

**Chemical Synthesis and Drug Discovery Facility**

The Chemical Synthesis and Drug Discovery Facility at Notre Dame (CSDD) exists to provide expertise in multi-step organic synthesis, medicinal chemistry, parallel development, purification and isolation of small molecules.

**Instruments**

CSDD is a shared-resource facility where researchers operate and collect using a variety of state-of-the-art instruments.

**Equipment**

**LC/MS**

**Location**

**310 McCourtney Hall**

**Capabilities**

* **Provides mass to charge ratio data**
* **Provides structural identity of the compound**
* **Detection of residual chemical compounds**
* **Confirmatory identification of small organic molecules**
* **Confirmation and quantitation of contaminants and adulterants**

**Typical Use**

* **Develop highly accurate and reproducible assays.**
* **Analyze biochemical organic and inorganic compounds**

**Assisted Hourly Rates**

* **$10.00 (Internal)**
* **$20.00 (External)**
* **$10.00 (CSTI)**

**Unassisted Hourly Rates**

* **$5.00 (Internal)**
* **$20.00 (External)**
* **$5.00 (CSTI)**

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**Compound Purification**

**Location:**

**310 McCourtney Hall**

**Capabilities:**

* **High performance liquid chromatography**
* **Separate by columns**
* **Identify, quantify or purify the individual components of the mixture**
* **Assay platform for detection of metabolites**

**Typical Use:**

* **Separation challenges from small molecules to antibodies to peptides.**
* **For Industrial and scientific applications**
* **Test for presence of a specific compound/metabolite**

**Hourly Rates**

* **$26.00 (Internal)**
* **$51.00 (External)**
* **$26.00 (CSTI)**

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**Yamazen Flash Chromatography**

**Location:**

**310 McCourtney Hall**

**Capabilities:**

* **Purify chemical mixtures**
* **Separate substances that are insoluble from soluble in a solvent**
* **Transfers results from TLC to CLC**
* **Faster flow rates of solvent**

**Typical Uses:**

* **Separate mixtures of molecules into their individual constituents**
* **Purify chemical mixtures**

**Internal Hourly Rates**

* **Unassisted:**
* **Assisted:**

**External Hourly Rates**

* **Unassisted:**
* **Assisted:**

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**Services**

**Chemical Synthesis Consultation**

**A broad range of services, including: preparation of small molecules for use in hit verification, lead development, and midsize scale-up. The core facility can also help with preparation of biological probes, active pharmaceutical agents as experimental controls.**

**Assisted Hourly Rates:**

**$62.00 (Internal)**

**$83.00 (External)**

**$62.00 (CTSI)**

**Unassisted Hourly Rates:**

**$26.00 (Internal)**

**$83.00 (External)**

**$26.00 (CSTI)**

**Compound Registration Storage**

**The facility maintains a compound collection currently of 20,000 unique chemical entities.**

**Hourly Rates:**

**$9.80 (Internal)**

**Project Development**

**Help with the planning, organizing, coordinating to accomplish a specific goal.**

**Hourly Rates:**

**$131.00 (Internal)**

**$185.00 (External)**

**$131.00 (CSTI)**