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(Instructions for preparation on reverse)

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Abstract No.

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PAPER TITLE Red-pigment-producing *Monascus ruber* strains obtained by radiomutagenesis

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ABSTRACT (See instructions overleaf) A strain of *Monascus ruber* from the Collection of the Institute of Food Research, ICA 3.250 and another two radioinduced mutant strains, ICA 3.250 M₁ and ICA 3.250 M₂ were used.

Culture was performed from the stock culture on corn flour-solid media with intermittent stirrings for 7 - 10 days at 30°C and the pigments were extracted by Et - OH.

The pigment biosynthesis on liquid media was performed using the synthetic medium containing 4 % glucose; 0,1 % KH₂PO₄; 0,05 % MgSO₄ . 7 H₂O; 0,05 % NaCl and 0,01 % FeSO₄ . 7 H₂O in the shaker - type incubator (240 rpm), at 30°C for 6 days. The samples were analysed by UV - VIS spectrophotometry.

The irradiations were performed at a Co - 60 source, with an activity of approximately 105 TBq, the irradiations being carried out statically, in a cylindrical geometry, in the dose range of D = 1 + 10 kGy, at 1 kGy/h dose - rate.

There was determined the viability percentage versus the unirradiated (control) sample, separately for every irradiation dose, to obtain the dose-effect curves, the radiosensitivity parameters and the optimum mutagenesis dose range.

There were obtained two mutants (at 4 kGy and 6 kGy) which were analysed for pigment biosynthesis.