



Standard Test Method for Prerinse Spray Valves¹

This standard is issued under the fixed designation F2324; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the water consumption flow rate and spray force of prerinse spray valves. The food service operator can use this evaluation to select a prerinse spray valve and understand its water consumption and spray force.

1.2 The following procedures are included in this test method:

1.2.1 Water consumption (see 10.2).

1.2.2 Spray force test (see 10.3).

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This test method may involve hazardous materials, operations, and equipment. It does not address all of the potential safety problems associated with its use. It is the responsibility of the users of this test method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to its use.*

2. Referenced Documents

2.1 NSF Documents:²

NSF Listings Food Equipment and Related Products, Components and Materials, NSF International

2.2 ASME Standard:³

ASME A112.18.1/CSA B125.1 Plumbing Supply Fittings

3. Terminology

3.1 Definitions:

3.1.1 *prerinse spray valve*—a handheld device containing a release to close mechanism that is used to spray water on dishes, flatware, etc.

3.1.2 *spray force*—the amount of force exerted onto the spray disc.

3.1.3 *test method*—a definitive procedure for the identification, measurement, and evaluation of one or more qualities, characteristics, or properties of a material, product, system, or service that produces a test result.

3.1.4 *uncertainty*—measure of systematic and precision errors in specified instrumentation or measure of repeatability of a reported test result.

3.2 Abbreviations:

3.2.1 *gpm*—gallons per minute.

4. Summary of Test Method

4.1 The flow rate of the prerinse spray valve is measured at a water pressure of 60 ± 2 psi (413.7 ± 13.8 kPa) and $60 \pm 10^\circ\text{F}$ ($15.6 \pm 2.6^\circ\text{C}$) to verify that the prerinse spray valve is operating at the manufacturer's rated flow rate. If the measured flow rate is not within 5 % of the rated flow rate, all further testing ceases and the manufacturer is contacted. The manufacturer may make appropriate changes or adjustments to the prerinse spray valve.

4.2 The amount of force exerted by the prerinse spray valve is determined by the spray force test.

5. Significance and Use

5.1 The flow rate test is used to confirm that the prerinse spray valve is operating at the manufacturer's rated flow rate at the specified water pressure. The result from this test would also assist the operator in controlling the water and sewer consumption and reduce water heating bills.

5.2 The spray force is a measure of the impact from a prerinse spray valve on the target surface and can be used to select a model that meets an end-user's force profile.

5.3 Flow rate and spray force can be used along with spray pattern, coverage area, usage time, and flow control to select a prerinse spray valve that meets an end-user's performance requirements.

6. Apparatus

6.1 *Analytical Balance Scale*, or equivalent, for measuring the weight of the water carboy. It shall have a resolution of 0.01 lb (5 g) and an uncertainty of 0.01 lb (5 g).

¹ This test method is under the jurisdiction of ASTM Committee F26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.06 on Productivity and Energy Protocol.

Current edition approved June 1, 2013. Published July 2013. Originally approved in 2003. Last previous edition approved in 2009 as F2324 – 03 (2009). DOI: 10.1520/F2324-13.

² Available from NSF International, P.O. Box 130140, 789 N. Dixboro Rd., Ann Arbor, MI 48113-0140.

³ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, <http://www.asme.org>.