**LIST OF FEEDBACK RECEIVED BY WQIA STANDARDS COMMITTEE MEMBERS AND CORRECTIVE ACTIONS IMPLEMENTED IN THE DRAFT STANDARD**

Evaluation of Point of Use Drinking Water Purification systems – Specification IAPMO- I WPS-012019 – DRAFT

The above draft version is now uploaded in IAPMO – I website for public comments. The last date for sending your final comments is 24th June 2019.

Note: please do not raise any comments on the points under Sr.No:1 to 9 as these items were discussed in detail and finalized. The comments repetitive in nature shall not be entertained. Any new feedback, observations, suggestions for improving the standard are most welcome.

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| S.No | Observation / Comments | Corrective action |
| 1 | Microbial reduction Tests – page 18  1.any technology namely UV, mechanical Filtration including ceramics, MF, UF and RO. RO can be tested for Bacteria and Virus reduction tests?? , resin/chemical based for microbial reduction.  Not mentioned anything about charged based membrane technologies | Page No: 23 mentions “Also the basic advantage of this protocol is that it can be applied to standalone disinfection filter cartridges and/or fully assembled units or any other technology leading to microbial reduction. |
| 2 | Structural integrity – page 12  6 Kg/Sq.Cm is only 85psi, when flow restrictor started choking the pressure of pump may reach to 100psi or till its by-pass mechanism point. Even with new system condition, feed pressure is near to 30 or with external booster pump the diaphragm pump will boost near to 100psi.  It should be 100psi or max operating pressure of the system | Table – 1 , page 7 mentions “When the test unit is pressurized from the input port (shall include any connector, coupler, a part of the installation kit provided by the manufacturer) till the outlet of the water purification system, for non-RO products, at a rate of 6 Kg/Sq.Cm for 30 minutes and for RO products at 7.0Kg/sq.cm for 30 minutes, there shall not be any leakage of water from all components and joints. Also there shall not be any emerging air bubbles from water joints. |
| 3 | On Page No:5, Table-1, Currently in the standard it is mention that for UV purifier the structural integrity test need to be done at 6Kg/cm², but when discussed with you (Dr.Muralidhara Rao sir), You said that Structural Integrity test for UV purifier is exempted | **Table – 1 page 7 mentions “ ##** UV chamber is exempted from pressurizing. However, in case the UV chamber is installed as Pre cooler, under the sink or in other installations where UV chamber is subjected to pressure ( if the chamber is connected between two solenoid valves or ON/OFF valves) shall be tested under structural integrity using 6kg/Sq.cm pressure for 30 minutes.  **###** Manufacturer has an option of excluding these tests if the product is not capable of meeting any of the star rating designated as 5,4 and3. In such case the product will be tested as per sections A and B. |
| 4 | As per your view, test sample need to be pass in Duplicates, Hence on Page No:6, Clause 1.5.1, It is mention that only one system need to installed for testing, So from One it’s need to change to two system installed for testing. | Two systems will be tested for Material safety testing only. For all other tests, 1 unit will be used. |
| 5 | On Page No:8 in third paragraph, in the standard it is written as The pooled sample of 6L from the vessel to be used for analyzing various test parameters as shown in Annexure -1 but  the Annexure-1 is consist of PROTOCOL FOR PREPARATION AND ANALYSIS OF TEST MICROORGANISMS, Hence it is need to correct wherever there is Annexure-1, it should be Table-19. | Correction has been implemented accordingly. |
| 6 | The Resin shall be replaced by Resin/ media as there are advancement in filter media technology which replaces typical styrene based rein with catalytic or other natural products. | In Table No:1, page 7 mentions “ Resin/Media. |
| 7 | catalytic or other natural products.  Combination of Specialty filtration media, carbon, UF , UV can work and reduce many contaminants like Iron, Fluoride, Pesticides, Pacteria, Virus, Arsenic, Nitrates, Radionuclei.. so combined technology shall be considered in the table. Except TDS ( salinity reduction) this combined products can be suitable to reduce harmful elements and make water fit for drinking. | In Table No:1, page 7 mentions “ Others.  At the time of certification, customer needs to declare the claims for testing. |
| 8 | The efficiency figures are applicable to RO only or also for other purifiers if they need to be backwashed periodically. | The current standard only emphasizes on RO product currently with regards to water efficiency. |
| 9 | The efficiency figures at input TDS level of minimum 1500 PPM and output level of less than 150 PPM ( considering 90% rejection) needs to be reworked. It also shall consider membrane life . achieving greater than 50% with conditions mentioned may not be practicable | Majority of the members have accepted 1500 ppm TDS water, 90% TDS reduction and Water efficiency criteria shown below:  **Criteria for 5 star**  ≥50% recovery up to 6000Lit  **Criteria for 4 star**  >40% up to 50% during 2000Lit. Up to 30% till 6000Lit  **Criteria for 3 star**  >30% up to 40% during 2000Lit. Up to 25% till 6000Lit |
|  | After considering the various previous feedbacks from manufacturers and Board members, the water efficiency criteria for star rating have been revised as described in adjacent box. | **Revised star rating criteria**  1. Criteria for 5 star  ≥50% recovery throughout the tested volume. Testing will be done as per manufacturer’s claim about Volume.  2. Criteria for 4 star  >40% up to 50% recovery during 1/3rd of the life claim. Followed by  up to 30% during 2/3rd of the claimed life.  Testing will be done as per manufacturer’s claim about Volume.  3. Criteria for 3 star  >30% up to 40% recovery during 1/3rd of the life claim. Followed by up to 25% during 2/3rd of the claimed life.  Testing will be done as per manufacturer’s claim about Volume |
| **Special Notes**:  i) During the surveillance audit annually the manufacturer has to show the documentary evidence of replacement of Certified RO membrane ( 5 Star, 4star and 3 star) under AMCs.  ii) The product, Membrane Housing and RO membrane element have to carry star rating stickers compulsorily. |