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Test charts for resolution
characteristics of X-ray equipment

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**In the event of any doubts arising as to the contents,
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Test charts for resolution characteristics of X-ray equipment

1 Scope This Japanese Industrial Standard specifies the test charts for resolution characteristics of X-ray (hereafter referred to as "test chart"), made of a material of X-ray absorber (hereafter referred to as "absorber") which is used to measure the resolution of X-ray equipment and X-ray imaging equipment.

Remarks : The following standards are normative references to this Standard.

JIS B 7502	<i>Micrometer callipers</i>
JIS B 7507	<i>Vernier, dial and digital callipers</i>
JIS K 6718	<i>Polymethyl methacrylate sheets</i>

2 Definitions For the purpose of this Standard, the following definitions apply:

- (1) **resolution** A quantity relating to the depicting power of images of X-ray photograph and X-ray imaging equipment. This quantity is expressed by the reciprocal of the minimum width of line pair which is recognized that it has resolved, out of the images of clear contrast line pairs having the same width. In general, LP/mm is used as the unit.
- (2) **spatial frequency** A quantity relating to the expression of finesse of frequent structure which makes an image or an object. This quantity is expressed by cycle number per unit length. In general, LP/mm is used as the unit.

3 Type and uses The types of test charts shall be classified as Table 1 according to the material quality, thickness, shape and size of absorber, and arrangement. The variation of spatial frequency shall be, as a rule, geometrical progression.

Table 1 Type and uses of test chart

Type	Range of spatial frequency LP/mm	Common ratio	Uses
R-1W100 R-1Pb100	0.5 to 5.0	1.25	General purpose
R-2W50 R-2Pb50	2.0 to 10.0	1.25	High resolution
R-4W100 R-4Pb100	1.0 to 4.0	1.25	Indirect radiography
R-5W50 R-5Pb50	0.5 to 5.0	Progressive	Confirmation of focus