

KIMBLE®

CAPACITY TOLERANCES FOR GLASS VOLUMETRIC APPARATUS

Many listings of Kimble volumetric glass apparatus are designated as CLASS A, and all such glassware is permanently marked with a large A. This custom resulted from a requirement of Federal Specification DD-V-581a, Volumetric Apparatus, Glass, wherein apparatus meeting certain high requirements for accuracy was described as CLASS A and was to be marked with A. DD-V-581a has been replaced by ASTM Specification E694 and for individual items E287 for burets; E237 and E288 for volumetric flasks; E1094 for pharmaceutical graduates; and E969 for volumetric pipets. They cover the same groups of ware, and the same requirements for accuracy and marking have been continued. The accuracy requirements are identical with those of Circular 602* of the National Bureau of Standards, Testing of Glass Volumetric Apparatus. These various publications cover the usual burets, cylinders, volumetric flasks, volumetric and measuring pipets. In addition to these, a number of other items are held to accuracies equivalent to the values assigned by the National Bureau of Standards to the particular items mentioned in Circular 602. Hence, the designation CLASS A has been given to many items which are not included by name or description in either the Federal Specifications or Circular 602.



The tolerances allowed on capacity for apparatus now designated as CLASS B are twice as large as the CLASS A tolerances.

***NOTE:** This publication is out of print but is available for loan at most Government Depository Libraries throughout the country. The companion ASTM publications E-542 and E-694 cover what C-602 did in the past.

Milliliter vs. Cubic Centimeter

The Twelfth General (International) Conference on Weights and Measures redefined the liter as, "a special name for the cubic decimeter." Thus, the relationships previously used –

1 liter = 1.000028 cubic decimeters, and
1 milliliter = 1.000028 cubic centimeters – became void.

The Conference agreed that use of the terms "liter," "milliliter," and "mL" might be continued, except in association with measurements of the highest precision.

Incidentally, the preferred abbreviation for cubic centimeters is "cm³" — the use of "cc" is not permitted.

The difference in volume between the old and the current meanings of liter is so small as to be negligible for volumetric glassware. This being so, we continue to use "liter" and "milliliter" in descriptions and for inscriptions on glass apparatus. In the worst case, that of a 2000 "milliliter" flask, the difference is only 10% of the Class A tolerance.

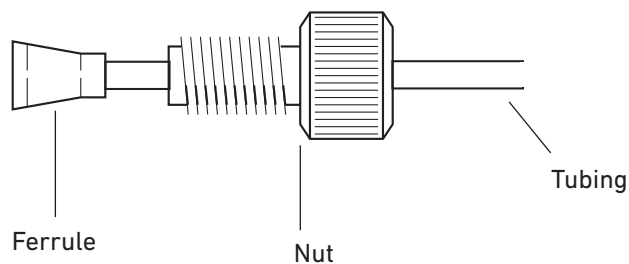


KONTES® ULTRA-WARE® ECONOMY HPLC MOBILE PHASE HANDLING SYSTEMS

Optional Accessories

Article No.	Description
953984-0090	90mm Conversion Base
953906-6390	THF-Resistant Pickup Adapter
953882-1000	Fittings Kit, Standard Version
953882-2000	Fitting Kit, THF Version
953916-3002	Inlet / Sparge Filter

Flangeless Fittings Instructions



1. Cut the tubing, leaving a square-cut face
2. Slide the nut onto the tubing.
3. Slip the ferrule onto the tubing with the conical section toward the nut. The flat end of the ferrule should be even with the end of the tubing.
4. Insert the tubing with ferrule into the mating fitting, making sure the tubing is firmly pressed against the flat surface of the fitting.
5. Tighten the nut.



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