

Optimization of polygalacturonase production by *Trichoderma harzianum* on orange peels in submerged fermentation

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Abstract: The effect of fermentation condition on polygalacturonase production by *Trichoderma harzianum* was studied using Response Surface Methodology (RSM) design. RSM revealed that the highest production of polygalacturonase reached a maximum of 145.6 U/ml. The optimum conditions for the production of the enzyme by submerged fermentation were achieved using broth medium containing 3% orange peels powder as sole carbon source. The initial pH was 6 during fermentation period of 5day at 30°C in shaking flask 150rpm. Applying the optimum conditions obtained 145.6 U./mL enzyme activity.

Keywords: Polygalacturonase, Response Surface Methodology, Production, Optimization, *Trichoderma harzianum*.

Rasha.Daoud *et al* /Int.J. ChemTech Res. 2016,9(1),pp 359-365.
