Genetic Engineering-2013

International Conference on
Genetic Engineering & Genetically Modified Organisms

August 12-14, 2013 Raleigh-North Carolina, USA

Isolation and long term storage of DNA from six latex rich medicinal plants through FTA card method

Shweta Chouhan
Centre of Excellence in Biotechnology, (MPCST), India

Abstract

An attempt has been made to develop new effective method for isolation and long term storage of genomic DNA from some latex rich medicinal plants. For isolation of genomic DNA, six medicinal plants like *Jatropha curcas (*Ratanjot), *Justicia adhatoda* L. (Adulsa, Malabar Nut), *Hemidesmus indicus* (Anantmool, Indian sarsaparilla), *Cissus quadrangula* L. (Hadjod, edible-stemmed vine), *Tinospora cordifolia* (Giloy), *Commiphora wightii (*Guggul) were selected, which are having ridiculous latex and secondary metabolites. The FTA plant saver card has a great potential for binding with nucleic acid. Latex and secondary metabolites of medicinal plants creates difficulties during DNA isolation using the FTA card. For proper cell lysis and removal of secondary metabolites, four different methods were used and the lysate was applied on FTA plant sever card. In the first method leaves were crushed with DNase/RNase free water, in second method leaves were crushed with phosphate buffer saline (PBS). In the third and fourth method poor quality DNA precipitated using modified CTAB method and DNAzol method was applied to the FTA plant saver card, respectively. Samples applied on FTA plant saver card after isolation by modified CTAB method showed good amplification with all studied medicinal plants.

Keywords: Medicinal plants; DNA isolation; FTA plant sever card; DNAzol

Biography

Shweta Chouhan has completed her Ph.D. at the age of 29 years from Barkatullah University, Bhopal in Microbiology. She is working as Project Officer in Centre of Excellence in Biotechnology, the M.P. Council of Science and Technology, Bhopal, Madhya Pradesh, India a government organization with 6 years of research experience. She has published more than 10 research papers in national/international journals and 12 abstracts. She has submitted 3 unique DNA sequences of plants in NCBI Databank. She is actively involved in the organization of more than 35 institutional training programs on various subjects like molecular biology, microbiology, DNA fingerprinting, molecular diversity, HPTLC, plant tissue culture, microbial analysis of herbal drugs, water and soil.