

P91. IS IT GOOD, BAD OR UGLY? WHICH ONE IS TRUE?

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Monosodium glutamate (MSG) is sodium salt of the common amino acid glutamic acid (Molecular formula is $C_5H_8NNaO_4$). It may be naturally occur in many foods like tomatoes, potatoes and dairy products. In food industry, it is used a food additives (E621) to give savory taste (flavor enhancer). MSG is produced in laboratory by the fermentation of some carbohydrate based products like molasses. MSG is added in many foods like chips, biscuits and canned vegetables. U.S. Food and Drug Administration (FDA) accepts the addition of MSG to foods to be “generally recognized as safe” (GRAS). However the use of MSG remains controversial in many countries. For this reason these countries including FDA require that it be listed on the food label. Up to date it was reported MSG may be related with some symptoms known as MSG symptom complex which includes headache, flushing, sweating, chest pain and nausea. However, scientist have reported that no definitive evidence of a link between MSG and these symptoms. Because of glutamate is one of the most important neurotransmitter in human brain, research of the possible side effect of the MSG has focused on this side. Some data indicate that MSG may be related with the sperm concentration reduction in male and MSG-treated rats are more susceptible to develop depressive-like behaviors. Also it has shown that MSG treatment in the rat enhances hippocampus β -amyloid accumulation important in neurodegenerative disorders including Alzheimer's disease.

In conclusion, human toxicologist should take role to investigate the proof of the relations between MSG and these findings. Answer of the title seems that MSG is ugly.