https://doi.org/10.17816/ecogen568310

Some biochemical characteristics of the hairy roots of *Pisum sativum* L. mutants

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Two high-protein root cultures of vegetable pea mutants were received [1]. In continuation a PCR analysis of the obtained root cultures genes was carried out according [2] and the amino acid composition of the cultures protein was clarified in a dry product on the AAA 339TM device [3]. Obtained results confirmed the absence of rhizobia contamination of the cultures, which grow steadily on a hormone-free media for 5 years. PCR analysis revealed that four *rol* genes *A*, *B*, *C*, *D* were inserted into the genome of the root culture with genotype *afaftltl*, and two — *rol C* and *rol D* — in the genome of the root culture with genotype *tltl*. The protein composition of the obtained cultures was represented by essential and non-essential amino acids and some others. In four inserts culture, the content of essential, ketogenic, proteinogenic and sulfur-containing amino acids prevailed by 1.5–2 times. Two inserts culture has twice as much aspartic acid and proline. Both cultures lacked tryptophan. The number of inserts determines the amino acid composition most likely.

Keywords: hairy roots; amino acids; *Pisum sativum* L.

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