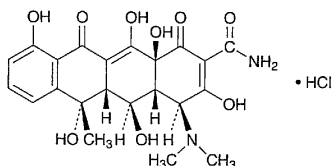


## Oxytetracycline Hydrochloride

塩酸オキシテトラサイクリン



$C_{22}H_{24}N_2O_9 \cdot HCl$ : 496.89

(4*S*,4*aR*,5*S*,5*aR*,6*S*,12*aS*)-4-Dimethylamino-1,4,4*a*,5,5*a*,6,11,12*a*-octahydro-3,5,6,10,12,12*a*-hexahydroxy-6-methyl-1,11-dioxonaphthacene-2-carboxamide monohydrochloride [2058-46-0]

Oxytetracycline Hydrochloride conforms to the requirements of Oxytetracycline Hydrochloride in the Requirements for Antibiotic Products of Japan.

**Description** Oxytetracycline Hydrochloride occurs as yellow crystals or crystalline powder. It has a bitter taste.

It is freely soluble in water, soluble in ethanol (95), and practically insoluble in diethyl ether.

## Oxytocin Injection

オキシトシン注射液

Oxytocin Injection is an aqueous solution for injection, and contains synthetic oxytocin, or the oxytocic principle, oxytocin, obtained from the posterior lobe of the pituitary of healthy cattle, pigs and other mammals, from which most of the pressor principle, vasopressin, has been removed.

Oxytocin Injection contains not less than 85% and not more than 120% of the labeled Oxytocin Units.

**Method of preparation** Prepare as directed under Injections, with oxytocin obtained from the posterior lobe of the pituitary or synthetic oxytocin.

**Description** Oxytocin Injection is a colorless, clear liquid. It is odorless or has a slight, characteristic odor.

**pH** 2.5 – 4.5

**Purity** Pressor principle—Proceed with Oxytocin Injection as follows: not more than 0.5 vasopressin Units for each labeled 10 oxytocin Units. To prepare the sample solution according to (iv), assuming that the vasopressin Units in Oxytocin Injection amount to 1/20 of the labeled oxytocin Units.

(i) Test animals: Use health male rats weighing between 200 g and 300 g.

(ii) Standard stock solution: Weigh accurately 0.02 to 0.05 g of Posterior Pituitary Reference Standard, place in a conical flask, and add exactly 0.5 mL of diluted acetic acid (100) (1 in 400) per 1.0 Unit. Insert a small funnel into the neck of the flask, and heat the mixture with shaking gently in a water bath for 5 minutes. Cool the flask quickly to ordi-

nary temperature, and filter: 1 mL of the filtrate is equivalent to 2.0 Unites. Place this filtrate in hard glass ampules, seal and sterilize at 100°C for 30 minutes. Store in a cold place, and do not freeze. Use within 6 months after preparation.

(iii) Standard solution: Dilute the standard stock solution with isotonic sodium chloride solution so that 0.2 mL of the obtained solution causes blood pressure increases of between 35 mmHg and 60 mmHg in test animals when injected according to (vi), and designate this solution as the high-dose standard solution ( $S_H$ ). Then dilute this solution with isotonic sodium chloride solution 1.5 to 2.0 times by volume, and designate it as the low-dose standard solution ( $S_L$ ).

(iv) Sample solution: Dilute an accurately measured volume of Oxytocin Injection with isotonic sodium chloride solution so that the obtained solution contains the same concentration in Units as the high-dose standard solution based on the labeled Units, and designate it as the high-dose sample solution ( $T_H$ ). Then dilute this solution with isotonic sodium chloride solution 1.5 to 2.0 times by volume and designate it as the low-dose sample solution ( $T_L$ ). Make the concentration ratio of  $S_H$  to  $S_L$  equal to the ratio of  $T_H$  to  $T_L$ . When the sensitivity of an animal is changed, adjust the concentration of  $S_H$  and  $T_H$  before the next set of assay is started. However, keep the same ratio of  $S_H$  to  $S_L$  and  $T_H$  to  $T_L$  as in the primary set.

(v) Dose of injection: Although 0.2 mL of each solution is usually injected, the dose of injection can be determined based from preliminary tests or experiences. Inject the same volume throughout a set of tests.

(vi) Procedure: Inject subcutaneously 0.7 mL of a solution of ethyl carbamate (1 in 4) per 100 g of body mass to anesthetize the test animals and cannulate the trachea. Under artificial respiration (about 60 strokes per minute), remove a part of the second cervical vertebra, cut off the spinal cord and destroy the brain through the foramen magnum. Insert a cannula filled with isotonic sodium chloride solution into a femoral vein. Through this cannula, inject a solution prepared by dissolving 200 heparin Units of heparin sodium in 0.1 mL of isotonic sodium chloride solution, and then immediately inject 0.3 mL of isotonic sodium chloride solution. Insert a cannula into a carotid artery, and connect the cannula to a manometer for blood pressure measurement with a vinyl tube. The cannula and the vinyl tube has previously been filled with isotonic sodium chloride solution. Inject the standard and the sample solutions at regular intervals of 10 to 15 minutes into the femoral vein through the cannula followed by 0.3 mL of the isotonic solution when the blood pressure increase caused by each solution returns to the original level. Measure the height of blood pressure increase within 1 mmHg on the kymogram. Maintain a constant temperature between 20°C and 25°C during the assay. In advance, make four pairs with  $S_H$ ,  $S_L$ ,  $T_H$ ,  $T_L$  as follows. Randomize the order of injection for pairs, but keep the order of injection within pairs as indicated.

Pair 1:  $S_H$ ,  $T_L$  Pair 2:  $S_L$ ,  $T_H$  Pair 3:  $T_H$ ,  $S_L$  Pair 4:  $T_L$ ,  $S_H$

Carry out this assay using the same animals throughout a set of four pairs of observations. Perform this assay with two sets. If necessary, however, the different animals may be used for both sets of tests.

(vii) Calculation: Subtract increases of blood pressure