**LC-MS Protocols for plant samples (10 mg dry)**

1. Freeze tissues in liquid nitrogen.
2. Lyophilize frozen tissue until dry; about 2-3 days (or longer if large quantities). The dried tissues should be stored at -80ºC until used.
3. Grind the dry tissue using mortar and pestle.
4. Weigh tissue (10mg ± 0.06) into a 1-dram glass vial (3.8mL).
5. Add 1.0 mL of 80% methanol containing internal Standard (18 µg/mL 7-OH Coumarin).
6. Gently shake on orbital shaker for 2 hours.
7. Centrifuge samples for 30 minutes at 3000g at 4°C.
8. Transfer 500 µl of extract solution to an autosampler vial.
9. Store sample at -20°C until sample analysis.
10. Inject 2 µl into LC-MS. Separation is achieved on an ACQUITY UPLC BEH C18 Column, 130Å, 1.7 μm, 2.1 mm X 150 mm. Column temperature: 60 oC, mobile phase A: 0.1% formic acid, B: acetonitrile. Flow rate: 0.56 mL/min. Metabolites are detected using a Bruker Impact II Q-TOF MS with a scan range from m/z 100 -1500.