Purification of Cellulase obtained from Tomato fruits (Lycopersicon lycopersicum (L.) Karst) deteriorated by Aspergillus Flavus Linn.

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- **Abstract:** Tomato fruits infected by Aspergillus flavus Linn produced proteins with cellulolytic activity. The enzyme was partially purified by Ammonium Sulphate Precipitation, Gel filtration and ionexchange chromatography. Three peaks of absorption A, B and C were obtained. Peak B had Cellulase activity with molecular weight of approximately 30,200 Daltons while Peaks A and C lacked Cellulase activity. Elution of components of Peak B on CM Sephadex C-25 produced four peaks of absorption designated Ba, Bb, Bc and Bd. Only components of Peaks Bb and Bc possessed Cellulase activity. Purification folds of approximately 80 and 81 were obtained for components of Peaks Bb and Bc respectively for Cellulase of A. flavus. The apparent Km values for the hydrolysis of carboxymethylcellulose by A.flavus Cellulase fractions, Bb and Bc were approximately 16.7 and 15.4mg/ml respectively. The partially purified enzyme preparations obtained from A.flavus during the deterioration of tomato fruits caused tissue maceration and cellular death. This result can be very useful in splitting and solubilization of pectic substances and pathogenicity.