This study aimed to analyze the published literature regarding the problem of safety of consuming food products containing genetically modified organisms. Genetically modified food products are given a brief definition, purpose and methods of their production are described, and the pro- and contra- arguments for their consumption are presented. The discussion is mostly focused on results of evaluating possible toxicity of such foods and their safety for
macroorganism using traditional methods of toxicological analysis. Test results for long-term toxic effects, namely allergenicity, carcinogenicity, reproductive toxicity, and the possibility of mutagenic effects of these food products on the human body and the intestinal microflora are discussed separately. These data are based on the current understanding of the laws of the penetration and functioning of foreign genetic material outside the body, its entry and the possibility of integration into the genome during intake of foods manufactured by genetic engineering. The basic principles of the toxicological and hygienic regulation of these food products are also considered.

An analysis of published experimental results allowed to draw a general conclusion about the absence of reliable scientific information indicating the presence of the toxic properties of genetically modified foods, and therefore of credible evidence of the dangers of consuming for humans and pets.

**Key words**: genetically modified foods, toxicity, safety.


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