

## SYNTHESIS OF ALIPHATIC SYMMETRIC DIPHOSPHONIUM SALTS AND BACTERICIDAL ACTIVITY OF SELECTED PRODUCTS

Bin Yuan <sup>a\*</sup>, Wei Hu <sup>a</sup>, Song Lv <sup>a</sup>, Jieyang Huang <sup>b</sup>, Kecheng Huang <sup>a</sup>

<sup>a</sup>*Faculty of Environmental Science and Engineering, Guangdong University of Technology, Guangzhou 510006, Guangdong, P.R. China*

<sup>b</sup>*Huizhou city water supply Co.Ltd., Huizhou, 516000, P.R. China*

\**e-mail: gdyb1960@126.com; phone: (86) 132 659 528 09; fax: (86) 020 393 220 25*

**Abstract.** Eight new aliphatic symmetrical diphosphonium salts were synthesized by reacting  $\omega,\omega'$ -dibromoalkanes with triphenylphosphine or tributylphosphine using N,N-dimethyl acetamide as a solvent at 140-150°C for 17-24 h under a nitrogen atmosphere. Product characterization and bactericidal tests against saprophytic bacteria, sulphate reducing bacteria and iron bacteria were performed. Three compounds presented bactericidal activity, among which 1,12-di(tributylphosphonium bromide)dodecane provided the best results.

**Keywords:** diphosphonium salts,  $\omega,\omega'$ -dibromo alkane, synthesis, bactericidal activity.

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