

Analysis of 19 components of anti bacterials in animal and fishiry products

The purpose of using antibacterials is to prevent animals from getting disease, enhance feed efficiency, promote animal growth, and improve productivity. The residue of antibacterials (veterinary drugs) in food has received great attention in recent years because of concerns over the request in food safety by consumers. A detrimental effect on human health could occur when people consume those products containing veterinary residues. To solve the problems of veterinary drug residue in animal products, related authorities should take extra efforts in monitoring veterinary drug usage and enforcing inspection of commercial products. A HPLC method equipped with a photodiode array detector allows multiple antibacterials to be analyzed simultaneously. This is an example for multiresidue determination of antibacterials in chicken. For the analysis of antibacterials, the simultaneous analysis method is recommended for screening because of many components. In Table 1 there shows such 19 components and analysis methods. Chicken meat spiked with such standard 19 components was processed according to the procedure shown in Fig. 1 and was analyzed by components simultaneous analysis method. The chromatograms of the standard and the spiked chicken meat are shown in Fig. 2 and Fig. 3.

Conditions:

Column :	CrestPak C18T-5		
Eluent A:	10mM NaH ₂ PO ₄ (pH3.5) + 4mM sodium hexane sulfonate in 4% 2-PrOH		
Eluent B:	CH ₃ CN		
Gradiet profile:	Time(min)	A(%)	B(%)
	0.0	100	0
	35.0	48	52
	45.1	10	90
	50.0	10	90
	50.1	100	0
	1cycle 70min		
Wavelength :	200 to 450nm(PDA)		
Flow rate :	1.0ml/min		
Column Temperature:	40 degree celsius		
Sample :	STD mixture, STD in chicken		
Injection volume:	20uL		

Keywords: 1.anti bacterials, 2.STD in chicken, 3.ODS, 4.MD, 5.screaning

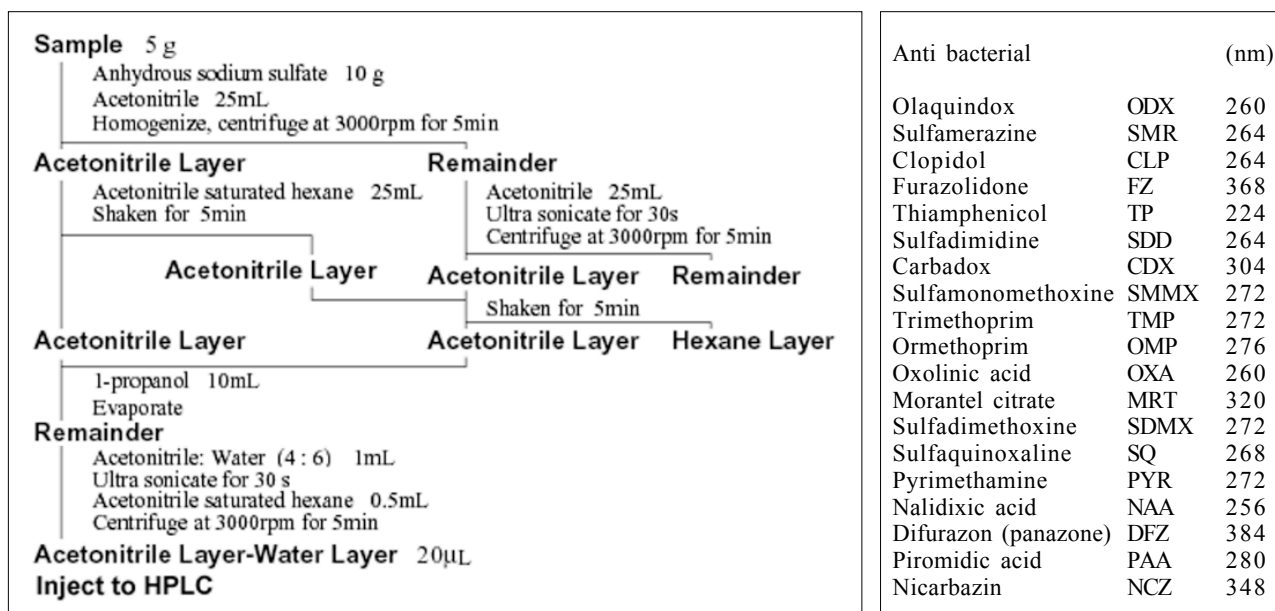


Fig.1 Pretreatment Procedure for Antibacterial Compounds

Table 1. Optimum detection wavelength of each anti bacterial analyzed by high performance liquid chromatography

