

SUPPLEMENT-H: RESULTS FROM CONSTRUCTION AND SCREENING OF METAGENOMIC LIBRARIES

Construction of small insert libraries was successful. However, after the screening, only three positive clones for protease activity was noticed. As for the esterase, no clone showed significant activity. The positive clones for protease activity the phenotype was found to be unstable as after picking the colony from the plate and streaking on a new plate no activity was observed.

TABLE 43: CHARACTERIZATION OF CONSTRUCTED METAGENOMIC LIBRARIES (SMALL INSERT LIBRARY) AND SCREENING FOR FUNCTIONAL GENES

Library	Number of clones (with insert)	Average insert size (kb)	Insert frequency (%)	Estimated library size (Mb)	Screening cover (Mb)	Detected positive clone
Protease enrichment	68220	3.03	98.42	206.7	212.09	3
Lipase enrichment	76680	1.83	97.65	140.3	146.37	0

On the other hand, construction of large insert library from cellulase enrichment was unsuccessful.