

National Bureau of Standards

Certificate of Analysis

Standard Reference Material 2672a

Freeze-Dried Urine Certified for Mercury

This Standard Reference Material (SRM) is intended primarily for use as an analytical standard for the determination of mercury in urine. SRM 2672a consists of four bottles of freeze-dried urine containing mercury, two bottles each at low and elevated levels. The low level material is normal urine that was prepared from pooled samples. The elevated level was prepared by spiking the normal level with a stabilized solution of mercury. The certified value is based on analysis of the reconstituted urine, resulting from the addition of 20 mL of mercury-free water (see instructions for use below) to each bottle.

<u>Material</u>	<u>Mercury, mg/L</u>
Low level	(0.002)
Elevated level	0.105 \pm 0.008

The certified value for the elevated level is based upon the determination by cold vapor atomic absorption spectrometry of samples randomly selected from the entire lot. Confirmatory analyses were made by neutron activation analysis. The value for the low level, in parentheses, is not certified but given for information only.

The uncertainty of the certified value is the statistical tolerance interval, at the 95% level, for coverage of 99% of the samples of SRM 2672a. With a 95% confidence, the Hg concentration in at least 99% of the samples of this SRM should be included in the above interval.

Use: This Standard Reference Material should be reconstituted by the addition of 20 mL of mercury-free water (i.e., water containing less than 0.0001 mg/L Hg), at 23 °C to each bottle. If the water used is not free of mercury, suitable blank corrections should be made for its mercury content. When reconstituted, the specific gravity of SRM 2672a is 1.0117 ± 0.0002 g/mL at 23 °C.

Notice to Users: The reconstituted material may be considered as fresh urine and should be handled under the same conditions as such samples. It is recommended that SRM 2672a be stored under refrigeration or freezer conditions. The physical and chemical stability of SRM 2672a has not been rigorously assessed. NBS will continue to monitor the stability of this SRM and if the certification becomes invalid, the purchasers will be notified.

The certified values are based upon measurements made at NBS by T.C. Rains and T.A. Rush of the Inorganic Analytical Research Division.

The overall direction and coordination of technical measurements leading to certification were performed by E.L. Garner, Chief, Inorganic Research Division.

The technical and support aspects involved in the certification and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by T.E. Gills.