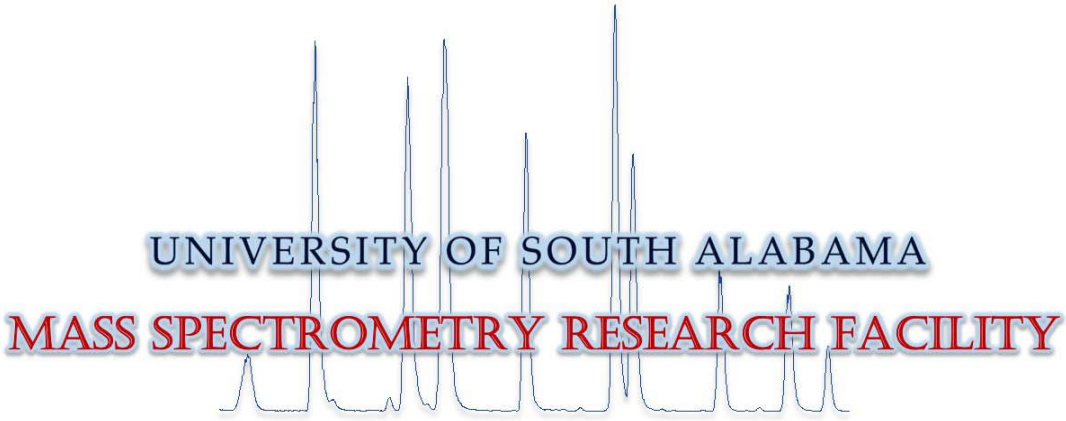

1660 Springhill Ave, Mobile, AL 36604, Room 2095
Phone: 251-445-9860 Email: usa.mass@southalabama.edu

MS Analysis Requisition Form

Date:_____ **Institution:** _____

Investigator:_____ **Phone #:** _____

Email: _____ **FOPAL# (USA Users):**_____

Billing Address/Information (External Users): _____

Will services be paid for by a federally funded grant? ☐ **Yes** ☐ **No**

Analysis requested:

Small Molecules

- ☐ Accurate Mass Determination of pure compound (~50-100µM preferred, suspension in 50% ACN)
- ☐ Metabolomics Analysis of Whole Cell Lysate (Minimum $1x10^6$ cells, $5x10^6$ preferred)
- ☐ Metabolomics Analysis of Cell Culture Medium (Without Phenol Red)
- ☐ Metabolomics Analysis of Human/Animal Tissue (50mg minimum preferred, 100mg or more best)

Proteomics

- ☐ Global proteomics of whole cell lysate (Please discuss use of lysis buffer)
- ☐ Global proteomics of secreted protein from cell culture medium (without serum, pen-strep, phenol red)
- ☐ In-Gel Protein Digestion (Coomassie Stained Gel preferred)
- ☐ Protein ID from Immunoprecipitation
- ☐ Post-translational modification determination

Lipids

- ☐ Sphingolipids
- ☐ Phospholipids
- ☐ Cardiolipids

Other

- ☐ Other analysis requested: _____

 # Of Samples to be provided for analysis: _____ **Do these contain biological replicates?** ☐ **Yes** ☐ **No**

 # Of MS technical replicates requested: _____

**Proper sample preparation is crucial for successful MS results. Please consult the MS facility regarding sample preparation prior to bringing your samples for analysis. Researcher will be responsible for providing total protein/cell counts for data normalization if necessary. **

Please provide experiment details. Specimen(s) ID, estimated sample concentration/cell count per sample, how the samples were prepped, and how the samples have been stored for MS analysis must be included. (If the MS facility is to perform the sample preparation, please provide protocol.):

Mass spectrometers are not compatible with a high concentration of salts, detergents and other chemicals. Please check if your samples contain any of the following, even if it is far upstream in your experiment:

Non-volatile salts and buffers:

- ☐ Tris-HCL
- ☐ HEPES
- ☐ Phosphate buffers

Nonionic detergents:

- ☐ TWEEN 20 (Polysorbate 20)
- ☐ NP-40
- ☐ PEGs (Polyethylene glycol)
- ☐ SDS (sodium dodecyl sulfate)
- ☐ Triton X-100
- ☐ CHAPS

Non-volatile solvents:

- ☐ Glycerol
- ☐ DMSO (dimethyl sulfoxide)
- ☐ DMF (dimethylformamide)

Biological/Chemical Risk Assessment

Please check if your samples contain any of the following potential hazards:

- ☐ Chemical (pharmaceutical compounds, corrosives, toxic solvents, etc) (MSDS sheet must be provided)
- ☐ Biological (bacteria, viruses, yeasts, etc)
- ☐ Radioactive

MS Core Facility Fee Structure

For an estimate of charges, please request a quote.
Internal rates apply if services are being paid for by a federally funded grant.

