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ANTIMUTAGENIC EFFECTS OF DIFFERENT KINDS AND PARTS OF RED PEPPER/POWDER ON THE *N*-METHYL-*N'*-NITRO-*N*-NITROSOGUANIDINE (MNNG)-INDUCED MUTAGENICITIES

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Antimutagenic effect of red pepper powder (RPP) produced in Korea depending on the varieties and producing districts were studied against *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine (MNNG) in Ames test and SOS chromotest. The antimutagenic activities of green pepper, red pepper and different parts of dried red pepper were also evaluated in the same experimental systems. RPP samples exerted the different antimutagenicity according to the variety and producing districts in the Ames test using *Salmonella typhimurium* TA100. Antimutagenicity was the highest in Myungpum RPP among varieties and in Youngyang RPP among producing districts. In SOS chromotest, these RPP also showed higher inhibitory effect then other RPP samples. The revertants of the *Salmonella typhimurium* TA100 strain induced by MNNG were significantly decreased when the extract of green pepper added to the test system. Inhibitory effect of the green pepper on SOS response of *E. coli* PQ37 was higher than that of the extract of red pepper and dried red pepper (DRP). Antimutagenicity was different according to the parts of DRP. Seed had strong inhibitory effects on the mutagenicity induced by MNNG, while pericarp showed low inhibition rate in the Ames test. In the SOS chromotest, the patterns of antimutagenic effects were almost same as shown in the Ames test system. Seed in DRP exhibited lower SOS induction factor than pericarp and placenta. These results indicate that the variety and producing district of RPP differ the degree of the antimutagenicity of the RPP. Green pepper rather than red pepper, and the seed in the part of DRP have strong antimutagenicity.