

swirl to dissolve. Dilute with 0.01 N hydrochloric acid to volume, mix, and filter a portion of the solution through a 0.5- μ m or finer porosity filter. Use the filtrate as the Assay preparation.

Procedure—Proceed as directed for *Procedure* in the Assay under *Oxytetracycline*. Calculate the quantity, in mg, of oxytetracycline ($C_{22}H_{24}N_2O_9$) in the portion of Capsules taken by the formula:

$$0.5(CP)(r_U / r_S)$$

in which the terms are as defined therein.

Oxytetracycline for Injection

» Oxytetracycline for Injection contains an amount of Oxytetracycline Hydrochloride equivalent to not less than 90.0 percent and not more than 115.0 percent of the labeled amount of oxytetracycline ($C_{22}H_{24}N_2O_9$).

Change to read:

Packaging and storage—Preserve as described in *•Packaging and Storage Requirements* (659), *Injection Packaging*, *Packaging for constitution* (CN 1-May-2017), protected from light.

USP Reference standards (11)—

USP Endotoxin RS

USP Oxytetracycline RS

Constituted solution—At the time of use, it meets the requirements for *Injections and Implanted Drug Products* (1), *Specific Tests*, *Completeness and clarity of solutions*.

Bacterial Endotoxins Test (85) —It contains not more than 0.4 USP Endotoxin Unit per mg of oxytetracycline.

Sterility Tests (71) —It meets the requirements when tested as directed for *Membrane Filtration* under *Test for Sterility of the Product to be Examined*, *Fluid D* being used instead of *Fluid A*.

pH (791): between 1.8 and 2.8, in a solution containing 25 mg per mL.

Loss on drying (731)—Dry about 100 mg, accurately weighed, in a capillary-stoppered bottle in vacuum at a pressure not exceeding 5 mm of mercury at 60° for 3 hours: it loses not more than 3.0% of its weight.

Particulate Matter in Injections (788) : meets the requirements for small-volume injections.

Other requirements—It responds to *Identification* test *B* under *Oxytetracycline Hydrochloride*. It also meets the requirements for *Uniformity of Dosage Units* (905) and *Labeling* (7), *Labels and Labeling for Injectable Products*.

Assay—

Tetrabutylammonium hydrogen sulfate solution, Edetate disodium solution, pH 7.5 Phosphate buffer, Mobile phase, Standard preparation, System suitability solution, and Chromatographic system—Proceed as directed in the Assay under *Oxytetracycline*.

Assay preparation 1 (where it is represented as being in a single-dose container)—Constitute Oxytetracycline for Injection in a volume of water, accurately measured, corresponding to the volume of solvent specified in the labeling. Withdraw all of the withdrawable contents, using a suitable hypodermic needle and syringe, and dilute quantitatively with 0.01 N hydrochloric acid to obtain a solution having a concentration of about 0.2 mg of oxytetracycline per mL.

Assay preparation 2 (where the label states the quantity of oxytetracycline in a given volume of constituted solu-

tion)—Constitute Oxytetracycline for Injection in a volume of water, accurately measured, corresponding to the volume of solvent specified in the labeling. Dilute an accurately measured volume of the constituted solution quantitatively with 0.01 N hydrochloric acid to obtain a solution having a concentration of about 0.2 mg of oxytetracycline per mL.

Procedure—Proceed as directed for *Procedure* in the Assay under *Oxytetracycline*. Calculate the quantity, in mg, of oxytetracycline ($C_{22}H_{24}N_2O_9$) withdrawn from the container or in the portion of constituted solution taken by the formula:

$$(L / D)(CP)(r_U / r_S)$$

in which *L* is the labeled quantity, in mg, of oxytetracycline ($C_{22}H_{24}N_2O_9$) in the container or in the portion of constituted solution taken; *D* is the concentration, in mg per mL, of oxytetracycline in *Assay preparation 1* or in *Assay preparation 2*, based on the labeled quantity in the container or in the portion of constituted solution taken, respectively, and the extent of dilution; and the other terms are as defined therein.

