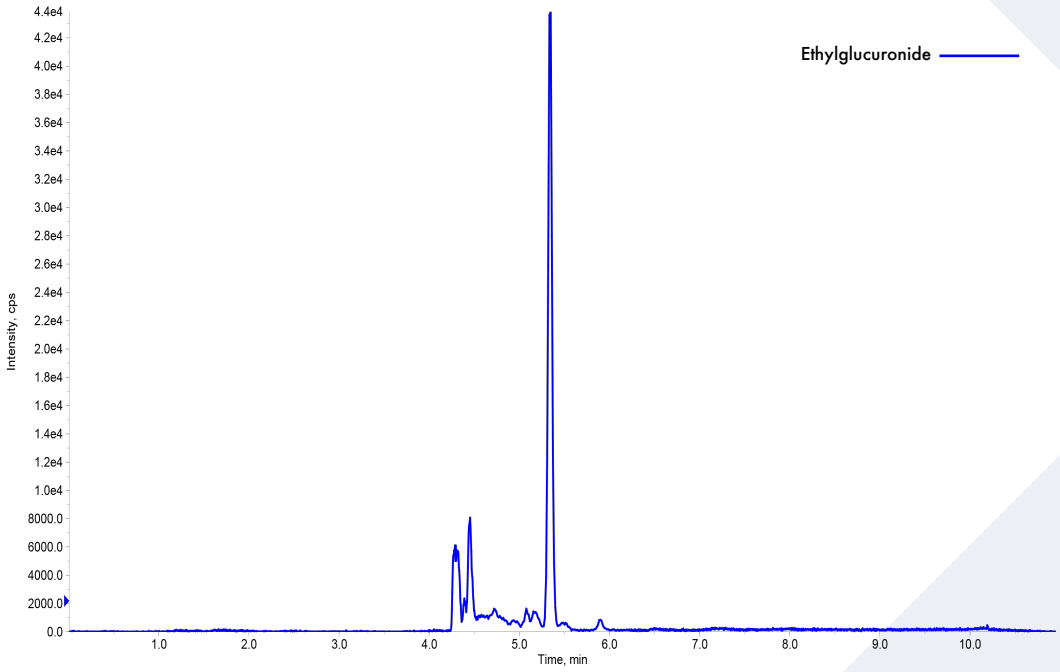
BSN
Biological Sales Network

METHOD AT A GLANCE

FLOMASS® ETHYLGLUCURONIDE IN HAIRS

The diagnosis of alcohol abuse is complex and delicate both for clinical-diagnostic reasons and for medico-legal implications.
In addition to the classic hematological and biochemical indices usually taken into consideration (such as AST, ALT, GGT and MCV), in recent years the use of %CDT (desialated transferrin) and Ethylglucuronide has become increasingly popular. EtG is a non-volatile, polar, relatively stable molecule formed by the conjugation of ethanol with glucuronic acid. Unlike CDT, ethylglucuronide (EtG) is therefore a direct metabolite of ethanol in serum and urine up to 80 hours after the last intake. Furthermore, its presence in hairs and other tissues further increases its diagnostic value. The keratin matrix, in fact, has the undoubted advantage of being able to broaden the surveillance window, theoretically allowing to identify not only a recent continuous abuse, but also an abuse in previous times. The keratin matrix has many practical advantages compared to other biological samples, such as the greater ease of collection that can also be carried out by non-medical personnel, the non-invasiveness of sampling, the easy storage of the material and the stability of the analytes.



PROVIDE PERSONAL SOLUTIONS

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HPLC-MS/MS system conditions

Ionization: ESI negative mode
MS/MS: specific MRM
Injection volume: 10-20 µL (variable according to instrumental sensitivity)
Running time: 11 min
Column heater: 25°C
Column conditioning: column should be conditioned for 10 min at chromatographic gradient initial condition. Then run 3 blank injections (MPA only) using the gradient as indicated in IFU

Sample preparation

- Insert about 100 mg of hair segment into a 7 mL tube, add 4 mL of Wash Sol ensuring all the sample is absorbed, vortex for 5 sec and place in ultrasonic bath for 10 min
- Remove Wash Sol, add 4 mL Reconditioning Sol, ensuring all the sample is absorbed, vortex for 30 sec and discard the supernatant. Evaporate the residual with nitrogen flow
- Add 20 balls and grind the entire quantity using the mill, if you use mill protocol (see conditions on IFU) or finely grind the hairs if you don't use the mill
- Weigh about 20 mg of shredded hairs, add 200 µL Extraction Sol and incubate at 60°C for 2 h
- Prepare a mix composed of 5µL Internal Standard + 70 µL Extraction Sol per sample
- Add 30 µL of the mix previously prepared, vortex for 30 sec and place in ultrasonic bath for 2 h at 60°C
- Centrifuge for 20 min at 1200 rpm
- Pipette supernatant in an autosampler vial, inject 10-20 µL according to instrumental sensitivity and analyze with HPLC-MS/MS technique

Performance

ANALYTE	LINEARITY (pg/mg)	LLOD (pg/mg)	LLOQ (ng/mg)	CV% INTRA	CV% INTER
EtG	2.99 – 500	0.9	2.99	9.5 – 11.6	8.2 – 14.0

Ordering guide

EUM04200	FloMass® Ethylglucuronide in Hairs	200 assays
EUM04041	6-Levels Calibrators, lyophil.	3 x 6 x 0.2 mL
EUM04051	2-Levels Controls, lyophil.	3 x 2 x 0.2 mL
EUM00C04	Chromatographic Column	1 pc
EUM00A17	Precolumn	2 pcs

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