3.5 Optimization of inoculum size
Optimum spore density (number of spores per unit weight of substrate) is important for SSF process. The maximal enzyme activity (466 U/mL) was noted at the 6 mL inoculum size of co-culture (*T. viride* and *G. lucidum*) (Fig. 5). Lower inoculum sizes shortened the microbial lag phase stage, whereas inoculum size beyond the optimum value increased the moisture factor that caused lower levels of enzyme formation due to the overcrowding of fungal spores [3-5]. *Aspergillus niger* grown under solid state fermentation conditions gave maximum enzyme activity (216.2 IU/g) at an inoculum size of 10% using wheat straw as the substrate [16]. In an earlier study Omojasola and Jilani [14] reported the maximum cellulase activity with an inoculum size of 8%.

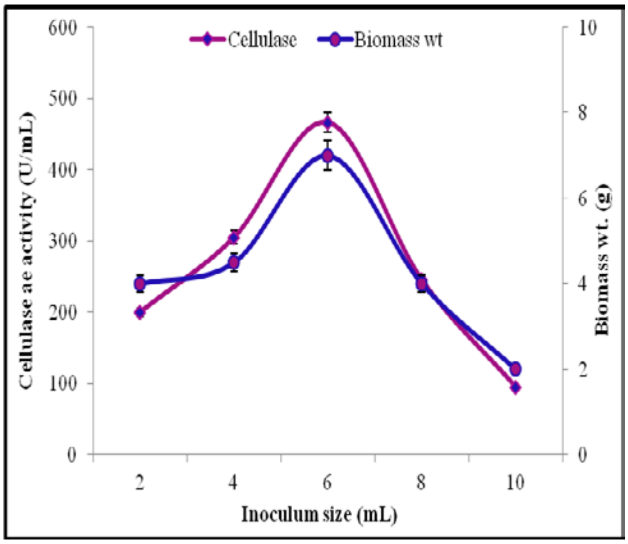

Fig.5. Cellulases activity on varying sizes of fungal inoculums

4 Conclusions
In conclusion attempt was made, to find the optimum fermentation conditions for successful cultivation of microbial co-cultures, and also towards an induced production of third most demanded industrially important enzyme cellulase. However, the suitability of the enzymes for biotechnological applications can be investigated through kinetic characterization of the purified enzymes as thermo-stability is a desired characteristic of an enzyme for its possible use in industry.

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