



Gly/TCA (Supplement to Central Metabolism Profile)

Service Code:

Summary: Supplement to the profile of Central Metabolism, adding analytes detectable via GCMS from glycolysis and TCA cycle. GCMS detection includes a one step liquid-liquid extraction followed by MTBSTFA derivatization. All analytes and Internal Standards are measured by EI on a GC-MS and are reported as μM and normalized to wet tissue weight/cell protein/biofluid volume. CV's are 15%.

Container: 1.5mL Micro Tube or equivalent

Normal Volume: Plasma (100 μL) Tissue (50-100 mg); Cell ($1.5\text{E}7$).

Minimal Volume: Plasma (50 μL) Tissue (30 mg); Cells ($\sim 2.5\text{E}6$)

Sample Collection: Please see our detailed sample collection protocol on the Michigan Regional Comprehensive Metabolomics Resource Core (MRC²) website before preparing samples for analysis or contact the core director at the number below for details.

Reference: [Matthew A. Lorenz](#), [Charles F. Burant](#), and [Robert T. Kennedy](#) (2011) "Reducing Time and Increasing Sensitivity in Sample Preparation for Adherent Mammalian Cell Metabolomics", *Anal. Chem.* 83(9): 3406–3414.

Table I: Analytes reported by GCMS:

Analyte	Abbr.	Mol Formula	LOQ(μM)
Alpha Ketoglutarate	AKG	$\text{C}_5\text{H}_6\text{O}_5$	1
Fumurate	FUM	$\text{C}_4\text{H}_4\text{O}_4$	1
Lactate	LAC	$\text{C}_3\text{H}_6\text{O}_3$	1
Pyruvate	PYR	$\text{C}_3\text{H}_4\text{O}_3$	1