The Bacteria with ability to grow in presence of 0.8% BTEX compounds were isolated from the soil sample from co-contaminated soil from a landfill site, GIDC, Vatva, Ahmedabad. The five isolates which showed the growth on solid as well as liquid media were selected for the biochemical characterization. The biochemical characterization revealed the two of the isolates with gram positive nature belonged to Micrococcus sps. The gram-negative rods and gram are still under investigation. The gram variable probably identified to belong to Rhodococcus sps. The plasmid profiling of the isolates showed the presence of high molecular weight plasmid in all the five isolates. The isolates ability to grow can be conferred upon these plasmids. Further classification of the plasmid and isolates can be helpful in revealing the role of the isolates in mineralization of BTEX Compounds.