

交叉学科

阿佛曼链霉菌的<sup>12</sup>C离子辐照效应及高产菌株选育

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摘要

选用<sup>12</sup>C<sup>6+</sup>离子辐照诱变阿维菌素B1a产生菌ZJAV-A1, 研究其诱变效应。实验结果表明, <sup>12</sup>C<sup>6+</sup>离子辐照剂量50 Gy时致死率97%, 正突变率最高可达到34.2%。通过<sup>12</sup>C<sup>6+</sup>离子诱变处理, 结合平板培养基及斜面培养基的正突变菌株筛选, 最终获得一株稳定性良好, 阿维菌素B1a组分产量稳定在4460—4588 μg/ml之间, 较出发菌株提高11.1%—14.7%的突变株ZJAV Y1 203。

Mutagenic effect on avermectin B1a producing strains of ZJAV-A1 by ion beam of <sup>12</sup>C<sup>6+</sup> has been investigated. The experimental results indicated that the lethality was 97% and the highest rate of orthomutation was 34.2%, when ZJAV A1 was irradiated by ion beam of 50 Gy <sup>12</sup>C<sup>6+</sup>. After the mutagenesis processing by ion beam of <sup>12</sup>C<sup>6+</sup> and the screening of orthomutation strains by using plating mediums and slant cultures, the mutant ZJAV-Y1203 was obtained with the avermectin B1a yield of 4588—4460 μg/ml. Compared with the original strain, the titer was improved 11.1%—14.7%.

关键词 [辐照诱变](#) [阿维菌素B1](#) [效价](#) [高产菌株](#)

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