FloMass Toxicology test in urine

Reagents for 100 assays

Application Note

REF **EUM11100**

RUO **Research purposes only**

PROVIDE PERSONAL SOLUTIONS

B.S.N. S.r.l. | Biological Sales Network
Tel. +39.0374.351005
Via Coelli, 18 26012 Castelleone (CR)

contact@bsn-srl.it
bsn-srl.it

B.S.N. BIOLOGICAL SALES NETWORK S.R.L.
26012 Castelleone (CR) Italy - Via Coelli, 18
Tel. +39 0374 351005 - Fax +39 0374 57965 - e-mail: info@bsn-srl.it – bsn@postecert.it
Reg. Imprese / C.F. / P.IVA: 11317290150 - R.E.A. di Cremona n. 143395

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CONTENTS

1 CLINICAL INFORMATION

FloMass Toxicology test in urine is intended to be used for research purposes only. It has been developed to support the screening of drugs of abuse in urine matrix library using liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS) in clinical laboratory. For drugs consumption determination, rapid screening tests with immunochromatographic methods (based on antigen-antibody interaction) are usually used. Because of their low specificity and sensitivity, these tests can identify only family molecule and they have higher cut-off than mass spectrometry coupled with UHPLC. LC-MS/MS analysis shows greater specificity and lower cut-off than rapid tests.

2 PRINCIPLE OF THE METHOD

Drugs of abuse identification is based on a match between spectra fragments obtained with the analysis and those in the library. To obtain substances mass spectra, the acquisition takes place in two steps. Spectrometer carries out MRM scan of substances specific transitions for every acquisition cycle. Spectrometer selects precursor ions related to the two most intense peaks for every scan cycle. Then it fragments them using ion trap. It registers mass spectra composed by fragments obtained from each precursor ion. Then every mass spectrum can be compared with those in the library to obtain the identification of substances in the sample.

3 COMPONENTS

CATALOG NUMBER	DESCRIPTION	QUANTITY	STORAGE
EUM11011	Mobile Phase A	1000 mL	Room temperature
EUM11012	Mobile Phase B	1000 mL	Room temperature
EUM11031	Internal standard mix	10 mL	-20°C
EUM00C11	Analytical Column	1 pz	Room temperature
EUM00A08	Precolumn	3 pz	Room temperature
EUM00A09	Holder + precolum	1 pz	Room temperature

4 SAMPLE PREPARATION

1. Put 100 µL sample (urine, calibrators, controls) in a vial
2. Add 100 µL of Internal Standard Mix (EUM11031) and vortex for 30 sec
3. Centrifuge for 5 min at 14000 rpm
4. Transfer the supernatant in a vial and dilute it with 800 µL water
5. Transfer 200 µL in a vial and analyze it with LC-MS/MS tecnology

5 CHROMATOGRAPHIC CONDITIONS

Oven temperature: 40°C
Injection volume: 30 uL

Chromatographic gradient

Time (min)	% MPB	Flow (ml/min)
0.01	10	0.5
10.00	90	1.0
15.00	90	1.0
15.50	10	0.5
17.50	10	0.5
17.51	Stop	Stop

6 REFERENCES

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