

KES

**Test Methods for
Index of Refraction of
Transparent Plastic**

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1. Scope of application

This standard shall specify the refractive index measurement of the transparent plastic. In measuring the broadest scope of the refractive index with materials of the transparent plastic, there are two well-known methods, one by the refractometer and the other by the microscope. The specimen for these methods should be optically homogeneous for the best reproduction. It is better to use the method by the refractometer as far as it is possible.

2. Significance of the test

This test controls and checks briefly of degree of purity and composition, and evaluates the basic properties of the materials used for optical parts planning.

It is more accurate than what is asked for in general.

In the method by the refractometer, up to four significant figures are accurate, and in the method by the microscope, up to three significant figures in general are accurate according to the tester's focusing skill.

3. Pre-settlement

(1) Pre-settlement : The specimen which requires pre-settlement before testing should be pre-settled at least 40 hours under the condition of the temperature of 23 ± 2 °C and the relative humidity of 50 ± 5 %.

If the test result does not accord, pre-settle it at 23 ± 1 °C and 50 ± 2 %.

(2) Testing condition : As far as there isn't any separate regulation, experiment under the standard lab condition, at the temperature of 23 ± 2 °C and the relative humidity of 50 ± 5 %.

If the test result does not accord, test it at 23 ± 1 °C and 50 ± 2 %. If the refractive index of materials is sensitive to the temperature, the testing temperature must be adjusted to