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**Determination of oxytetracycline, tetracycline and
chlortetracycline residues in meat (HPLC)**

畜、禽肉中土霉素、四环素、金霉素残留量的测定

(高效液相色谱法)

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Foreword

This Standard replaces GB/T 14931.1-1994 "Method for determination of oxytetracycline, tetracycline and chlortetracycline residues in meat (HPLC)".

Compared to GB/T 14931.1-1994, the main changes of this Standard are as follows:

- MODIFY the Chinese name of the standard; the Chinese name of the standard is changed to "Determination of oxytetracycline, tetracycline and chlortetracycline residues in meat (HPLC)";
- MODIFY the structure of the original standard according to GB/T 20001.4-2001 "Rules for drafting standards - Part 4: Methods of chemical analysis".

This Standard is proposed by and under the jurisdiction of Ministry of Health of the People's Republic of China.

Drafting organizations of this Standard: Liaoning Food Sanitation Supervision and Inspection Institute, Dalian Institute of Health Inspection, Shenyang Health and Epidemic Prevention Station, Liaoning Health Medical College.

Main drafters of this Standard: Huo Yongxin, Yan Yong, Wei Feng, Wu Bolu, Ma Yong.

The original standard was first published in 1994, this is the first revision.

Determination of oxytetracycline, tetracycline and chlortetracycline residues in meat (HPLC)

1 Scope

This Standard specifies the determination method of oxytetracycline, tetracycline and chlortetracycline residues in meat.

This Standard applies to the determination of oxytetracycline, tetracycline and chlortetracycline residues in all kinds of livestock and poultry meat.

In this Standard, the detection limit is 0.15 mg/kg for oxytetracycline, 0.20 mg/kg for tetracycline and 0.65 mg/kg for chlortetracycline.

2 Principle

After being extracted and filtered through the microporous membrane, the sample is directly injected, separated by reversed-phase chromatography, detected by UV detector and compared with the standard; the appearance order of the peak is oxytetracycline, tetracycline and chlortetracycline. QUANTIFY by standard addition method.

3 Reagents

3.1 Acetonitrile (analytical reagent).

3.2 0.01 mol/L uranium dihydrogen phosphate solution: WEIGH 1.56 g (accurate to ± 0.01 g) of sodium dihydrogen phosphate ($\text{NaH}_2\text{P}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$); DISSOLVE in distilled water to 100 mL; FILTER through a microporous membrane (0.45 μm) for further use.

3.3 Oxytetracycline (OTC) standard solution: WEIGH 0.0100 g (accurate to ± 0.0001 g) of oxytetracycline; DISSOLVE with 0.1 mol/L hydrochloric acid solution to 10.00 mL; the solution contains 1 mg of oxytetracycline per milliliter.

3.4 Tetracycline (TC) standard solution: WEIGH 0.0100 g (accurate to ± 0.001 g) of tetracycline; DISSOLVE with 0.01 mol/L hydrochloric acid solution to 10.00 mL; the solution contains 1 mg of tetracycline per milliliter.

3.5 Chlortetracycline (CTC) standard solution: WEIGH 0.0100 g (accurate to ± 0.0001 g) of chlortetracycline; DISSOLVE in distilled water to 10.00 mL; the solution contains

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