

# M3G and M6G in Urine Post-Hydrolysis with $\beta$ -Glucuronidase from Abalone on Force Biphenyl

Peaks	t <sub>R</sub> (min)	Precursor Ion	Product Ion	Product Ion
1. Morphine-3- $\beta$ -D-glucuronide	0.61	462.1	286.0	152.1
2. Morphine-6- $\beta$ -D-glucuronide	1.17	462.1	286.0	152.1

**Column** Force Biphenyl (cat.# 9629252)  
**Dimensions:** 50 mm x 2.1 mm ID  
**Particle Size:** 1.8  $\mu$ m  
**Guard Column:** UltraShield UHPLC precolumn filter, 0.2  $\mu$ m frit (cat.# 25809)  
**Temp.:** 40 °C

**Sample**  
**Conc.:** A 750 ng/mL standard was prepared in 1 mL of urine. 150  $\mu$ L of the fortified urine was incubated for 16 h at 60 °C with 20  $\mu$ L of  $\beta$ -glucuronidase from abalone and 10  $\mu$ L of internal standard. Following incubation, 600  $\mu$ L of acetonitrile was added, and then the solution was vortexed and centrifuged. 500  $\mu$ L of the supernatant was dried down and reconstituted in 1 mL of 0.1% formic acid in water.

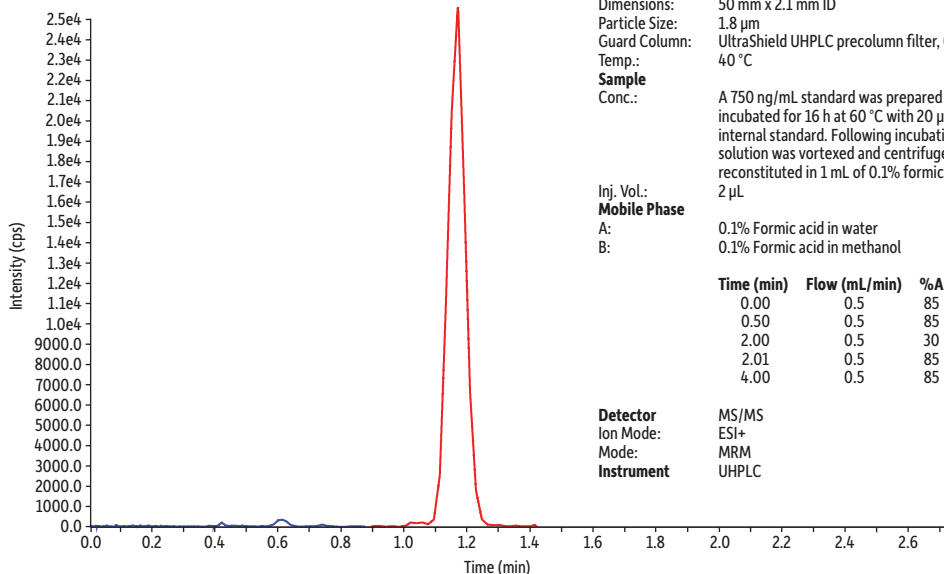
**Inj. Vol.:** 2  $\mu$ L

**Mobile Phase**

**A:** 0.1% Formic acid in water  
**B:** 0.1% Formic acid in methanol

Time (min)	Flow (mL/min)	%A	%B
0.00	0.5	85	15
0.50	0.5	85	15
2.00	0.5	30	70
2.01	0.5	85	15
4.00	0.5	85	15

**Detector** MS/MS  
**Ion Mode:** ESI+  
**Mode:** MRM  
**Instrument** UHPLC



LC\_CF0681