

令和元年度「日本薬局方の試験法等に関する研究」研究報告 成分情報及び遺伝子情報によるソウハクヒの品質評価研究

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Quality Evaluation of Mulberry (Root) Bark Based on Chemical and Genetic Information

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Summary

To investigate the relationship between the chemical diversity and genetic diversity of mulberry (root) bark, we analyzed the nucleotide sequence of the 5S rDNA IGS region with a high-throughput DNA sequencer (next-generation sequencer). We found 12 genotypes among 23 commercial samples and classified them into 7 clusters (clusters I to VII) based on phylogenetic analysis.

The samples in cluster I corresponded well to chemotype 1 in our previous LC/MS metabolome study, and the samples in cluster IV corresponded to chemotype 3.

These results suggest that the chemical diversity found in commercial mulberry (root) bark may be largely due to genetic variation of the raw materials.

Key words

Mulberry (root) bark, 5S rDNA intergenic spacer, LC/MS metabolome