
HS 3004 Oil and Water Proof Tests at Raised Temperature**1. Purpose**

Heat resistance of the container (for food container test sample only) is tested by filling the container with hot water and hot oil.

2. Terminology**2.1 Disposable food /drink container**

Containers of any shape are being used for temporary storage of food or beverage and disposed of after use.

3. Apparatus

3.1 Filter paper, large enough to cover the base area of the test specimen.

3.2 Slate plate, large enough for the filter paper to place on.

3.3 Conditioning oven, capable of maintaining a temperature of at least 100 °C and with a tolerance of 3 °C.

3.4 Water and commercially available cooking oil (e.g. corn oil).

4. Procedures

4.1 Place a filter paper, followed by a specimen container on a slate plate.

4.2 Fill the container up to 80 % of its capacity with hot water of $95\text{ °C} \pm 5\text{ °C}$. Take care not to splash out any water to the filter paper when filling the container (see Figure 1).

4.3 Place the whole setup to a conditioning oven of $60\text{ °C} \pm 3\text{ °C}$ for 30 min.

4.4 After conditioning, pour out the water and check if there is any distortion, discoloration and defect of the container.

4.5 Check if there is any leakage mark on the filter paper.

4.6 Repeat procedure 4.1 to 4.5 by using hot cooking oil of same temperature instead of hot water.

4.7 For each sample, test three replicates with hot cooking oil and hot water.

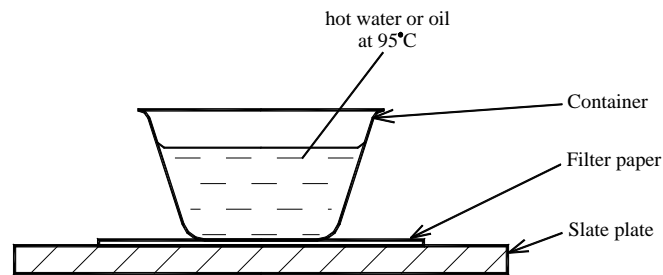


Figure 1: Schematic diagram to show the experimental setup.

5. Results

There should be no distortion, discoloration and defect of the three tested specimens (for both hot water and hot cooking oil). Leakage is also not allowed.

6. References

1. JIS S2029, Plastic Table Wares, Japanese Industrial Standards, Japanese Standards Association.
2. GB 18006.1-1999, General Specification for Single Use and Degradable Lunch Container and Drinking Set, China National Standards, China State Bureau of Quality and Technical Supervision (CSBTS).