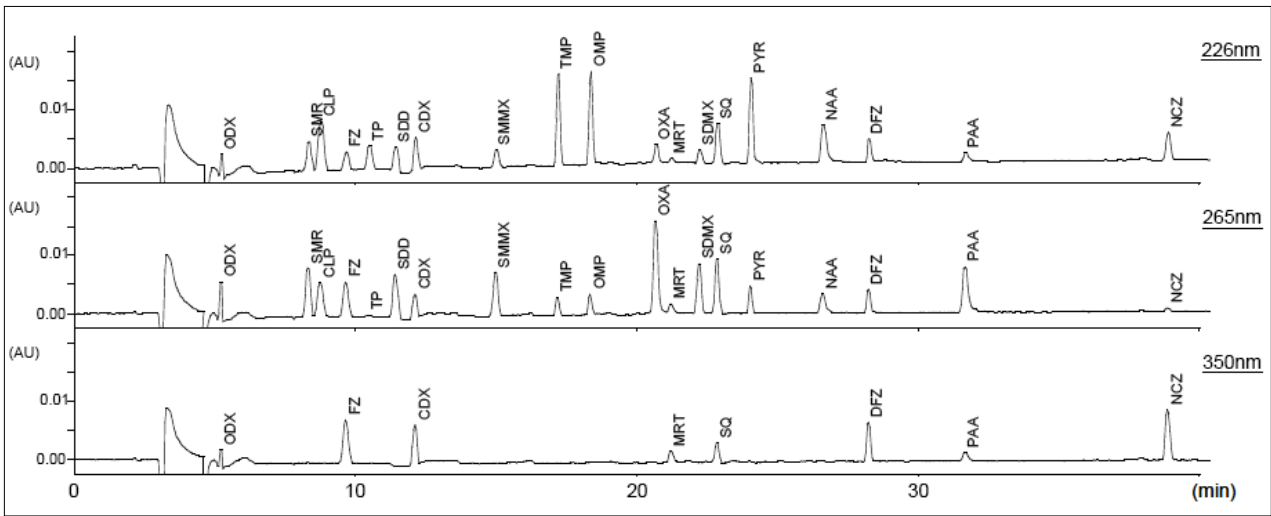


Fig.2 Standard samples of 19 anti bacterial components

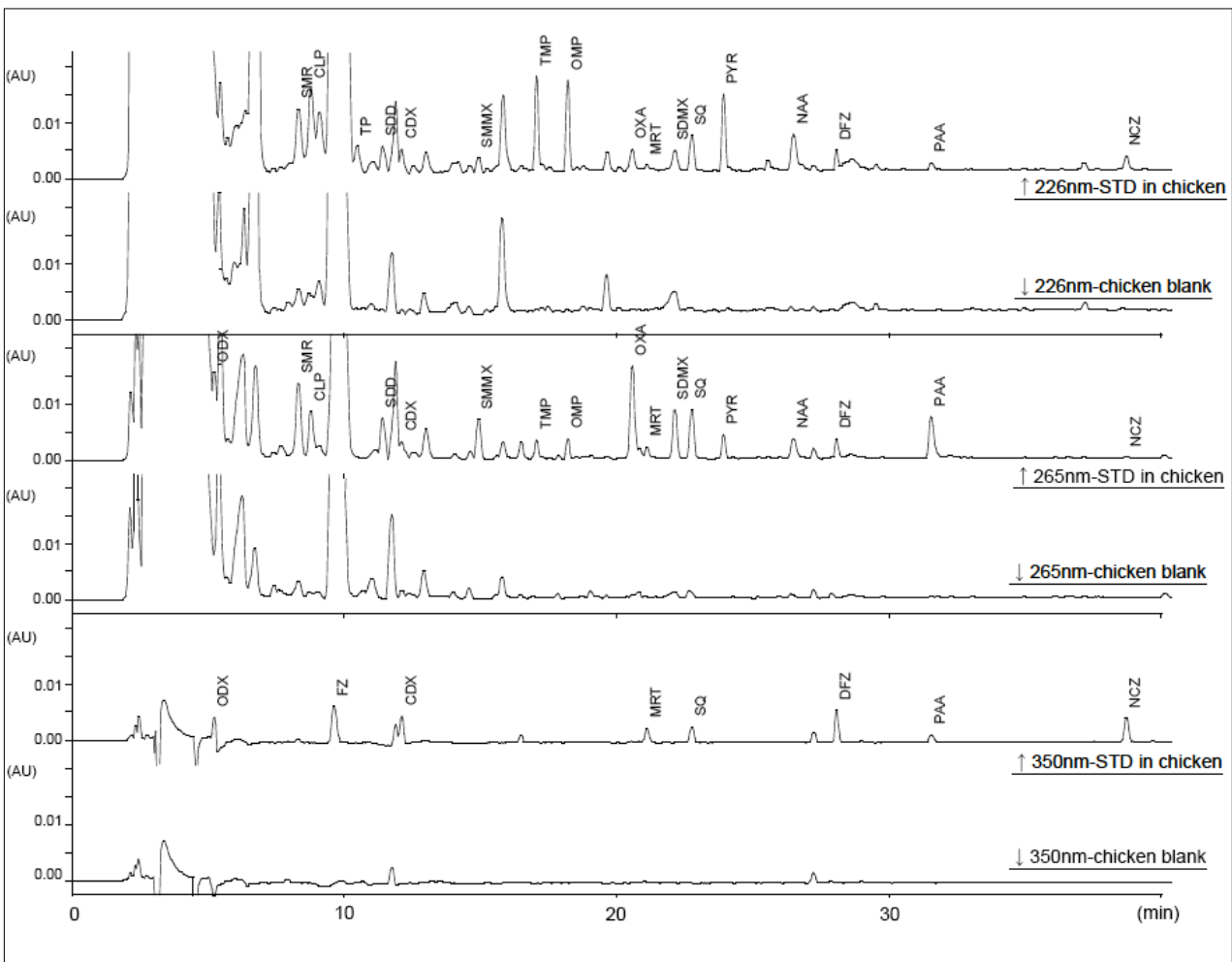


Fig.3 Multiresidue determination of anti bacterials in chicken