JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 9921 : 2010

(JACA/JSA)

Light scattering airborne particle counter for clean spaces

ICS 19.120

Reference number : **JIS B 9921** : **2010** (**E**)

Date of Establishment: 1976-05-01
Date of Revision: 2010-05-20
Date of Public Notice in Official Gazette: 2010-05-20
Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Industrial Machinery

JIS B 9921:2010, First English edition published in 2011-10

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

NH/AT

Contents

Page

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal of revision of Japanese Industrial Standard submitted by the Japan Air Cleaning Association (JACA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 9921** : 1997 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Light scattering airborne particle counter for clean spaces

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 21501-4** published in 2007, while modifying some of its technical contents so as to make them easier to understand, as well as to enhance the usability of this Standard.

The portions with continuous sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JB.

1 Scope

This Standard describes a calibration and verification method for a light scattering airborne particle counter (hereafter referred to as "particle counter"), which sucks in air and measures the size and number or particle number concentration of particles suspended in the air. The particle counter specified in this Standard performs single particle measurements, and the typical size range of particles measured by it in the method specified in this Standard is between 0.1 μm and 10 μm in particle size.

NOTE 1 Instruments that conform to this Standard are used for the classification of air cleanliness in cleanrooms and associated controlled environments in accordance with **JIS B 9920**, as well as the measurement of number and size distribution of particles in various environments.

NOTE 2 The particle size measured by the particle counter is not the actual particle size—it is the light scattering equivalent diameter of the calibration particles suspended in air.

The particle size is a diameter of particle and is also called the particle diameter.

NOTE 3 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 21501-4 : 2007 *Determination of particle size distribution—Single particle light interaction methods—Part 4: Light scattering airborne particle counter for clean spaces* (MOD)

The symbols which denote the degree of correspondence in the contents in the corresponding International Standard and **JIS** are IDT (identical), MOD (modified) and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standard (including amendments) indicated below shall be applied.