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Use of RAPD and ISSR Assays for the Detection of Mutation Changes in Wheat (*Triticum aestivum* L.) DNA Induced by Ethyl-Methane Sulphonate (*EMS*)

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Abstract: This study was conducted at the National Research Center, Department of Genetics and Cytology. Random amplified polymorphic DNA (RAPD) and inter simple sequence repeat (ISSR) were used to determine the mutation changes in three bread wheat lines treated with 0.3 % of ethyl-methane sulphonate (EMS). Seven RAPD and four ISSR primers were used to detect the mutation changes of the lines. The RAPD primers produced total of 57 bands under control. 27 out of them were polymorphic. They produced 17 new bands after treatment with EMS. Used four ISSR primers give change ratio 0.08% and showed 4 different new alleles.
Key words: Bread Wheat, Mutagenesis, Molecular breeding, RAPD and ISSR– PCR markers.

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