Oxytetracycline Hydrochloride Soluble Powder

» Oxytetracycline Hydrochloride Soluble Powder is a dry mixture of Oxytetracycline Hydrochloride and one or more suitable excipients. It contains not less than 90.0 percent and not more than 110.0 percent of the labeled amount of oxytetracycline hydrochloride ($C_{22}H_{24}N_2O_9 \cdot HCl$).

Packaging and storage—Preserve in well-closed containers.

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

USP Reference standards (11)—

USP Oxytetracycline RS

Identification—

A: Shake a quantity of Soluble Powder with methanol to obtain a solution containing about 1 mg of oxytetracycline hydrochloride per mL. Filter if necessary to obtain a clear solution. Using the filtrate as the *Test solution*, proceed as directed for *Method II* under *Identification—Tetracyclines* (193).

B: The retention time of the major peak in the chromatogram of the *Assay preparation* corresponds to that in the chromatogram of the *Standard preparation*, as obtained in the Assay.

pH (791): between 1.5 and 3.0, in the solution obtained as directed in the labeling.

Loss on drying (731)—Dry about 100 mg, accurately weighed, in a capillary-stoppered bottle in vacuum at a pressure not exceeding 5 mm of mercury at 60° for 3 hours: it loses not more than 3.0% of its weight.

Minimum fill (755): meets the requirements.

Assay—

Tetrabutylammonium hydrogen sulfate solution, Edetate disodium solution, pH 7.5 Phosphate buffer, Mobile phase, Standard preparation, System suitability solution, and Chromatographic system—Proceed as directed in the Assay under *Oxytetracycline*.

Assay preparation—Transfer an accurately weighed portion of the Soluble Powder, equivalent to about 100 mg of oxytetracycline hydrochloride, to a 500-mL volumetric flask, dilute with 0.01 N hydrochloric acid to volume, and mix. Pass a portion of this solution through a filter having a

0.5- μ m or finer porosity. Use the filtrate as the *Assay preparation*.

Procedure—Proceed as directed for *Procedure* in the *Assay* under *Oxytetracycline*. Calculate the quantity, in g, of oxytetracycline hydrochloride ($C_{22}H_{24}N_2O_9 \cdot HCl$) in each g of Soluble Powder taken by the formula:

$$0.5(496.90 / 460.44)(C / W)(r_U / r_S)$$

in which 496.90 and 460.44 are the molecular weights of oxytetracycline hydrochloride and oxytetracycline, respectively; C is the concentration, in mg per mL, of USP Oxytetracycline RS in the *Standard preparation*; P is the assigned potency, in μ g of oxytetracycline per mg, of USP Oxytetracycline RS; W is the weight, in g, of Soluble Powder taken to prepare the *Assay preparation*; and r_U and r_S are the oxytetracycline peak responses obtained from the *Assay preparation* and the *Standard preparation*, respectively.

Oxytetracycline Hydrochloride and Hydrocortisone Acetate Ophthalmic Suspension

» Oxytetracycline Hydrochloride and Hydrocortisone Acetate Ophthalmic Suspension is a sterile suspension of Oxytetracycline Hydrochloride and Hydrocortisone Acetate in a suitable oil vehicle with one or more suitable suspending agents. It contains the equivalent of not less than 90.0 percent and not more than 115.0 percent of the labeled amount of oxytetracycline ($C_{22}H_{24}N_2O_9$) and not less than 90.0 percent and not more than 110.0 percent of the labeled amount of hydrocortisone acetate ($C_{23}H_{32}O_6$).

Packaging and storage—Preserve in tight, light-resistant containers. The containers are sealed and tamper-proof so that sterility is assured at time of first use.

USP Reference standards (11)—

USP Hydrocortisone Acetate RS

USP Oxytetracycline RS

Sterility Tests (71)—It meets the requirements when tested as directed for *Direct Inoculation of the Culture Medium* under *Test for Sterility of the Product to be Examined* using 0.25 mL of specimen.

Water Determination, Method I (921): not more than 1.0%, 60 mL of a mixture of methanol and chloroform (2:1) being used instead of methanol in the titration vessel.

