

## *In silico* analysis of pectinase enzymes from ascomycetes fungus

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### **SUMMARY**

Pectinases are a big group of enzymes that break down pectic polysaccharides of plant tissues into simpler molecules like galacturonic acids. Pectinases are one of the most widely distributed enzymes in bacteria, fungi and plants. Some fungal species are used in industries as source of pectinases enzymes. It has long been used to increase yields and clarity of fruit juices. In the present investigation, total eleven protein sequences of pectinase enzyme from different fungal species of Ascomycetes were obtained from NCBI protein database and were considered for physico-chemical characterization including pI, EC, AI, GRAVY and instability index, motif discovery, motif family analysis and phylogenetic analysis. Three different motifs were discovered by MEME program where minimum motif width was 6 and maximum motif width was 50. All three discovered motifs were aligned using MAST tool which revealed the similarity between all of three submitted motif's sequence. The motif matches have shown a position p-value less than 0.0001. Each of the following 11 sequences has an E-value less than 100. There is only one major sequence clusters were constructed by phylogenetic analysis.

**Key Words :** *In silico*, Pectinase, Enzyme, Ascomycetes, Fungus

**How to cite this article :** Thakur, Anupsingh, Hande, Atul S. and Patil, Mahesh J. (2014). *In silico* analysis of pectinase enzymes from ascomycetes fungus. *Internat. J. Plant Sci.*, 9 (1): 148-153.

**Article chronicle :** Received : 07.10.2013; Revised : 26.10.2013; Accepted : 05.11.2013

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