

## Simultaneous Analysis of Veterinary Drugs by LC-MS/MS (2)

Examples of separation by LC-MS/MS of a standard sample of drugs on the Positive List.

Veterinary drug mixture PL-2-1 (Wako Pure Chemical Industries, Ltd.) 24 components

– Components corresponding to those for Simultaneous Analytical Methods I and II for Veterinary Drugs using HPLC (in livestock food and fish) –

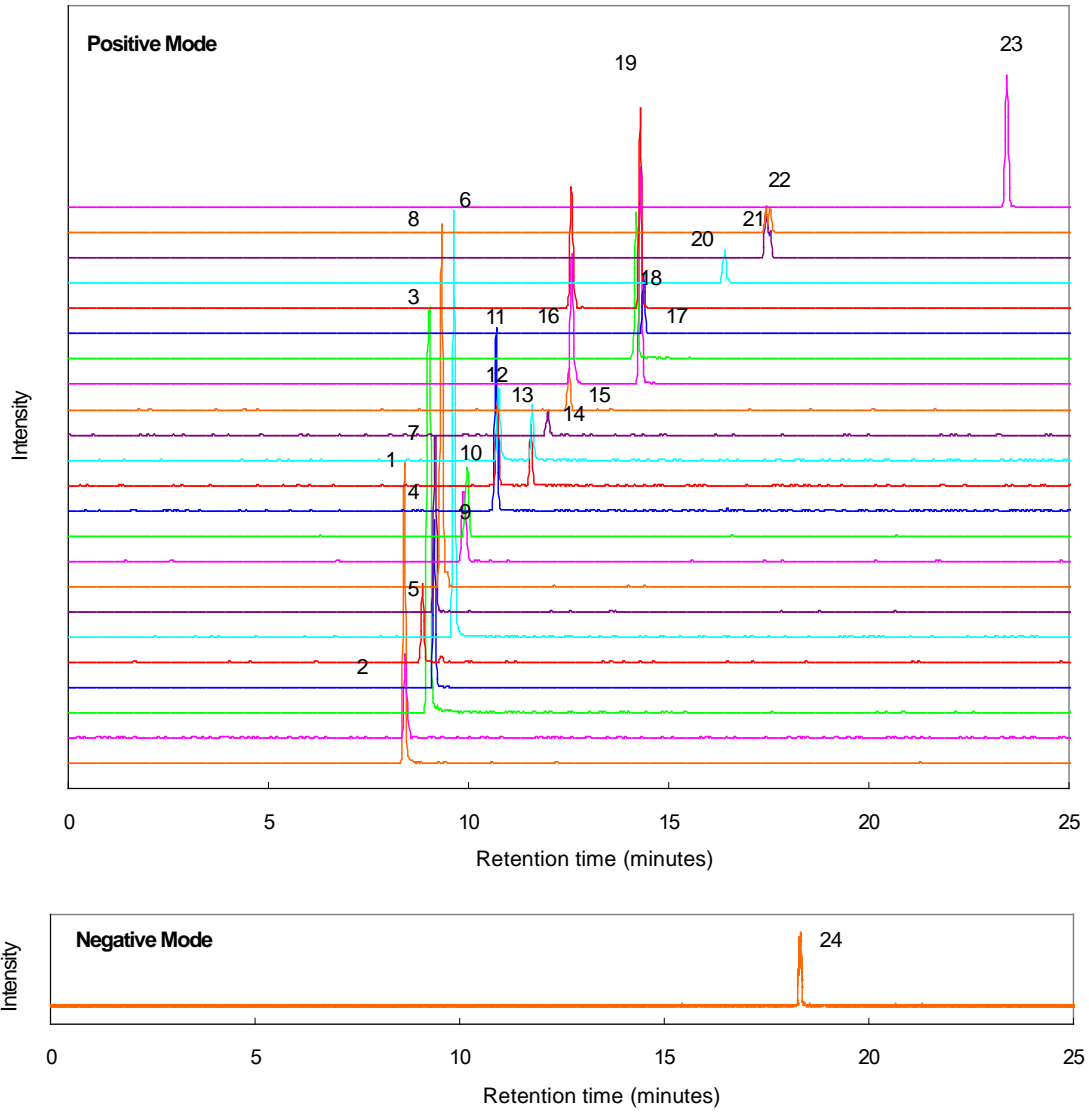
**Table 1. Analytical conditions**

Column:	<b>TSKgel ODS-100V, 3<math>\mu</math>m, 2.0mm ID x 15cm</b>
Mobile phase:	A: 0.1% formic acid in water B: 0.1% formic acid in acetonitrile
Gradient:	0min (0%B) → 35min (100%B) → 40min (100%B)
Flow rate:	0.2mL/min
Temperature:	40°C
Injection vol.:	2 $\mu$ L
Instrument:	QTRAP <sup>®</sup> (Applied MDS SCIEX)

**Table 2. List of monitoring ions**

No.	Drugs	Ionization	Monitoring ion (m/z)
1	5-Plopylsulfonyl-1H-benzimidazole-2-amine	ESI (+)	240.1 / 133.2
2	Levamisole	ESI (+)	207.1 / 91.2
3	Thiabendazole	ESI (+)	202.1 / 175.1
4	Trimethoprim	ESI (+)	291.1 / 230.3
5	Sulfadiazine	ESI (+)	251.1 / 92.2
6	Ormetoprim	ESI (+)	275.2 / 123.1
7	Sulfathiazole	ESI (+)	256.0 / 156.0
8	Sulfapyridine	ESI (+)	250.0 / 156.2
9	Sulfamerazine	ESI (+)	265.1 / 92.2
10	Thiamphenicol	ESI (+)	355.9 / 308.0
11	Sulfadimidine	ESI (+)	279.1 / 92.1
12	Sulfamethoxyipyridiazine	ESI (+)	281.1 / 156.1
13	Sulfamonomethoxine	ESI (+)	281.1 / 156.1
14	Sulfachlorpyridazine	ESI (+)	286.1 / 157.1
15	Sulfamethoxazole	ESI (+)	254.6 / 156.0
16	Sulfadoxine	ESI (+)	311.1 / 156.1
17	Ethopabate	ESI (+)	238.2 / 136.0
18	Sulfaquinoxaline	ESI (+)	301.0 / 156.2
19	Sulfadimethoxine	ESI (+)	311.1 / 156.2
20	Sulfanitran	ESI (+)	336.1 / 134.1
21	$\beta$ -Trenbolone	ESI (+)	271.2 / 165.3
22	$\alpha$ -Trenbolone	ESI (+)	271.2 / 165.2
23	Melengestrol Acetate	ESI (+)	397.2 / 279.4
24	Zeranol	ESI (+)	321.1 / 277.2

Figure 1. MRM chromatogram of standard sample





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