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Cephapirin Benzathine Intramammary Infusion

» Cephapirin Benzathine Intramammary Infusion is a suspension of Cephapirin Benzathine in a suitable vegetable oil vehicle. It contains the equivalent of not less than 90.0 percent and not more than 120.0 percent of the labeled quantity of cephapirin ($C_{17}H_{17}N_3O_6S_2$). It contains a suitable dispersing agent.

Packaging and storage—Preserve in well-closed unit-dose disposable syringes at controlled room temperature.

Labeling—Label Intramammary Infusion to indicate that it is for veterinary use only.

USP REFERENCE STANDARDS (11)—
[USP Cephapirin Benzathine RS](#)
[USP Cephapirin Sodium RS](#)

Change to read:

SPECTROSCOPIC IDENTIFICATION TESTS (197), Infrared Spectroscopy: 197K▲ (CN 1-May-2020) —Prepare the test specimen as follows. Transfer the contents of 1 syringe of Intramammary Infusion to a 50-mL centrifuge tube, add 25 mL of toluene, mix for about 1 minute, and centrifuge. Remove and discard the toluene layer without disturbing the residue in the centrifuge tube. Wash the residue with two 25-mL portions of toluene. Dry the residue in vacuum at 60°, and use the dried residue as the test specimen. Mix the dried residue with 9 parts of potassium bromide, and record the IR spectrum, using the diffuse reflectance technique: the IR absorption spectrum so obtained corresponds to that of a similar dispersion of [USP Cephapirin Benzathine RS](#) in potassium bromide.

WATER DETERMINATION, Method I (921) : not more than 1.0%, 10 mL of Intramammary Infusion being tested.

Assay—

Solution A, Solution B, Mobile phase, Extraction solution, Dilution buffer, 10% Acetic acid solution, System suitability solution, Standard preparation, and Chromatographic system—Proceed as directed in the Assay under [Cephapirin Benzathine](#).

Assay preparation—Express the entire contents of a syringe of the Intramammary Infusion into a centrifuge tube. For each mL of Intramammary Infusion, add 1.0 *n*-heptane and 1.5 mL of *Extraction solution*, cap, and vortex at high speed for 5 minutes. Centrifuge for 5 minutes at a sufficient speed to break the emulsion. Remove the aqueous layer, and pass through a 0.45-μm nylon filter, discarding the first 0.5 mL. Transfer 2.5 mL of the filtered aqueous phase into a 25-mL volumetric flask that contains a solution composed of 15.0 mL of *Dilution buffer* and 7.0 mL of acetonitrile. Add water to volume, and mix well to obtain a single phase.

Procedure—Separately inject equal volumes (about 2 μL) of the duplicate *Standard preparation* and the *Assay preparation* into the chromatograph, record the chromatograms, and measure the areas of the major peaks. Calculate the quantity, in mg, of cephapirin ($C_{17}H_{17}N_3O_6S_2$) in each syringe of Intramammary Infusion taken by the formula:

$$15PW(V_U/V_S)(r_U/r_S)$$

in which *P* is the assigned potency, in μg cephapirin per mg, of [USP Cephapirin Sodium RS](#); *W* is the quantity of [USP Cephapirin Sodium RS](#), in mg, used to prepare the *Standard preparation*; *V_S* is the final volume, in mL, of the *Standard preparation*; *V_U* is the entire volume of Intramammary Infusion, in mL, in one syringe; and *r_U* and *r_S* are the peak area and the average peak area of the cephapirin peaks obtained from the *Assay preparation* and the *Standard preparation*, respectively.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

| Topic/Question | Contact | Expert Committee |
|---|---|---------------------------|
| CEPHAPIRIN BENZATHINE INTRAMAMMARY INFUSION | Documentary Standards Support | SM32020 Small Molecules 3 |

Chromatographic Database Information: [Chromatographic Database](#)

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