

Ethylglucuronide (EtG) and ethylsulfate (EtS) are known as relatively new, specific parameters for the assessment of alcohol consumption, which dates back several days. The analysis is primarily performed from urine but may be extended to plasma and serum. For this purpose RECIPE offers a ClinMass® Complete Kit for analysis from urine, which can be expanded to plasma and serum samples (ClinMass® Supplement Kit, order no. MS8100). The analytical method features fast and simple sample preparation and guarantees a reliable analyte determination. The kit validation was established in compliance with the German GTFCh guidelines for quality assurance.

Alcoholism

Ethylglucuronide and Ethylsulfate in Urine, Plasma and Serum

Test Data (Urine)

Linearity:	EtG: 76.2 - 100000 µg/l EtS: 21.8 - 76356 µg/l
LOD:	EtG: 45.7 µg/l / EtS: 13.1 µg/l
LLOQ:	EtG: 76.2 µg/l / EtS: 21.8 µg/l
Intraassay precision:	EtG: 5.3 % / EtS: 4.6 %
Interassay precision:	EtG: 5.4 % / EtS: 4.9 %

LC-MS/MS Parameters

LC-Parameters

HPLC pump:	isocratic, flow rates: 0.2 ml/min, 0.5 ml/min
Injection volume:	10 µl
Injection interval:	5 min
Column heater:	40 °C

MS-Parameters

Ion source:	ESI, negative
MS/MS-Mode:	MRM

Sample Preparation

A: Urine

Dilution:

50 µl urine (calibrator, control, patient)	1000 µl Internal Standard IS
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LC-MS/MS Analysis:

Inject 10 µl

B: Plasma / Serum

Precipitation:

100 µl sample (calibrator, control, patient)	300 µl Internal Standard IS
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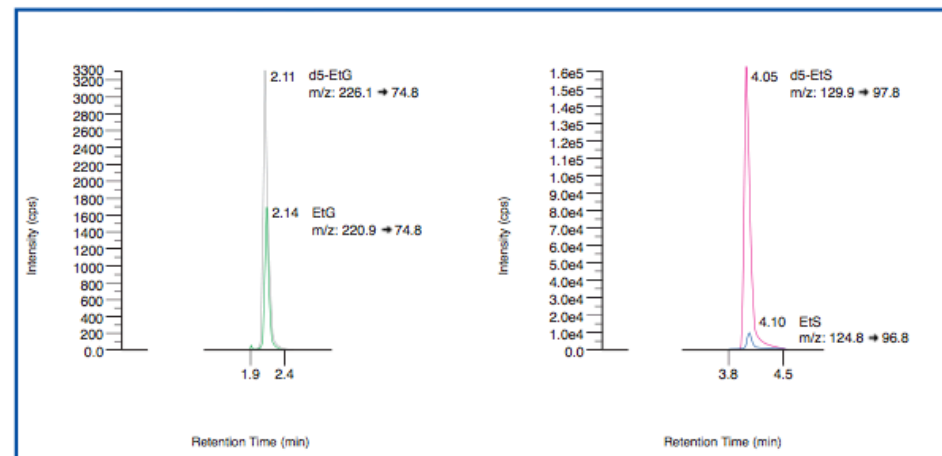
Dilution:

50 µl supernatant	500 µl Diluting Solution D
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LC-MS/MS Analysis:

Inject 10 µl

Chromatogram of the ClinChek® Urine Control, Level II (order no. MS8081):



Ordering Information

Order No.	Description	Quantity
MS8000	ClinMass® Complete Kit for Ethylglucuronide and Ethylsulfate in Urine for 400 assays	1 pce.
Kit Components (order no. MS8000):		
MS8005	Autosampler Washing Solution	1000 ml
MS8010	Mobile Phase	1000 ml
MS8012	Internal Standard IS	4 x MS8012 (4 x 100 ml)
MS8713	Urine Calibrator Set, lyophil., Level 0 - 6 Manual	7 x 1 x 1 ml 1 pce.
MS8100	ClinMass® Supplement Kit for Ethylglucuronide and Ethylsulfate in Plasma and Serum for 100 assays	1 pce.
Kit Components (order no. MS8100):		
MS8112	Internal Standard IS	30 ml
MS8113	Serum Calibrator Set, lyophil., Level 0 - 3	4 x 1 x 1 ml
MS8121	Diluting Solution D	50 ml
Additional Components:		
MS8014	Optimisation Mix	2 ml
MS8413	Urine Calibrator Set, lyophil., Level 0 - 3	4 x 1 x 1 ml
Start Accessories:		
MS8030	Analytical Column with test chromatogram	1 pce.
ClinChek® Controls:		
MS8080	Urine Control, lyophil., Level I	10 x 1 ml
MS8081	Urine Control, lyophil., Level II	10 x 1 ml
MS8082	Urine Control, lyophil., Level III	10 x 1 ml
MS8083	Urine Control, lyophil., Level I, II, III	3 x 3 x 1 ml
MS8180	Serum Control, lyophil., Level I	10 x 1 ml
MS8181	Serum Control, lyophil., Level II	10 x 1 ml
MS8182	Serum Control, lyophil., Level I, II	2 x 5 x 1 ml

→ Fast and simple sample preparation

→ Method validation according to GTFCh guidelines