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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Determination of sulfonamides residues in animal tissues.
Radioimmuno receptor screening method**

动物组织中磺胺类抗生素残留量检测方法 放射免疫受体筛选法

(English Translation)

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Foreword

Appendix A of this standard is a normative appendix, and Appendix B is an informative appendix.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Guangzhou Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

1 Scope

This standard specifies the radioimmunoassay screening method for the determination of sulfonamide antibiotic residues in animal tissues.

This standard applies to radioimmunoassay screening assays for sulfonamide antibiotic residues in tissues of animals (bovine, pig, poultry, fish and shrimp).

1) The CharmII Competitive Receptor Binding Tissue Sulfonamide Test Kit is the trade name of the product supplied by Charm. Give this information is for the convenience of users of this standard does not imply endorsement of the product. These equivalents can be used if other equivalent products have the same effect product.

2) The isotope radiation intensity of the labeled tablets is within the scope of the radiological exemption, and there are no special restrictions on laboratory conditions.

2.1 Sample preparation

Take out some representative samples from the mixed original samples, remove the adipose tissue, put the edible portion into the blender, and mix thoroughly.

Evenly, divide the not less than 500g by the quarter method, divide it into two parts, put it into a clean container as a sample, seal and mark it.

Samples must be protected from microbial or chemical contamination or changes in residue levels during sample preparation.

2.2 Sample storage

The samples were stored frozen at -18 °C. Fresh or frozen tissue samples can be stored at 2 °C ~ 6 °C for 72 h.

3.1 Method summary

The sulfonamide antibiotic residues in the sample are extracted and diluted to compete with the [3H]-labeled sulfamethazine to bind the bacterial cells.

a sulfonamide-specific receptor. After the competitive binding reaction is carried out at a certain temperature, the precipitation of the sulfonamide-receptor complex is re-dissolved in water.

After the addition of the scintillation fluid, the beta particle radioactivity count cpm (countperminute) emitted by the [3H] decay was measured. Liquid scintillation counter the resulting cpm is inversely proportional to the amount of sulfonamide remaining in the sample.

3.2 Reagents and materials

3.2.1

Water, experimental water is heavy distilled water.

3.2.2 CharmII competitive receptor binding tissue sulfonamide test kit 1)

Performance monitoring should be performed before each new kit is used, see Appendix A. The kit is mainly composed of the following parts.

3.2.2.1

Meat tissue negative control concentrated dry powder, stored at 2 °C ~ 6 °C. Use concentrated dry powder to make tissue negative according to label the control solution can be stored in a refrigerator or ice bath at 2 °C ~ 6 °C for 48 h, or all or part of the solution can be stored below -15 °C in the refrigerator, when it is used, it is thawed at room temperature, and the thawed solution is stored in a refrigerator or ice bath at 2 °C to 6 °C

for 24 hours.

3.2.2.2

A variety of antibiotics mixed standard dry powder containing sulfamethazine, stored at 2 ° C ~ 6 ° C. Use the label to make an anti-resistant the standard solution of sulfamethazine was 1000 µg/L. The solution is stored in the same way as 3.2.2.1.

3.2.2.3

Buffer. Includes dry tissue of meat tissue extraction buffer (MSU extraction buffer) and M2 buffer to adjust pH.

Powder, stored at 2 ° C ~ 6 ° C. When used, it can be formulated into a buffer solution according to the label, and can be stored for 2 months at 2 ° C ~ 6 ° C.

3.2.2.4

Sulfonamide receptor. stored at -18 ° C, should be within the validity period indicated on the package.

3.2.2.5

Sulfaguanidine label 2) (3H-sulfamethazine = 59 µCi/mmol). Store at -18 °C.

3H-sulfamethazine

The specific binding rate should not exceed 20% of the total 3H-sulfamethazine liquid scintillation count, otherwise it should be replaced.