



Data Collection Worksheet

Please Note: The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

Serum cotinine is measured by high-performance liquid chromatography atmospheric pressure chemical ionization tandem mass spectrometry (LC APCI MS/MS). Briefly, a 0.5-ml aliquot of the serum sample is equilibrated with a cotinine-D3 internal standard for 20 min, and then applied to a basified solid-phase extraction column. Cotinine is extracted using methylene chloride, the organic extract is concentrated, and the residue is injected onto a C-18 HPLC column. The eluant from these injections is monitored by APCI-MS/MS, and the m/z 80 daughter ion from the m/z 177 quasi-molecular ion is quantitated. Additional ions for the internal standard and for confirmation are also monitored. Cotinine concentrations are derived from the ratio of native-to-labeled cotinine in the sample by comparisons to a standard curve. The limit of detection (LOD) is 15 pg/ml.

Protocol source: <https://www.phenxtoolkit.org/protocols/view/91703>