

## Metabolite Profiling Facility

### Melatonin Analysis

#### Brief Description:

Melatonin can be detected and quantified in liquid biological samples such as serum. The prepared samples are separated on a Waters Xbridge C8 phase HPLC column and detected using our Agilent 6460 triple quadrupole mass spectrometer in MRM mode. The run time is approximately 12 minutes per sample. Data are collected in positive electrospray ionization modes. Data are typically normalized to sample volume used for extraction.

**Normal Weight:** serum (200-1000  $\mu$ L)

**Minimal Weight:** serum (200  $\mu$ L)

**Special Handling:** Samples should remain frozen at  $-80^{\circ}\text{C}$  and in darkness prior to analysis if possible

#### References:

1. Rapid and sensitive analysis of melatonin by LC-MS/MS and its application to pharmacokinetic study in dogs. Asian journal of Pharmaceutical sciences II (2016) 273-280 Huimin Zhao et al
2. Measurement of melatonin in body fluids: standards, protocols and procedures. Childs Nerv Syst (2011) 27:879-891 Eduardo Alves de Almeida et al

**Table I: Analytes (1) reported**

Compound Name	
Melatonin	analyte
Melatonin-d4	internal standard