	UNITS	USA Internal Rate	Exernal User Rate
SAMPLE PREPARATION			
Solid phase extraction (with drying)	1.00	$41.00	$51.25
Liquid-Liquid extraction (with drying)	1.00	$36.00	$45.00
HPLC purification/fractionation	1.00	$10.00	$12.50
In-Gel protein digestion	1.00	$123.00	$153.75
Protein digestion in solution	1.00	$26.00	$32.50
Cell/Vesicle/Tissue Lysis	1.00	$26.00	$32.50
HPLC ISOLATION/SEPARATION			
1 sample + 1 blank	1.00	$19.00	$23.75
MSQ CHEMICAL ANALYSIS			
Small molecule m/z, low resolution no fragmentation, With Reporting	1.00	$34.00	$42.50
SMALL MOLECULE ANALYSIS			
Small molecule m/z, High Resolution, with or without MS2 Fragmentation, Including reporting	1.00	$105.00	$131.25
HRMS ANALYSIS			
Method development	Up to 12 hrs	$128.00	$160.00
LTQ Orbitrap XL Instrument, High Resolution, Per injection	1.00	$99.00	$123.75
Q-Exactive Plus Instrument, High Resolution, Per injection	1.00	$122.00	$152.50
OTHER			
Complex project (Fixed Fee) (16-60 MS Runs)	1.00	$1,605.00	$2,006.25
Complex project (Pro-rated) (60-90 MS Runs)	Pro-rated	$1,605.00	$2,006.25
Complex project (Fixed Fee) (90-120 MS Runs)	1.00	$3,210.00	$4,012.50
Basic bioinformatics and reporting per injection/method	1.00	$53.00	$66.25
Training of users for data analyses	1.00	$21.00	$26.25
Training of users on LC and MSQ	1.00	$21.00	$26.25

Samples are placed in a queue upon receipt with the completed form. For other services and urgent samples, please contact us via e-mail.

Results will be provided by email and/or PDF attachment using the email address provided above.

Acknowledgment

All work performed in the mass spectrometry facility should be acknowledged in scholarly reports, presentations, posters, papers, and all other publications. Please acknowledge the facility as “The University of South Alabama Mass Spectrometry Core Facility”, and notify the facility when your acknowledgement is published.

Signature of Principal Investigator:_____
(Type your name in the box above to agree with the information provided on this form.)

Metabolomics Assays

Please check any of the following small molecules you wish to have measured and included in the final report, and also check if you have included a heavy labeled internal standard prior to extraction. Spiked heavy labeled standards will be measured using non-targeted full scan data unless requested otherwise. If more than one MS run/method is necessary to incorporate all of the compounds you wish to target, each MS run will be charged separately. If your compound of interest is not listed below, please include it in the information with the details of your experiment.

Method 1				
Check for Analysis	Spiked Heavy Labeled Standard	Compound	Formula	Theoretical M/Z to be measured
☐	☐	**NAD+** (Nicotinamide adenine dinucleotide)	$C_{21}H_{28}N_7O_{14}P_2^+$	664.116944
☐	☐	**4-NADO** (4-Oxonicotinamide adenine dinucleotide)	$C_{21}H_{27}N_7O_{15}P_2$	680.111313
☐	☐	**NADP+** (Nicotinamide adenine dinucleotide phosphate)	$C_{21}H_{29}N_7O_{17}P_3^+$	744.083273
☐	☐	**NADH** (Nicotinamide adenine dinucleotide, reduced)	$C_{21}H_{29}N_7O_{14}P_2$	666.132048
☐	☐	**NADPH** (Nicotinamide adenine dinucleotide phosphate, reduced)	$C_{21}H_{30}N_7O_{17}P_3$	746.098379
☐	☐	**Nam** (Nicotinamide, Niacinamide)	$C_6H_6N_2O$	123.055289
☐	☐	**NA** (Nicotinic acid, Niacin)	$C_6H_5NO_2$	124.039305
☐	☐	**NAR** (Nicotinic acid riboside)	$C_{11}H_{14}NO_6^+$	256.082112
☐	☐	**N-Me-NA** (N-methyl-nicotinic acid, Trigonelline)	$C_7H_8NO_2^+$	138.055504
☐	☐	**Me-Nam** (N-methyl nicotinamide)	$C_7H_9N_2O^+$	137.071488
☐	☐	**NR** (Nicotinamide riboside)	$C_{11}H_{15}N_2O_5^+$	255.098097
☐	☐	**NRH** (Nicotinamide riboside, reduced)	$C_{11}H_{16}N_2O_5$	257.113198
☐	☐	**NMN** (Nicotinamide mononucleotide)	$C_{11}H_{16}N_2O_8P^+$	335.064426
☐	☐	**2-PY** (2-pyridone-3-carboxamide)	$C_6H_6N_2O_2$	139.050204
☐	☐	**4-PY** (4-pyridone-3-carboxamide)	$C_6H_6N_2O_2$	139.050204
☐	☐	**6-PY** (6-pyridone-3-carboxamide)	$C_6H_6N_2O_2$	139.050204
☐	☐	**2-PYR/4-PYR/6-PYR** (1-N-ribosyl-2-pyridone-3-carboxamide)	$C_{11}H_{14}N_2O_6$	271.092463
☐	☐	**AMP** (Adenosine Monophosphate)	$C_{10}H_{14}N_5O_7P$	348.070359
☐	☐	**ADP** (Adenosine Diphosphate)	$C_{10}H_{15}N_5O_{10}P_2$	428.036688
☐	☐	**ATP** (Adenosine Triphosphate)	$C_{10}H_{16}N_5O_{13}P_3$	508.003017
☐	☐	**FAD** (Flavin adenine dinucleotide)	$C_{27}H_{33}N_9O_{15}P_2$	786.164408
☐	☐	**Cyclic FMN** (Cyclic-flavin mononucleotide)	$C_{17}H_{19}N_4O_8P$	439.101325
☐	☐	**FMN** (Flavin mononucleotide)	$C_{17}H_{21}N_4O_9P$	457.111889

