

Degradation of Xenobiotics and Producte Biogas by Gram Negative Bacteria

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Background & Objectives: A wide spectrum of Xenobiotics having ring nucleus enters in the environment as solvent, pesticide and medicine. Ring compounds are dissoluble-resistant against photochemical factors. these are main pollutants of water and soil .The purpose of this study was to measure the quantity of degradation 2,5-chlorobenzoic acid and 2-chlorobenzoat by G- bacteria and to confirm that biodegradation happens.

Methods: during four season, it was taken samples of the spotty soil in addition, media R.D inoculating benzoate and benzoic acid were inoculated and incubated. After identifying the bacteria , the quantity of released CL ion was measured by turbidimotry. In addition, the quantity of the degradation was measured by chromatography.

Results: 2-chlorobenzoat during one week was broken down (100%) by Pseudomonas and Enterobacter and 2,5-chlorobenzoic acid during tow months were degrading by Vibrio Sp. and Klebsiella (60%-55%).

Conclusion : when broke down P.C.B.(Poly chlorobiphenyl) and benzoate production CH₄ (bio gas) and CO₂ G- bacteria used as the only carbon and energy source.

Keywords: Bio Ga; Componds Xenobiotic; Turbidimotry; G- Bacteria; P.C.B

