

STUDY OF CONSUMING ABILITY OF EXTRACTED PECTIN FROM SOME FRUITS PEELS BY LOCAL ISOLATE *Aspergillus sp.*

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ABSTRACT

Extracted pectin samples from citrus peels and sunflower heads by aqueous and ethanolic methods were used only as a carbon source instead of sucrose for cultivation a local isolate of *Aspergillus sp.* in Czapek-Dox medium which contains 0.2% NaNO₃, 0.05% MgSO₄.7H₂O, 0.1% K₂HPO₄, 0.05% KCl, 0.001% FeSO₄.7H₂O, by solid state fermentation methods for polygalacturonase production. Polygalacturonase activity was estimated in different mediums contain different pectin extracts (aqueous and ethanolic) of citrus and sunflower heads. It is found that, by using citrus pectin in production medium, and sunflower heads pectin as a substrate for polygalacturonase activity signed by (O₃) treatment, the enzyme activity was 51.56 U/ml., while by using sunflower extracted pectin for polygalacturonase production, achieve highest activity 94.375 U/ml. for (O₂) by using citrus pectin as a substrate. Morphological properties for the aqueous and ethanolic extracts were studied also, including relative viscosity, it was found that the aqueous extracted pectin from sunflower bases gives the highest viscosity, while the best morphological properties was obtained by ethanolic extracted pectin from sunflower bases, which mean the progression of sunflower pectin on citrus pectin in physical properties.

Key words: Pectin, aqueous extract, ethanolic extract, citrus peels, *Aspergillus*, physical properties.