ethanol in a current of warm air, add 20 mL of water, and cool. Add a mixture of 10 mL of strong hydrogen peroxide and 40 mL of water, boil gently under a reflux condenser for 10 minutes, and filter rapidly after cooling. Wash the residue with two 10-mL portions of water, combine the washings with the filtrate, add 10 mL of dilute nitric acid and exactly 5 mL of 0.1 mol/L silver nitrate VS, and titrate the excess silver nitrate with 0.1 mol/L ammonium thiocyanate VS (indicator: 2 mL of ammonium iron (III) sulfate TS). Perform a blank determination: not more than 1.0 mL of 0.1 mol/L silver nitrate VS is consumed.

Assay Weigh accurately about 0.15 g of Dimercaprol into a glass-stoppered flask, dissolve in 10 mL of methanol, and titrate immediately with 0.05 mol/L iodine VS until a pale yellow color is produced. Perform a blank determination, and make any necessary correction.

Each mL of 0.05 mol/L iodine VS = 6.211 mg of $C_3H_8OS_2$

Containers and storage Containers—Tight containers.
Storage—Not exceeding 5°C.

Dimercaprol Injection

ジメルカプロール注射液

Dimercaprol Injection is an oily solution for injection. It contains not less than 95% and not more than 105% of the labeled amount of dimercaprol ($C_3H_8OS_2$: 124.23).

Method of preparation Prepare as directed under Injections, with Dimercaprol. Benzyl Benzoate or Benzyl Alcohol may be added to increase the solubility.

Description Dimercaprol Injection is a clear, colorless to light yellow liquid. It has an unpleasant odor.

Identification **(1)** Measure a volume of Dimercaprol Injection, equivalent to 0.03 g of Dimercaprol according to the labeled amount, and proceed as directed in the Identification (1) and (2) under Dimercaprol, respectively.

(2) Measure a volume of Dimercaprol Injection, equivalent to 0.03 g of dimercaprol according to the labeled amount, add 20 mL of water, shake well, and proceed as directed in the Identification (3) under Dimercaprol.

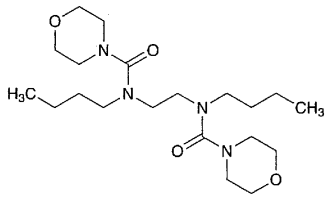
Assay Pipet a volume of Dimercaprol Injection, equivalent to about 0.2 g of dimercaprol ($C_3H_8OS_2$), into a flask, and rinse the pipet several times with a mixture of methanol and chloroform (3:1), adding the rinsings to the flask. Add a mixture of methanol and chloroform (3:1) to make 100 mL, and titrate with 0.05 mol/L iodine VS until a yellow color persists. Perform a blank determination, and make any necessary correction.

Each mL of 0.05 mol/L iodine VS = 6.211 mg of $C_3H_8OS_2$

Containers and storage Containers—Hermetic containers.
Storage—In a cold place.

Dimorpholamine

ジモルホラミン



$C_{20}H_{38}N_4O_4$: 398.54
N,*N*′-Ethylenebis(*N*-butylmorpholine-4-carboxamide)
[*119-48-2*]

Dimorpholamine, when dried, contains not less than 98.0% of $C_{20}H_{38}N_4O_4$.

Description Dimorpholamine is a white to light yellow, crystalline powder, mass or syrupy liquid. It has an amine-like, characteristic odor and a bitter taste.

It is very soluble in ethanol (95), in acetic anhydride, in diethyl ether and in nitrobenzene, and soluble in water.

The pH of a solution of Dimorpholamine (1 in 10) is between 6.0 and 7.0.

It is hygroscopic.

Identification **(1)** Dissolve 0.1 g of Dimorpholamine in 5 mL of water, and add 3 drops of Dragendorff's TS: an orange color is produced.

(2) To 1 g of Dimorpholamine add 10 mL of a solution of sodium hydroxide (1 in 10), and heat for 30 minutes on a water bath: the gas evolved does not change moistened red litmus paper to blue. Cool, and neutralize with dilute hydrochloric acid. Acidify 5 mL of this solution with dilute hydrochloric acid, boil, and pass the gas evolved through calcium hydroxide TS: a white precipitate is produced immediately.

(3) Dissolve 0.05 g of Dimorpholamine in 2 mL of hydrochloric acid, boil under a reflux condenser for 10 minutes, and evaporate on a water bath to dryness. Dissolve the residue in 1 mL of water, neutralize with sodium hydroxide TS, and add 0.2 mL of a solution of acetaldehyde (1 in 20), 0.1 mL of sodium pentacyanonitrosylferrate (III) TS and 0.5 mL of sodium carbonate TS: a blue color is produced.

(4) Determine the absorption spectrum of a solution of Dimorpholamine (1 in 50,000) 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.

Purity **(1)** Clarity and color of solution—Dissolve 1.0 g of Dimorpholamine in 50 mL of water: the solution is clear and colorless to pale yellow.

(2) Chloride—To 20 mL of the solution obtained in (1) add 6 mL of dilute nitric acid and water to make 50 mL. Perform the test using this solution as the test solution. Prepare the control solution with 0.40 mL of 0.01 mol/L hydrochloric acid VS (not more than 0.036%).

(3) Sulfate—To 10 mL of the solution obtained in (1) add 1 mL of dilute hydrochloric acid and water to make 50 mL. Perform the test using this solution as the test solution.