

<b>Title</b>	Detection of Some Virus and Viroid Diseases in Citrus Trees by Multiplex RT-PCR
<b>Number</b>	TAGEM-BS-12/08-02/02-20
<b>Leader</b>	Bengi TOPKAYA KÜTÜK
<b>Researcher/es</b>	Prof. Dr. Bayram ÇEVİK Nejla ÇELİK Dr. İlknur POLAT Şenay KURT Ertuğrul TURGUTOĞLU
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**Abstract:** In this study, simultaneous detection of some viruses and virus-like diseases, *Citrus tristeza virus* (CTV), *Citrus tatter leaf virus* (CTLV), *Citrus psorosis virus* (CPsV), *Citrus exocortis viroid* (CEVd), *Citrus cachexia viroid* (CCaVd) which causes economic losses in citrus fruits and are tried to be purified in certification programmes, is aimed by using multiplex PCR. Initially total RNA isolation of leaf tissues, obtained from infected plants in the Orchard Department of BATEM, will be realized. RNase H reverse transcription enzyme and random primer and complementary DNA (cDNA) will be synthesized from obtained RNAs by using Reverse Transcription Polymerase Chain Reaction (RT-PCR). Daha sonra çalışmada testlenecek olan etmenlere spesifik olarak tasarlanan primerler kullanılarak, hedeflenen gen bölgeleri RT-PCR yöntemi ile çoğaltılacaktır. Targeted gen site will be multiplied with RT-PCR method by using primers, which are designed specifically for the factors that will be tested at a later stage of the study. The multiplex PCR (mPCR) that will be developed in the framework of this study will be applied in three stages. In the first stage, a mixture of obtained cDNAs will be formed and optimization of mPCR will be realized. In the second stage, mPCR will be applied to the cDNA obtained from the mixed inoculated plants and sensitivity of the method will be measured. In the last stage, same method will be applied to plants that are considered to be purified in the certification programme.