Identification (1) Determine the absorption spectrum of a solution of Doxapram Hydrochloride (1 in 2500) as directed under the Ultraviolet-visible Spectrophotometry, and compare the spectrum with the Reference Spectrum: both spectra exhibit similar intensities of absorption at the same wavelengths.

(2) Determine the infrared absorption spectrum of Doxapram Hydrochloride as directed in the potassium bromide disk method under the Infrared Spectrophotometry, and compare the spectrum with the Reference Spectrum: both spectra exhibit similar intensities of absorption at the same wave numbers.

(3) A solution of Doxapram Hydrochloride (1 in 50) responds to the Qualitative Tests for chloride.

pH Dissolve 1.0 g of Doxapram Hydrochloride in 50 mL of water: the pH of this solution is between 3.5 and 5.0.

Melting point 218 - 222°C

Purity (1) Clarity and color of solution—Dissolve 1.0 g of Doxapram Hydrochloride in 50 mL of water: the solution is clear and colorless.

(2) Sulfate—Perform the test with 1.0 g of Doxapram Hydrochloride. Prepare the control solution with 0.50 mL of 0.005 mol/L sulfuric acid VS (not more than 0.024%).

(3) Heavy metals—Proceed with 2.0 g of Doxapram Hydrochloride according to Method 2, and perform the test.
Prepare the control solution with 2.0 mL of Standard Lead Solution (not more than 10 ppm).

(4) Arsenic—Prepare the test solution with 1.0 g of Doxapram Hydrochloride according to Method 3, and perform the test using Apparatus B (not more than 2 ppm).

(5) Related substances—Dissolve 0.5 g of Doxapram Hydrochloride in 10 mL of methanol, and use this solution as the sample solution. Pipet 3 mL of the sample solution, and add methanol to make exactly 100 mL. Pipet 5 mL of this solution, add methanol to make exactly 50 mL, and use this solution as the standard solution. Perform the test with these solutions as directed under the Thin-layer Chromatography. Spot 6 μL each of the sample solution and the standard solution on a plate of silica gel for thin-layer chromatography. Develop the plate with a mixture of chloroform, formic acid, ethyl formate and methanol (8:3:3:2) to a distance of about 10 cm, and air-dry the plate. Allow the plate to stand in iodine vapor: the spots other than the principal spot from the sample solution are not more intense than the spot from the standard solution.

Water 3.5 - 4.5% (0.5 g, direct titration).

Residue on ignition Not more than 0.30% (1 g).

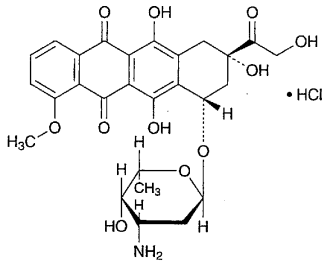
Assay Weigh accurately about 0.8 g of Doxapram Hydrochloride, dissolve in 50 mL of a mixture of acetic anhydride and acetic acid (100) (7:3), and titrate with 0.1 mol/L perchloric acid VS (potentiometric titration). Perform a blank determination, and make any necessary correction.

Each mL of 0.1 mol/L perchloric acid VS
= 41.50 mg of $C_{24}H_{30}N_2O_2$.HCl

Containers and storage Containers—Tight containers.

Doxorubicin Hydrochloride

塩酸ドキソルビシン



$C_{27}H_{29}NO_{11}$.HCl: 579.98
(2*S*,4*S*)-4-(3-Amino-2,3,6-trideoxy-α-L-*lyxo*-hexopyranosyloxy)-2-hydroxyacetyl-1,2,3,4-tetrahydro-2,5,12-trihydroxy-7-methoxynaphthacene-6,11-dione monohydrochloride [*25316-40-9*]

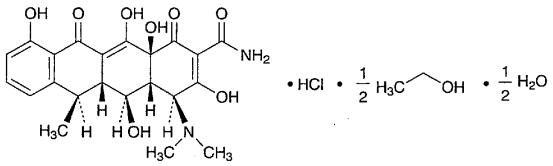
Doxorubicin Hydrochloride conforms to the requirements of Doxorubicin Hydrochloride in the Requirements for Antibiotic Products of Japan.

Description Doxorubicin Hydrochloride occurs as a red-orange powder.

It is sparingly soluble in water, slightly soluble in methanol, very slightly soluble in ethanol (95), and practically insoluble in diethyl ether.

Doxycycline Hydrochloride

塩酸ドキシサイクリン



$C_{22}H_{24}N_2O_8$.HCl.½C_2H_5OH.½H_2O: 512.94
(4*S*,4a*R*,5*S*,5a*R*,6*R*,12a*S*)-4-Dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxonaphthacene-2-carboxamide monohydrochloride hemiethanolate hemihydrate [*564-25-0*, Doxycycline]

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

Description Doxycycline Hydrochloride occurs as a yellow to dark yellow crystals or crystalline powder. It has a bitter taste.

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