Method 2				
Check for Analysis	Spiked Heavy Labeled Standard	Compound	Formula	Theoretical M/Z to be measured
☐	☐	**Adenosine**	$C_{10}H_{13}N_5O_4$	268.104300
☐	☐	**NUA** (Nicotinuric Acid)	$C_8H_8N_2O_3$	181.060769
☐	☐	**N-Me-2PY** (*N*-methyl-2-pyridone-3-carboxamide)	$C_7H_8N_2O_2$	153.065854
☐	☐	**N-Me-4PY** (*N*-methyl-4-pyridone-3-carboxamide)	$C_7H_8N_2O_2$	153.065854
☐	☐	**N-Me-6PY** (*N*-methyl-6-pyridone-3-carboxamide)	$C_7H_8N_2O_2$	153.065854
☐	☐	**Cysteine**	$C_3H_7NO_2S$	122.027025
☐	☐	**NAMN** (Nicotinic acid mononucleotide)	$C_{11}H_{15}NO_9P^+$	336.048441
☐	☐	**Creatinine**	$C_4H_7N_3O$	114.066188
☐	☐	**Riboflavin**	$C_{17}H_{20}N_4O_6$	377.145560

Method 3				
Check for Analysis	Spiked Heavy Labeled Standard	Compound	Formula	Theoretical M/Z to be measured
☐	☐	**cAMP** (3',5'-Cyclic adenosine monophosphate)	$C_{10}H_{12}N_5O_6P$	330.059794
☐	☐	**cGMP** (3',5'-Cyclic guanosine monophosphate)	$C_{10}H_{12}N_5O_7P$	346.054709
☐	☐	**cUMP** (3',5'-Cyclic uridine monophosphate)	$C_9H_{11}N_2O_8P$	307.032576
☐	☐	**cCMP** (3',5'-Cyclic cytidine monophosphate)	$C_9H_{12}N_3O_7P$	306.048561

Method 4				
Check for Analysis	Spiked Heavy Labeled Standard	Compound	Formula	Theoretical M/Z to be measured
☐	☐	Tryptophan	$C_{11}H_{12}N_2O_2$	205.097154
☐	☐	Kynurenine	$C_{10}H_{12}N_2O_3$	209.092068
☐	☐	Kynurenic acid	$C_{10}H_7NO_3$	190.049869
☐	☐	Anthranilic acid	$C_7H_7NO_2$	138.054955
☐	☐	3-Hydroxykynurenine	$C_{10}H_{12}N_2O_4$	225.086983
☐	☐	3-hydroxyanthranilic acid	$C_7H_7NO_3$	154.049869
☐	☐	Picolinic acid	$C_6H_5NO_2$	124.039304
☐	☐	Quinolinic acid	$C_7H_5NO_4$	168.029134
☐	☐	Xanthurenic acid	$C_{10}H_7NO_4$	206.044784
☐	☐	N-Formyl kynurenine	$C_{11}H_{12}N_2O_4$	237.086983
☐	☐	N-Acetyl-5- Hydroxytryptamine	$C_{12}H_{14}N_2O_2$	219.112804

Method 5				
Check for Analysis	Spiked Heavy Labeled Standard	Compound	Formula	Theoretical M/Z to be measured
☐	☐	Estrone	$C_{18}H_{22}O_2$	271.169246
☐	☐	Estradiol	$C_{18}H_{24}O_2$	273.184906

Additional Information

Please provide any additional information you wish to include below: