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Effects of cultural conditions on high temperature tolerance of *Lentinula edodes* mycelia

The effects of several cultural conditions on high temperature tolerance of vegetative mycelia of five *Lentinula edodes* strains were investigated. Mycelium of longer culture age (70 days) was significantly shown high temperature tolerance compared to mycelium of shorter culture ages (14 and 30 days) for four strains, whereas SA142 that showed reverse. When the culture plates were pretreated at 30 °C and 33 °C for 48 hours incubation before heat treatment (40 °C, 8 hours), mycelia of *L. edodes* strains were shown high temperature tolerance. Effects of nutritional factors in BM (basic medium) for the high temperature tolerance of *L. edodes* strains were also investigated. While yeast extract (as nitrogen source) and starch (as carbon source) were added to BM media, as a result cultured vegetative mycelia of *L. edodes* strains were significantly shown high temperature tolerance against heat treatment (40 °C, 6 and 8 hours). Furthermore, addition of bases (adenine+cytosine), vitamin (biotin) and organic acid (tartaric acid) to BM media, consequently vegetative mycelia of some *L. edodes* strains were also effective to increase high temperature tolerance.

Biography

Mohammad Arif Mahmud has completed his MS leading to PhD from Shinshu University, Nagano, Japan. He has provided consultancy in International Center for Mountain Development (ICIMOD) as a Mushroom Consultant; a UNDP-CHTDF funded project in Chittagong Hill Tracts of Bangladesh. He has published more than 10 papers in reputed journals. He has been serving as a Plant Manager of Panbo Bangla Mushroom Ltd., since 2010.

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