STANDARD OPERATING PROCEDURE
STAN MAYFIELD BIOREFINERY PLANT

TITLE: Dry Weight Determination by Moisture Balance Operating Procedure

---

AUTHOR:	**Claudia C. Geddes**	**DATE: April 1, 2011**
APPROVALS:	**Process Change Committee**	**DATE:**
	UF EH&S	**DATE:**

CONTENTS

A. Scope

This procedure describes how to take a sample and dry it in a moisture balance to determine its dry weight content.

B. Safety and Training Requirements

Refer to UF lab safety policies and review the Material Safety Data Sheets (MSDS) for each material listed in section D below before starting any process work.

Review the location of fire extinguishers, fire blankets, safety showers, spill cleanup equipment and protective gear before beginning any process work.

During operations in the plant, the following safety gear will be utilized at all times:

- Lab Coat
- Safety Goggles or Face Shield
- Protective Gloves (nitrile, neoprene)
- Autoclave gloves

Avoid inhalation of vapors and wear nitrile or neoprene rubber gloves. Contain spills by using spill kits next to fermentors.

C. Related Documents and SOPs

1. UF Biosafety manual
2. Kern model MLB_N moisture balance operating manual

D. Preparation/Materials/Equipment

The chemicals/materials used in this SOP are listed below:

1. Moisture balance (Kern MLB_N model)
2. Aluminum pan (Kern & Sohn GmbH, Art. Nr. MLB-A01/RH-A01)

E. Detailed Procedure

1. Place an aluminum pan in the moisture balance (refer to Kern MLB_N operating manual for directions on how to set the balance up for dry weight determination).
2. Add approximately 2 g of wet sample on the pan.
3. Spread the sample out evenly over the pan.
4. Begin the drying sequence (refer to Kern MLB_N operating manual for directions on how to set the balance up for dry weight determination).
5. Record the sample % dry weight displayed on the screen.

F. Data Archival and Analysis

Record sample % dry weight in its corresponding batch record and store records in a folder labeled with the run number.