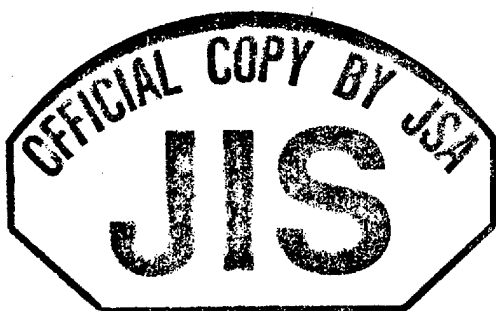


JIS

JAPANESE INDUSTRIAL STANDARD

Glass Material for Chemical Analysis

☞ JIS R 3504—1976



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JAPANESE INDUSTRIAL STANDARD

J I S

Glass Material for Chemical Analysis

R 3504-1976
(Reaffirmed: 1979)

1. Scope

This Japanese Industrial Standard specifies glass materials used for volumeters for chemical analysis, hereinafter referred to as the "glass materials".

2. Kinds and Grades

The kinds and grades of glass materials shall be as specified below:

2.1 Kinds The kinds of glass materials shall be the following 6 kinds:

- (1) Glass material for burettes, measuring pipettes, and whole pipettes
- (2) Glass material for measuring flasks
- (3) Glass material for measuring cylinders
- (4) Glass material for conical liquid volumeter
- (5) Glass material for cylindrical liquid volumeter
- (6) Glass material for handled cylindrical liquid volumeter

2.2 Grades Glass materials shall be classified into the following two grades based on the heat proof temperature and alkali dissolution quantity:

- (1) Hard grade
- (2) Normal grade

Applicable Standard:

JIS R 3502-Testing Method of Glass Apparatus for Chemical Analysis

Reference Standard:

JIS Z 8203-SI Units and the Use of their Multiples and of Certain other
Units

3. Quality

The quality of glass materials shall be examined by the testing methods of 5. and meet the requirements of Table 1.

Table 1

Item \ Grade	Hard grade	Normal grade
Heat proof temperature (°C)	180 min.	70 min.
Alkali dissolution quantity (mg)	0.1 max.	2.5 max.
Wall filling	The material shall be uniform in wall filling.	
Shape	The material shall be correct in shape and free from cuts.	
Function	The function shall fulfill the purposes of use perfectly.	
Body	The material shall be free from undissolved matter and inter-mixed foreign matter and be transparent except for special materials. In addition, it shall be free from foams and striae harmful to use.	
Strain	No remarkable interference figure shall appear when tested with a strain tester.	

Reference: The strain tester means an apparatus for detecting and observing strains in glass.

The tester employs the method of inspecting the strains of glass by passing a polarized light produced by a polarizing plate or a suitable reflecting plate through the glass being tested and observing it by means of a polarizing plate or an alternative device.

4. Shape and Dimensions

The shape and dimensions shall be as follows:

The shape and dimensions of glass materials shall be as shown in Attached Figs. 1 to 6 indicated in Table 2.