

Eurofins GeneScan Customer Information

Assessment of Contaminations with Cauliflower Mosaic Virus (CaMV) in Food Samples

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The Cauliflower Mosaic Virus (CaMV) is a naturally occurring plant virus found in many varieties of cabbage as well as some other plant species. There is no evidence that this virus affects animals or humans. In fact, human beings have been consuming plants infected with the CaMV for many generations.

Many genetically modified plants contain the CaMV 35S promoter as a genetic regulatory element. The CaMV 35S promoter is a small part of the DNA sequence that makes up the CaMV.

The CaMV 35S promoter is used as a regulatory element in many GMOs on the commercial market today. One important step in the detection of GMOs is testing for the presence or absence of this CaMV 35S promoter.

Because the CaMV 35S promoter was derived from the DNA of the CaMV, the analysis for CaMV 35S promoter also detects the naturally occurring virus. Therefore, it is possible that a sample containing the natural CaMV produces a positive result in the CaMV 35S promoter analysis, although no GMO is present in the sample.

A supplementary special test detects a DNA sequence from the CaMV that is not contained in the CaMV 35S promoter. This analysis can confirm whether or not a sample is contaminated with the natural CaMV.

However, if the result of this test shows a CaMV contamination, this does not exclude the presence of GMO in the sample! For this reason, all relevant GMO varieties should then be excluded with further tests.

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