**Document Type**: Thesis

**Document Title** : <u>The Formation of Tetracycline in Date Medium by Mutants of Streptomyces</u>

aureofaciens Induced by some Chemical Mutagens

تكوين التتر اسايكلين في بيئة التمر بواسطة طفرات من ستربتومايسيس أوروفاشينز مستحدثة ببعض

لمطفرات الكيميائيا

Document Language : Arabic

**Abstract** : The present study deals with the genotoxicity of Nitrosoguanidine (N.T.G.) - a

chemical mutagen- which was employed to induce auxotrophic mutations in the haploid wild type of bacteria Streptomyces aureofaciens strain NCIMB 8234. An increase in exposure time to the mutagen and dose of this mutagen led to a decrease in the survival percentage and increase in the percentage of mutation. The mutants were cultured in synthetic Date fermentation medium which contained Barni date-coat sugar extract as a carbon source. The following parameters were determined: final pH, medium quantity, microbial cell biomass to compare the changes before and after the incubation, and antibiotic production. All of the five mutants produced less antibiotic titers than the initial organism as certified by measuring

the inhibition zone created by Staphylococcus aureus as a gram positive pathogenic

bacterium and Escherichia coli as a gram negative pathogenic bacterium

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