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欧李叶片过氧化物酶同工酶与叶果矿质元素含量变化的关系

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摘要
以同一生境条件下113份燕山山脉野生欧李为试材，采用聚丙烯酰胺凝胶电泳方法，研究欧李叶片过氧化物酶(POD)同工酶与叶果中6种矿质元素的含量变化及其相关关系，为在酶水平上揭示欧李矿质营养代谢遗传差异提供理论参考。结果表明，欧李叶片过氧化物酶同工酶划分为7种酶谱类型，其中Rf 0.126和Rf 0.716酶带为共有的特征带，不同酶谱类型中单株个体间的相同酶带酶量大小以及叶果中的矿质元素含量存在明显差异，变异程度较大；相关分析结果显示，不同酶谱类型中相关酶带酶量大小与叶果中矿质元素含量变化存在显著或极显著的相关关系，表明欧李叶片过氧化物酶同工酶酶量大小变化在一定程度上反映矿质营养代谢的遗传差异和多样性。

关键词　欧李；过氧化物酶同工酶；酶量；矿质元素；相关性

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Relationship Between Contents of Mineral Nutrient Elements and Peroxidase Isoenzyme in Leaf of Wild *Cerasus humilis*

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Abstract
In this study, the content variations of peroxidase isoenzyme in Chinese dwarf cherry (*Cerasus humilis*) leaves and 6 mineral elements in leaves and fruits as well as their correlations were investigated by the method of polyacrylamide gel electrophoresis (PAGE) using 113 Chinese dwarf cherry which were cultivated at the same conditions in Yanshan Mountain as materials. The results showed that 7 types of POD isoenzyme bands appeared in Chinese dwarf cherry seedling population. Among these bands, two characteristic bands (Rf=0.126, Rf=0.716) appeared in all tested materials. The results of system clustering analysis showed that the relative amounts of the same position isoenzyme bands in different POD isoenzyme band types were different, and the variation was greater. The results of correlation analysis showed that notable or extremely notable correlation existed between the amount of correlative isoenzyme bands in different types and the mineral element contents. The amount of POD isoenzyme band could indicate the genetic difference and diversity of mineral nutrient metabolism of Chinese dwarf cherry leaves in some degree.

Key words　*Cerasus humilis*　POD isoenzyme　enzyme amount　mineral elements correlation

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