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| **Experiment name:** | Phtalimide |
| **Classification of the experiment:** | Other reactions |
| **Page number (see Experimental Organic Chemistry, Prof. Ender Erdik)** | 741 |
| **Required chemicals:** | **Chemical name** | **Amount** |
| Phthalic Anhydride | 1.5 g (10 mmol) |
| Urea | 0.3 g (5 mmol) |
| Water | 1.5 ml |
| **Crystallization solvent:** | Water or ethyl alcohol | Appropriate amount |

**Reaction scheme:**



**Experimental procedure and purification technique:**

Intimately mix phthalic anhydride (1.5 g; 10 mmol) and urea (0.3 g; 5 mmol), and place the corresponding mixture in a long-necked flask. Heat the flask content gradually at first until the mixture forms a homogeneous melt (the temperature of the reaction reaches ~130-135 °C)[[1]](#footnote-1). Following the observation of the effervescence, the mixture suddenly froths up to about three times the original volume this is accompanied by a rise in temperature to 150-160 °C and becomes immediately solid. Remove the heat from beneath the bath and allow to cool. Add about 1.5 ml of water to disintegrate the solid in the flask, filter at the pump, wash with a little water and then dry at 100 °C. mp: 233 °C. The obtained product is practically pure and if desired, it may be recrystallized from methanol or water. The first crop consists of 0.7 g and further quantities may be recovered from the mother-liquor.

**Reference source (1): “Vogel’s Textbook of Practical Organic Chemistry (5th edition)”: 1065.**

**Reference source (2): “Denel Organik Kimya (6th edition)”: 741.**

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1. Push down the sublimated material into the flask with a glass rod. [↑](#footnote-ref-1)