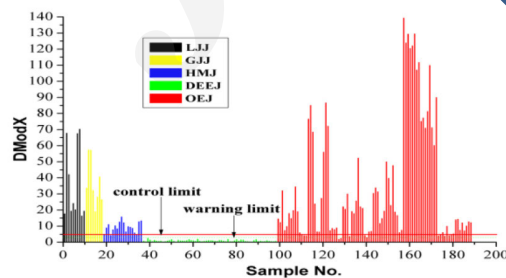
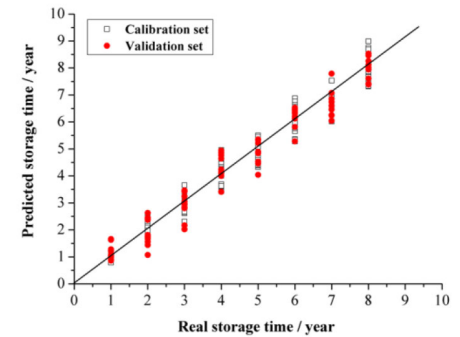
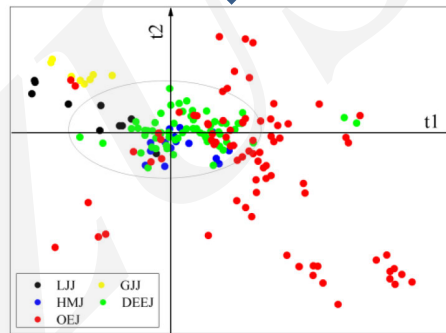
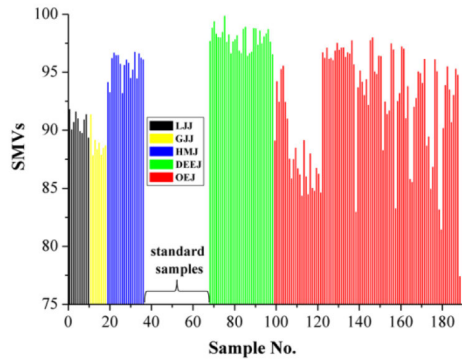
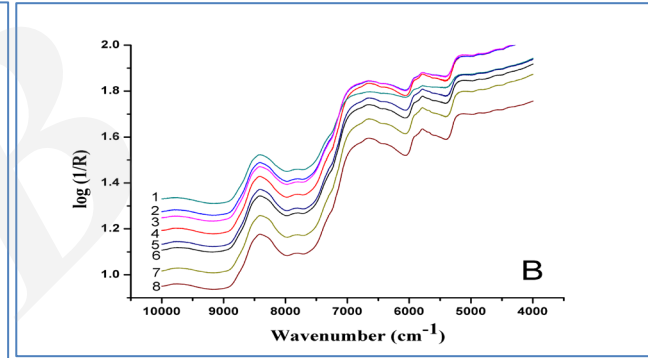
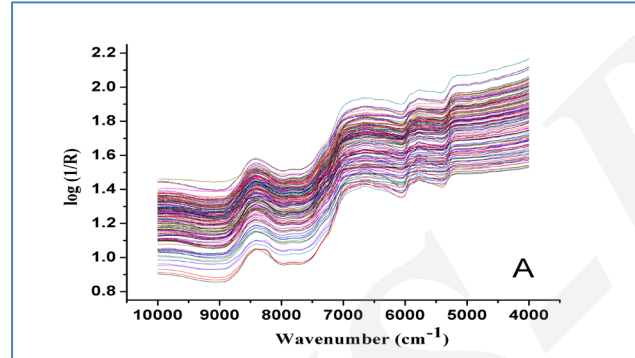
Manufacturer identification and storage time determination of “Dong’e Ejiao” using near infrared spectroscopy and chemometrics

Key words: Dong'e E-Jiao; near infrared spectroscopy; manufacturer identification; storage time identification; quality control

Research Summary

- Develop a set of near infrared spectroscopy (NIRS) based method for the manufacturer discriminant and storage time identification of Dong E donkey-hide glue (Dong E e-jiao, DEEJ), which is a precious traditional Chinese medicine (TCM) preparation widely used in China with thousands of years of history.
- For the manufacturer discriminant, the established SIMCA model can effectively differentiate the DEEJ and donkey-hide glues manufactured by other TCM factories with the misjudgment rate being 6.2%. The NIRS fingerprint with Hotelling T^2 , DmodX and SMV as criterions also takes on good predictability with appropriate thresholds.
- The established PLS-DA model for the storage time identification was satisfied with the accuracy rate of 84.4% and the misjudgment deviation of 1 year.

Innovation points



Innovation points

- Firstly reported the NIRS-based method for the discriminant analysis of E-Jiao from different manufacturers;
- Three statistics, Hotelling T^2 , DmodX and SMV were combined used for the NIRS- based fingerprint analysis.
- Firstly reported the NIRS-based method for the storage time determination of DEEJ, and speculation was proposed to explain the differences among DEEJ of different storage time .