Inorganic Antimicrobial of Cu_xS_y for the Continuous Deodorization System at Higher Temperature than 60℃

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The research's purpose is to prepare inorganic antimicrobial of Cu_xS_y for the continuous deodorization system at higher temperature than 60 ℃. The preparation of inorganic antimicrobial of Cu_xS_y was as follows; Copper(Ⅱ) sulfate pentahydrate 100g and sodium sulfate 70g were dissolved in distilled water 250mL, respectively. Mixing these solutions and stirring for 30min, particles of Cu_xS_y were synthesized in the process. The obtained particle was washed repeatedly with distilled water to pH 6~7. The washed particle was dried at 50℃ for 1h and then, calcinated at 200℃ for 2h, finally. Analyzing of the particle by XRD, XRF, and TGA, it is shown that crystal peaks are (101), (102), (103), (006), (110), and (018), mole ratio of Cu/S is about 2.4, and pyrolysis temperature is about 300 ℃. Evaluating antibiosis by *Staphylococcus aureus ATCC 6538P*, antibiosis was favorable in concentrations over 1 wt% Cu_xS_y.

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