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**Akustika - Ugotavljanje ravni zvočnih moči virov hrupa - Inženirske metode za majhne premične vire v odmevnih poljih - 1. del: Primerjalna metoda v prostoru za preskušanje z zvočno odbojnimi stenami (ISO 3743-1:1994)**

Acoustics - Determination of sound power levels of noise sources - Engineering methods for small, movable sources in reverberant fields - Part 1: Comparison method for hard-walled test rooms (ISO 3743-1:1994)

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**Akustik - Bestimmung der Schalleistungspegel von Geräuschquellen - Verfahren der Genauigkeitsklasse 2 für kleine, transportable Quellen in Hallfeldern - Teil 1: Vergleichsverfahren in Prüfverfahren mit schallharten Wänden (ISO 3743-1:1994)**

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**Acoustique - Détermination des niveaux de puissance acoustique émis par les sources de bruit - Méthodes d'expertise en champ réverbéré applicables aux petites sources transportables - Partie 1: Méthode par comparaison en salle d'essai a parois dures (ISO 3743-1:1994)**

**Ta slovenski standard je istoveten z: EN ISO 3743-1:1995**

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**ICS:**

17.140.01	Akustična merjenja in blaženje hrupa na splošno	Acoustic measurements and noise abatement in general
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**SIST EN ISO 3743-1:1997**

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EUROPEAN STANDARD

EN ISO 3743-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1995

ICS 17.140.10

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English version

**Acoustics - Determination of sound power levels  
of noise sources - Engineering methods for small,  
movable sources in reverberant fields - Part 1:  
Comparison method for hard-walled test rooms  
(ISO 3743-1:1994)**

Acoustique - Détermination des niveaux de puissance acoustique émis par les sources de bruit - Méthodes d'expertise en champ réverbéré applicables aux petites sources transportables - Partie 1: Méthode par comparaison en salle d'essai à parois dures (ISO 3743-1:1994)

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Ref. No. EN ISO 3743-1:1995 E

## Foreword

The text of the International Standard has been taken as a European Standard by the Technical Committee CEN/TC 211 "Acoustics" from ISO/TC 43 "Acoustics" of the International Organization for Standardization (ISO).

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 1995, and conflicting national standards shall be withdrawn at the latest by December 1995.

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NOTE: Normative references to International Standards are listed in annex ZA (normative)

**Annex ZA (normative)**  
**Normative references to international publications**  
**with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 7574-1	1985	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 1: General considerations and definitions	EN 27574-1	1988
ISO 7574-4	1985	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 4: Methods for stated values for batches of machines	EN 27574-4	1988

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**Acoustics — Determination of sound  
power levels of noise sources —  
Engineering methods for small, movable  
sources in reverberant fields —**

**(Part 1:**

**Comparison method for hard-walled test  
rooms**

<https://standards.iteh.ai/standards/sist/4e029a50-649b-4e6f-bb9c-06e61f7a73db/sist-en-iso-3743-1-1997>

*Acoustique — Détermination des niveaux de puissance acoustique émis  
par les sources de bruit — Méthodes d'expertise en champ réverbéré  
applicables aux petites sources transportables —*

*Partie 1: Méthode par comparaison en salle d'essai à parois dures*

Reference number  
ISO 3743-1:1994(E)

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3743-1 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Sub-Committee SC 1, *Noise*.

ISO 3743 consists of the following parts, under the general title *Acoustics — Determination of sound power levels of noise sources — Engineering methods for small, movable sources in reverberant fields*:

- Part 1: *Comparison method for hard-walled test rooms*
- Part 2: *Methods for special reverberation test rooms*

Part 2 is a revision of ISO 3743:1988.

Annex A of this part of ISO 3743 is for information only.

## ISO 3743-1:1994(E)

## Introduction

**0.1** ISO 3743 is one of the ISO 3740 series, which specifies various methods for determining the sound power levels of machines, equipment and their sub-assemblies. These basic standards specify the acoustical requirements for measurements appropriate for different test environments as shown in table 0.1. When selecting one of the methods of the ISO 3740 series, it is necessary to select the most appropriate for the conditions and purposes of the noise test. General guidelines to assist in the selection are provided in ISO 3740. The ISO 3740 series gives only general principles regarding the operating and mounting conditions of the machine or equipment under test. Reference should be made to the noise test code for a specific type of machine or equipment, if available, for specifications on mounting and operating conditions.

**0.2** The method given in this part of ISO 3743 enables measurement of sound pressure levels in octave bands at prescribed fixed microphone positions or along prescribed paths. A comparison method is used which allows determination of sound power levels in octave bands; A-weighted sound power levels may be calculated from the octave-band sound power levels. Quantities which cannot be determined are the directivity characteristics of the source and the temporal pattern of noise radiated by sources emitting non-steady noise.

**0.3** Parts 1 and 2 of ISO 3743 specify engineering methods for determining the A-weighted and octave-band sound power levels of small noise sources. The methods are applicable to small machines, devices, components and sub-assemblies which can be installed in a hard-walled test room with prescribed acoustical characteristics or in a special reverberation test room. The methods are particularly suitable for small items of portable equipment; they are not intended for larger pieces of stationary equipment which, due to their manner of operation or installation, cannot readily be moved into the test room and operated as in normal usage. The procedures are intended to be used when an engineering grade of accuracy is desired without requiring the use of laboratory facilities.

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International Standard	Classification of method <sup>1)</sup>	Test environment	Volume of source	Character of noise	Sound power levels obtainable	Optional information available
3741	Precision (grade 1)	Reverberation room meeting specified requirements	Preferably less than 1 % of test room volume	Steady, broad-band	In one-third-octave or octave bands	A-weighted sound power level
3742				Steady, discrete frequency or narrow-band		
3743-1	Engineering (grade 2)	Hard-walled test room	Preferably less than 1 % of test room volume	Steady, broad-band, narrow-band, or discrete frequency	A-weighted and in octave bands	Other weighted sound power levels
3743-2		Special reverberation test room				
3744	Engineering (grade 2)	Outdoors or in large room	Greatest dimension less than 15 m	Any	A-weighted and in one-third-octave or octave bands	Directivity information and sound pressure levels as a function of time; other weighted sound power levels
3745	Precision (grade 1)	Anechoic or semi-anechoic room	Preferably less than 0,5 % of test room volume	Any		
3746	Survey (grade 3)	No special test environment	No restrictions; limited only by available test environment	Any	A-weighted	Sound pressure levels as a function of time; other weighted sound power levels
3747	Survey (grade 3)	No special test environment; source under test not movable	No restrictions	Steady, broad-band, narrow-band, or discrete frequency	A-weighted	Sound power levels in octave bands

1) See ISO 2204.

Table 0.1 — International Standards specifying various methods for determining the sound power levels of machines and equipment