

建築物室內建材之揮發性有機物檢測分析研究

Study of Determination and Analyses of the VOCs From Indoor Materials and Products in the Building

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Abstract

The volatile organic compounds (VOCs) from indoor materials and products are the major sources of indoor air pollution, and the emissions were resulted in health or comfort problems. Those indoor materials and products include furniture, decoration, wall paper, tapestry, carpet, ceiling, coating materials, binder, solvent and additives.

In this research, the small environmental test system was used to develop the emissions characteristics of the indoor materials and products. Modifications and variations in equipment, test procedures and data analysis will be used to establish the standard guide for small-scale environmental chamber determinations of organic emissions from indoor materials and products.

The organic emissions of six kinds of organic coating materials which popularly used by the GC/MS analyses were experimentally investigated. From the GC/MS chromatograph analyses, the major organic emission components are 2-Propanol, Toluene, Butyl Acetate, Xylene, 2-Methyl Heptane, 3-Methyl Heptane, Octane, Trimethyl Benzene, 2-Butanone, which will seriously cause health problems and drop the indoor air quality (IAQ) .