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Comparison of phenol content of native Texas wild indigo root and Asian indigowoad root

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Samples for the Wild Indigo analysis were obtained directly from the roots of several native plants in a field in Texas USA. Four samples of Asian Indigowoad were purchased from four different stores. This study found that the total phenol content of Wild Indigo root was 16.43±0.51 mg/g dw, whereas the Indigowoad root varied from 5.14±0.41 to 13.63±0.14 mg/g dw. The total phenol content of the Wild Indigo root was found to be significantly higher ($P<0.05$) than that of the Indigowoad root. Specific phenolic acid contents of the roots of these two plants were also determined; however, they were only determined for the two samples of the four that had the highest total phenol contents out of the Asian Indigowoad root. The Wild Indigo had 40.19±14.42 mg/g dw total Gallic acid while the two Indigowoad samples had none. For vanillic acid, Wild Indigo had 7.31±0.33 while the Indigowoad had 5.78±0.06 for one sample and 3.70±0.20 for the other sample. For Syringic acid, Wild Indigo had 33.32±0.30 while the Indigowoad had 46.11±1.35 for one sample and 36.84±1.22 for the other sample. For p-Coumaric acid, Wild Indigo had 53.20±0.27 while the Indigowoad had 61.07±0.74 for one sample and 29.65±0.61 for the other sample. For ferulic acid, wild Indigo had 132.04±49.06 while the Indigowoad had 132.06±0.02 for one sample and 56.22±6.51 for the other sample.

Biography

Wai Kun Chan is a Master's degree student from department of Food Science National I-Lan University, Taiwan. He has participated in 2013 Spring World Congress on Engineering and Technology oral presentation, the title is Statistical comparison of nitrate concentrations in three vegetables as affected by environmental changes over 24 hrs periods. Now, his research purpose is analysis of the phenolic acids composition of plants.

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