影響活性污泥對持久性有機物馴化的因素

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摘 要

2,4 dichlorophenoxyacetic (2,4-D)是廣罰應用的除草劑。24- D 在環境中可能成為有機污染物，此污染物具有持久性及毒性；2,4- D 非自然的特徵(稱xenobiotic)，自然微生物如活性污泥要經適應期 間(稱為馴化)以後，才能將之分解。本研究以多重實驗探討各種因素，如何影響活性污泥對 2,4-D的馴化時間的長度，及馴化之後的分解 速率。實驗探討的因素包括 2,4-D 的濃度、活性污泥濃度、污泥之營 養狀況、自然基質及相似基質填增加等。實驗結果顯示：馴化時間長 短與污泥濃度成反比、馴化時間與 2,4-D濃度相關性小；污泥營養不 良(飢餓)時，馴化時間延長；蔗糖與 2,4-D同時分解，增長馴化時間 、在2,4-D之前分解則稍為減少馴化時間；酚在2,4-D之前分解，減少 污泥對 2,4-D馴化時間，且此優點因酚濃度而增加。

關鍵詞 : 馴化、2,4-D、活性污泥、持久性污染物

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