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Metabolomic Analysis of Mammalian Cells and Human Tissue through One-Pot Two Stage Derivatizations using Sheathless Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry

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Highlights:

- Novel sequential derivatization method that expands the detection of diverse classes of metabolites
- Hydroxyl, amine and carboxylate groups are derivatized with high proton affinity tags and separated by sheathless CE-ESI-MS
- Application of derivatization and sheathless CE-ESI-MS to human tissue and bovine aortic endothelial cell metabolome profiling
- Ability to detect 21 metabolites from <300 cells injected on-capillary

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