## Idarubicin Hydrochloride

 $C_{26}H_{27}NO_{9}$  HCI 533.95 5,12-Naphthacenedione, 9-acetyl-7-[(3-amino-2,3,6-trideoxy- $\alpha$ - L- lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,9,11-trihydroxyhydrochloride, (7 S-cis)-. (1S,3 S)-3-Acetyl-1,2,3,4,6,11-hexahydro-3,5,12-trihydroxy-6,11-dioxo-1-naphthacenyl 3-amino-2,3,6-trideoxy- $\alpha$ - L- lyxo-hexopyranoside, hydrochloride [57852-57-0].

» Idarubicin Hydrochloride contains not less than 960  $\mu$ g and not more than 1030  $\mu$ g of  $C_{26}H_{27}NO_9$  HCI per mg, calculated on the anhydrous basis. **Caution**— Great care should be taken to prevent inhaling particles of Idarubicin Hydrochloride and exposing the skin to it.

Packaging and storage— Preserve in tight containers.

USP Reference standards <11> — USP Idarubicin Hydrochloride RS .

Identification-

A: Infrared Absorption ( 197K ).

**B**: The chromatogram of the *Assay preparation* obtained in the *Assay* exhibits a major peak for idarubicin, the retention time of which corresponds to that in the chromatogram of the *Standard preparation* obtained in the *Assay*.

Crystallinity  $\langle$  695  $\rangle$ : meets the requirements.

pH  $\langle$  791  $\rangle$ : between 5.0 and 6.5, in a solution containing 5 mg per mL.

Water, Method I  $\langle$  921  $\rangle$ : not more than 5.0%.

Chromatographic purity— Using the chromatogram of the Assay preparation obtained in the Assay, and disregarding the solvent peak, calculate the percentage of each impurity taken by the formula:

$$100r_{i} / r_{s}$$

in which  $r_i$  is the response of each impurity peak, and  $r_s$  is the sum of the responses of all the peaks: not more than 1.0% of any individual impurity is found, and the sum of all impurities is not more than 3.0%.

## Assay-

Mobile phase— Prepare a mixture of water, acetonitrile, methanol, and phosphoric acid (540:290:170:2). Dissolve 1 g of sodium lauryl sulfate in 1000 mL of this solution, adjust with 2 N sodium hydroxide to a pH