

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

IAPMO GUIDE CRITERIA

FOR

**LAVATORY OR SINK TRAP WITH OR WITHOUT
REMOVABLE FILTER OR CLEANING DEVICE**

IGC 225-2006

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable criteria for lavatory or sink traps with or without removable filter or cleaning device. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding materials, manufacture and installation; and to provide of identifying such lavatory or sink traps with or without removable filter or cleaning device complying with this standard.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate materials or methods of construction, provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard applies to lavatory or sink traps with or without removable filter or cleaning device and covers definitions, materials and finishes, general requirements, strength requirements and descriptive details for such products.

3. REFERENCE STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard.

ASME A112.18.1/ <u>CSA B125.1</u>	Plumbing Supply Fittings
ASME A112.18.2/ <u>CSA B125.2</u>	Plumbing Waste Fittings
ASTM D 2240	Rubber Property - Durometer Hardness
ASTM F 409	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings

4. DEFINITIONS

- 4.1 **Lavatory or Sink Trap.** A water seal trap designed for installation in tight locations which is equipped with a minimum two (2) inch (50.8 mm) water seal and which is designed to be self-scouring and accessible.
- 4.2 **Removable Filter.** When provided, a filter insert made of non-corrosive material which is accessible and removable for cleaning and which serves to help filter general debris that may plug off the lavatory trap.
- 4.3 **Rotatable Cleaner.** When provided, a rotatable cleaner made of non-corrosive material which is accessible to be rotated to clean the area of the trap subject to plugging.

5. GENERAL REQUIREMENTS

- 5.1 **Sizes.** The trap inlet and outlet sizes shall be a minimum of 1-1/4" (31.8 mm) and a maximum of 1-1/2" and in no case shall the inlet size be greater than the outlet size.
- 5.2 **Flow Ways.** The internal flow ways of the trap shall be free from burrs and obstructions and the cross-sectional area shall not be less than the cross-sectional area of the inlet.
- 5.3 **Finish.** The finish of the trap if applied, shall comply with the finish requirements of ASME A112.18.1/CSA B125.1 or ASTM F 409.
- 5.4 **Materials.** The materials shall be as specified in ASTM F 409 or ASME A112.18.2/CSA B125.2.
- 5.5 **Dimensions.** The tubing and tail pieces shall meet the dimensional requirements of ASTM F 409. Minimum trap seal shall be 2" (50.8 mm) and maximum of 4" (101.6 mm).
- 5.6 All internal parts forming the trap shall be made of non-corrosive materials.
- 5.7 **Gaskets Materials.** The O'rings and gaskets material shall be manufactured from EPDM, Nitrile or silicon rubber, with a Shore A durometer between 60 and 70 when tested in accordance with ASTM D 2240.
- 5.8 **Wiper material.** The wiper material shall be manufactured from Santoprene, Nitrile, Silicone Rubber, or Urathane with a Shore A durometer between 50 and 70 when tested in accordance with ASTM D 2240.

6. TESTING REQUIREMENTS

- 6.1 **Flow Test.** The tests shall be conducted on a minimum 16" x 12" (406.4 mm x 304.8 mm) oval lavatory which is equipped with a 2.2 gpm (8.4 liters per minute) maximum flow rate faucet and a pop-up assembly. The trap assembly shall be attached to the waste outlet of the pop-up assembly. Where possible, a clear model of the trap shall be

evaluated. Confirm that a 2.2 gpm (8.4 liters per minute) maximum drain flow rate is achieved.

- 6.2 Debris Test.** The lavatory faucet shall be activated and adjusted to a flow rate of 2.2 gpm (8.4 L/m) at a temperature of $70 \pm 5^\circ\text{F}$ ($21.1 \pm 2.8^\circ\text{C}$). A hand full of generic shaving cream shall be poured into the lavatory drain with the faucet operating for 15 minutes. The clogging or debris accumulation shall be permitted and water flowing through trap shall remain at minimum 2.0 gpm during that 15 minute period.

Repeat the previous procedure using a 1 inch strip of generic toothpaste for an additional 15 minutes. The clogging or debris accumulation shall be permitted and water flowing through trap shall remain at minimum 2.0 gpm during that 15 minute period.

- 6.2.1 Performance Requirements.** Any clogging or debris accumulation that reduce water flows measured below 2.0 gpm during either above 15 minute periods shall be cause for rejection of the trap model.

- 6.3 Hair Test.** The sink stopper and rod shall be removed from the test assembly and 20-30 strands of 16" to 18" (406.4 mm to 457.2 mm) dry human hair shall be placed randomly around the lavatory drain. The water flow rate from the lavatory faucet shall be temporarily diverted to another vessel and shall be adjusted to 2.2 gpm (8.4 L/m). Once adjusted, the water shall be directed into the bowl and water shall be permitted to flow for a period of 30 minutes. The clogging or debris accumulation shall be permitted as long as the water flowing through trap shall remain at minimum 2.0 gpm during that 30 minute period.

The test shall be repeated with the hair from the previous procedure still remaining accumulated in the trap. The water flowing though the trap shall remain at a minimum 2.0 gpm during that 30 minute period.

- 6.3.1 Performance Requirements.** Any water flows measured below 2.0 gpm during either above 30 minute periods shall be cause for rejection of the trap model.

- 6.4 Hydrostatic and Axial Stress Test.** The trap shall meet the hydrostatic and axial stress requirements of ASTM F 409.

- 6.5 Life Cycle Test** – The life cycle test will be performed on the trap (with rotatable cleaner) with the handle removed and the rotating test device attached to the exposed axle. The trap shall be filled with fresh water. The test shall be performed for 2,500 revolutions at a maximum speed of 50 revolutions per minute.

- 6.5.1 Performace Requirements.** No leakage is allowed from the seals on the axle.

7. MARKING AND IDENTIFICATIONS

- 7.1** The trap shall be marked with the following designations:

- (a) The manufacturer's name or trademark;

(b) Model Number or designation.

Adopted: November 2005, November 2006