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## 合成二苯基硫脲的新方法研究

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**摘要** 探讨了一种合成二苯基硫脲(DPTU)的新工艺。以乙醇为溶剂,苯胺和硫脲为原料,盐酸为催化剂,通过均相反应合成了DPTU。采用红外光谱、紫外-可见光谱技术表征了DPTU的结构;用显微熔点测定仪测定了DPTU的熔点。考察了催化剂盐酸的浓度、反应时间和反应温度对产物收率的影响。结果表明:在1mol/L的盐酸催化下,反应温度为90℃,硫脲与苯胺的质量比为1.04:1,DPTU的收率可达32%。此合成方法具有条件温和、原料毒性小的特点。

**关键词** 硫脲 二苯基硫脲 均相反应 合成方法

## Study on New Method for Synthesis of Diphenyl Thiourea

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**Abstract** Diphenyl thiourea (DPTU) is synthesized from aniline and thiourea with 95% alcohol as solvent and hydrochloric acid as catalyst in homogeneous reaction. The structure of DPTU is characterized by the infrared spectrum and ultraviolet-visible spectrum technology, and the melting point is measured by the micro melting point cryoscope. The effect of the concentration, reaction time and temperature on the product yield is inspected. The result shows that the product yield of DPTU can reach 32% in which the mass ratio of thiourea to aniline is 1.04:1 and the hydrochloric acid concentration is 1mol.L-1 at the reaction temperature of 90℃. The synthetic method has the features such as mild reaction condition and the low-toxic reactant.

**Keywords** thiourea, diphenyl thiourea, homogeneous reaction, synthetic method

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