

FLOMASS[®] ANTIBIOTICS IN SERUM

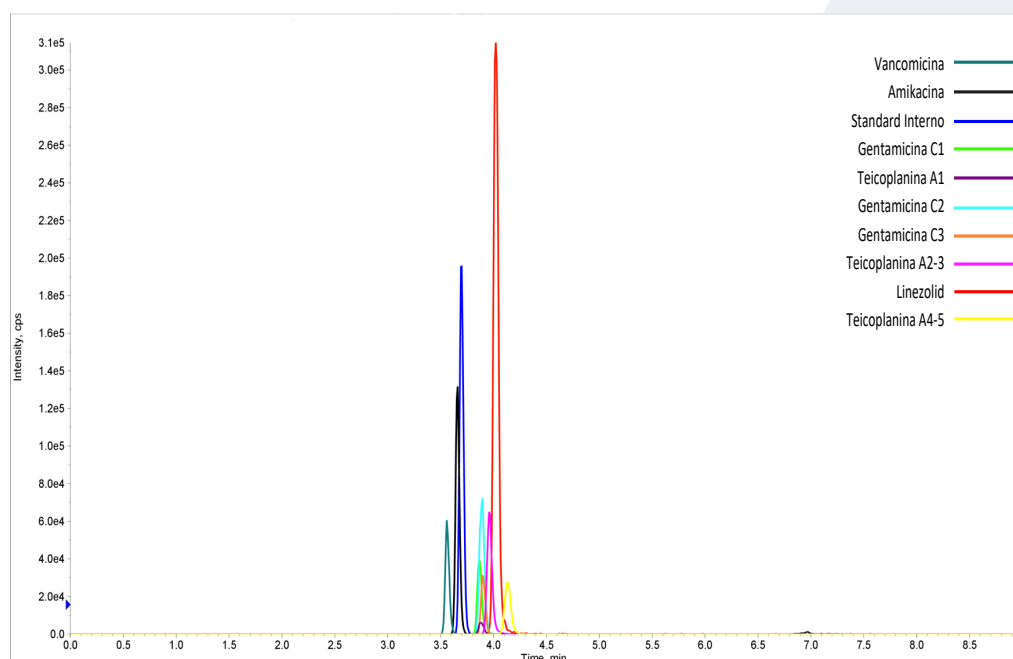
Amikacin, Gentamicin, Vancomycin, Teicoplanin and Linezolid are antibiotics with a narrow therapeutic range, so the difference between first effective concentration and first toxic level is very close.

Above the first toxic concentration, side effects can occur, even leading to serious consequences.

Below first effective concentration, a selection of antibiotic-resistant bacteria is promoted, and there is the risk of ineffective antibiotic treatment.

Moreover, the metabolism of these drugs can be very different among people, therefore adjustment of drug dosage is necessary in order to obtain the optimal therapeutic effect.

For these reasons, it is highly suggested to monitor circulating therapeutic drug to avoid adverse events and keep the therapeutic effect.



HPLC-MS/MS system conditions

Ionization: ESI positive mode

MS/MS: specific MRM

Injection volume: 2-10 μ L (variable according to instrumental sensitivity)

Running time: 10 min

Column heater: 50°C

Column conditioning: column should be conditioned for 5 min at chromatographic gradient initial condition. Then run 3 blank injections (MPA only) using the gradient as indicated in IFU

Sample preparation

- Prepare a mix with 190 μ L of Precipitant Solution + 10 μ L of Internal Standard Mix per sample
- Aliquot 100 μ L of serum
- Add 200 μ L of Mix Solution obtained in the previous step of the procedure
- Vortex for 30 sec
- Wait for 10 min at room temperature
- Centrifuge for 10 min at 13000 rpm
- Transfer 200 μ L of supernatant in vial
- Inject 2-10 μ L and analyze with HPLC-MS/MS technique

Performance

ANALYTE	LINEARITY (μ g/mL)	LLOD (ng/mL)	LLOQ (ng/mL)	CV% INTRA	CV% INTER
Amikacin	0.023 - 131	6.9	23.0	5.60 – 7.10	7.40 – 8.10
Vancomycin	0.084 - 126	25.1	83.7	4.30 – 5.50	8.80 – 11.00
Teicoplanin	0.082 - 263	24.5	81.7	3.80 - 4.50	6.70 – 11.40
Gentamicin	0.003 – 36.5	0.94	3.13	3.80 - 5.90	6.10 – 8.90
Linezolid	0.010 - 123	2.1	10.3	1.90 – 6.50	6.80 -9.00

Ordering guide

EUM15150	FloMass® Antibiotics in Serum	150 assays
EUM15041	6-Levels Calibrators, lyophil.	2 x 6 x 1.0 mL
EUM15051	2-Levels Controls, lyophil.	2 x 2 x 1.0 mL
EUM00C15	Chromatographic Column	1 pc
EUM00A11	Precolumn	4 pcs

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