This study was designed to investigate the mutagenic potential of anti-inflammatory drug oxicam and ginger plant extract singly or combined treatment on Saccharomyces cerevisia strain D7. Three concentrations were prepared from oxicam drug and ginger plant extract (1, 2, 4 µl. per ml media) in the all treatments of Saccharomyces cerevisia strain D7. The result of anti-inflammatory drug showed decreasing in survival percentage more than the combined treatment or the ginger plant extract alone. Weak positive mutagenic activity was obtained using the two lowest concentrations (1, 2 µl. per ml media) only of oxicam treatment which resulted in reversion and mitotic crossing over. Also, moderate mutagenic activity was obtained at the three loci under study at the highest concentrations in all treatments, except the oxicam treatment, the mutagenic activity was high in all concentrations. These results suggest the mutagenic effect of oxicam in the induction of revertant, convertant and mitotic crossing over in S. cerevisia strain D7 and ginger plant extract have some antimutagenic potential.