

IN-HOUSE PROCEDURE # _____

PROCEDURE FOR VERIFYING VACUUM SYSTEM

Item:

Vacuum system consisting of a vacuum pump or water aspirator and a manometer or exterior vacuum gauge.

Purpose:

This method provides instructions for checking the vacuum pressure of the system and the accuracy of the manometer or vacuum gauge.

Inspection Equipment Required:

1. Internal vacuum gauge readable to 1 mm Hg or better.

Tolerance:

Equipment shall meet the tolerances specified in the applicable test method.

Procedure:

SYSTEM CHECK

1. Clean and dry the vacuum bowl, flask, or pycnometer.
2. Place the internal vacuum gauge inside the vacuum container.
3. Close the vacuum system and pull a vacuum to at least 30 mmHg (4.0 kPa) or less.
4. Record the indicated vacuum pressure shown on the internal vacuum gauge.

MANOMETER OR EXTERIOR VACUUM GAUGE CHECK

1. Adjust the vacuum pressure until the internal vacuum gauge reads 25 mmHg (3.4 kPa).
2. Record the reading shown on the external gauge or manometer.
3. If an offset is used, apply the offset and record the adjusted reading.
4. Determine the difference between the internal vacuum gauge reading and the adjusted external gauge reading.
5. Adjust the vacuum pressure until the internal vacuum gauge reads 27.5 mmHg (3.7 kPa) and repeat steps 2 through 4.
6. Adjust the vacuum pressure until the internal vacuum gauge reads 30 mmHg (4.0 kPa) and repeat steps 2 through 4.
7. If the difference is no more than 1 mm Hg (0.1 kPa) for all three pressures, then the gauge or manometer is acceptable.
8. If an offset is needed, make sure an offset tag is clearly visible with the system.