

Lipidomics Facility

The lipidomics facility offers analysis of long-chain and short chain lipids from a variety of biological matrices to investigators at Rutgers and beyond.

Management

Director: Dr. Harini Sampath (harini.sampath@rutgers.edu)

Administrator: Roger Grillo

Services offered

- **Enzymatic Lipid Profiles (plasma):**
 - Esterified cholesterol, Free cholesterol, Triglycerides, Free fatty acids
- **Long chain fatty acid analysis (tissue, cell culture, plasma):**
 - total lipid acyl chain composition
 - phospholipids, diglycerides, free fatty acids, triglycerides, cholesterol esters content and acyl chain composition
 - Preparative TLC plates for publications/displays
- **Short chain fatty acid analysis (feces):**
 - Quantitation of C1-C6 SCFAs in mouse or human feces

Fee structure

Costs include sample prep from pre-weighed samples. For GC-MS analyses, costs include basic peak identification and quantitation, along with an Excel report.

Additional analyses are carried out on a collaborative basis by arrangement with Dr. Harini Sampath.

Turn-around time is dependent on place in queue and can be estimated through prior communication with Dr. Sampath.

Service	IFNH member price	Non-IFNH
Enzymatic kits	Kit price*+100/plate (upto 75 samples)	Kit price*+200/plate (upto 75 samples)
Long chain fatty acids – total	\$80/sample	\$160/ sample
Long chain fatty acids with TLC separation of lipid classes	\$100/sample/lipid class	\$200/ sample/ lipid class
Long chain fatty acids display TLC	\$200/9 samples	\$200/9 samples
SCFAs	\$20/ sample	\$40/ sample
*Kit price upon inquiry		

Sample preparation

- Tissue/cell samples should be weighed and frozen in liquid nitrogen immediately after collection.
- Feces should be freshly collected, weighed, and frozen in liquid nitrogen immediately after collection.

- Serum or EDTA plasma should be removed from the red cells as soon as possible after collection and then frozen.
- Samples with gross hemolysis or lipemia may yield false results.
- Heparin is not acceptable as an anticoagulant for lipid profiles.
- All samples should be stored at -70°C until shipped.
- Please label all tubes clearly and legibly.

Sample requirements

Assay	Requirements for Human	Requirements for Mouse
Plasma/Serum Cholesterol (enzymatic)	20 µl plasma or serum	20 µl plasma or serum
Plasma/Serum Triglycerides (enzymatic)	20 µl plasma or serum	20 µl plasma or serum
Plasma/Serum FFA (enzymatic)	20 µl plasma or serum	20 µl plasma or serum
Plasma/Serum FFA (GC)	500 µl plasma or serum	150 µl plasma or serum
Tissue/Cell FFA (GC)*	~30-100 mg tissue	~30-100 mg tissue
Tissue/Cell Diglyceride (GC)*	~30-100 mg tissue	~30-100 mg tissue
Tissue/Cell Phospholipid (GC)*	~30-100 mg tissue	~30-100 mg tissue
Tissue/Cell Triglycerides (GC)*	~30-100 mg tissue	~30-100 mg tissue
Tissue/Cell Cholesterol esters (GC)*	~30-100 mg tissue	~30-100 mg tissue
Fecal SCFAs	100 mg feces	100 mg feces

*all tissue analyses can be conducted using a single sample