Assay for oxytetracycline—Transfer an accurately measured volume of Ophthalmic Suspension to a separator, add 50 mL of ether, and shake. Add 25 mL of 0.1 N hydrochloric acid, shake, and allow to separate. Collect the acid layer, and repeat the extraction with three additional 25-mL portions of 0.1 N hydrochloric acid. Combine the acid extracts in a 200-mL volumetric flask, dilute with 0.1 N hydrochloric acid to volume, and mix. Proceed as directed for oxytetracycline under *Antibiotics—Microbial Assays* (81), using an accurately measured volume of this solution diluted quantitatively and stepwise with water to obtain a *Test Dilution* having a concentration assumed to be equal to the median dose level of the Standard.

Assay for hydrocortisone acetate—

Mobile phase—Prepare a degassed and filtered mixture of water and methanol (50:50).

Standard preparation—Dissolve an accurately weighed quantity of USP Hydrocortisone Acetate RS in a mixture of

Mobile phase and alcohol (80:20) to obtain a solution having a known concentration of about 0.06 mg per mL.

Assay preparation—Transfer an accurately measured volume of Ophthalmic Suspension, equivalent to about 30 mg of hydrocortisone acetate, to a separator containing 25 mL of pH 9.0 alkaline borate buffer (see under *Buffer Solutions* in the section *Reagents, Indicators, and Solutions*). Extract with four 25-mL portions of chloroform, filtering each chloroform extract through a thin layer of chloroform-washed anhydrous sodium sulfate into a 250-mL volumetric flask. Rinse the sodium sulfate with chloroform, collecting the filtrate in the volumetric flask, dilute with chloroform to volume, and mix. Transfer 25.0 mL of the resulting solution to a 50-mL conical flask, and evaporate slowly with the aid of mild heat until about 5 mL remains. Add about 15 mL of alcohol, and evaporate slowly until about 5 mL remains. Transfer this solution to a 50-mL volumetric flask, dilute with a mixture of **Mobile phase** and alcohol (80:20) to volume, and mix.

Chromatographic system (see *Chromatography* (621))—The liquid chromatograph is equipped with a 254-nm detector and a 3.9-mm \times 30-cm column that contains packing L1. The flow rate is about 1 mL per minute. Chromatograph the *Standard preparation*, and record the peak responses as directed for *Procedure*: the column efficiency determined from the analyte peak is not less than 235 theoretical plates, the tailing factor for the analyte peak is not more than 1.7, and the relative standard deviation of replicate injections is not more than 2.0%.

Procedure—Separately inject equal volumes (about 25 μ L) of the *Standard preparation* and the *Assay preparation* into the chromatograph, record the chromatograms, and measure the responses for the major peaks. Calculate the quantity, in mg, of $C_{23}H_{32}O_6$ in each mL of the Ophthalmic Suspension taken by the formula:

$$500(C / V)(r_U / r_S)$$

in which C is the concentration, in mg per mL, of USP Hydrocortisone Acetate RS in the *Standard preparation*; V is the volume, in mL, of Ophthalmic Suspension taken; and r_U and r_S are the peak responses obtained from the *Assay preparation* and the *Standard preparation*, respectively.

Oxytetracycline Hydrochloride and Hydrocortisone Ointment

» Oxytetracycline Hydrochloride and Hydrocortisone Ointment contains the equivalent of not less than 90.0 percent and not more than 115.0 percent of the labeled amount of oxytetracycline ($C_{22}H_{24}N_2O_9$), and not less than 90.0 percent and not more than 110.0 percent of the labeled amount of hydrocortisone.

Packaging and storage—Preserve in collapsible tubes or in well-closed, light-resistant containers.

USP Reference standards (11)—

USP Hydrocortisone RS

USP Oxytetracycline RS

Minimum fill (755): meets the requirements.

Water Determination, Method I (921): not more than 1.0%, 20 mL of a mixture of toluene and methanol (7:3) being used in place of methanol in the titration vessel.

Assay for oxytetracycline—Transfer a suitable, accurately weighed quantity of Ointment to a separator, add 50 mL of ether, and shake. Add 20 mL of 0.1 N hydrochloric acid, shake, and allow to separate. Collect the acid layer, and repeat the extraction with three additional 20-mL portions