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# INTERNATIONAL STANDARD



# 554

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Standard atmospheres for conditioning and/or testing — Specifications

*Atmosphères normales de conditionnement et/ou d'essai — Spécifications*

First edition — 1976-07-15

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**Descriptors** : standard atmospheres, controlled atmospheres, test atmospheres, tests, testing conditions.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 554 (originally ISO/DIS 3736) was drawn up by Technical Committee ISO/TC 125, *Enclosures and conditions for testing*, and circulated to the Member Bodies in March 1975.

It has been approved by the Member Bodies of the following countries :

|                |                       |                |
|----------------|-----------------------|----------------|
| Australia      | Germany               | Thailand       |
| Austria        | India                 | Turkey         |
| Belgium        | New Zealand           | United Kingdom |
| Czechoslovakia | Romania               | U.S.A.         |
| Finland        | South Africa, Rep. of | U.S.S.R.       |
| France         | Spain                 |                |

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Netherlands  
Sweden

This International Standard cancels and replaces ISO Recommendation R 554-1967, of which it constitutes a technical revision.

# Standard atmospheres for conditioning and/or testing — Specifications

## 0 INTRODUCTION

The ideal would be for a single atmosphere for conditioning and/or testing to be specified, but this simple solution has not been possible because of the diversity of climates and because of the difficulty of establishing tables of values reduced to this single standard atmosphere, from test results obtained previously under various tests and/or conditioning atmospheric conditions.

It is desirable, however, in the implementation of this International Standard, that every effort should be made to use a single atmosphere selected from those given in this document.

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard lays down three standard atmospheres for conditioning and/or testing which are not very different from ordinary ambient conditions.

## 2 SPECIFICATIONS

### 2.1 Standard atmospheres for conditioning and/or testing

| Designation | Temperature | Relative humidity | Pressure           | Remarks                               |
|-------------|-------------|-------------------|--------------------|---------------------------------------|
|             | °C          | %                 | kPa                |                                       |
| 23/50       | 23          | 50                | between 86 and 106 | Recommended atmosphere                |
| 27/65       | 27          | 65                |                    | For tropical countries                |
| 20/65       | 20          | 65                |                    | Used in certain fields of application |

### 2.2 Tolerances

| Tolerances                                     | Temperature | Relative humidity |
|------------------------------------------------|-------------|-------------------|
|                                                | °C          | %                 |
| Ordinary (normal) tolerances (wide tolerances) | ± 2         | ± 5*              |
| Reduced tolerances (close tolerances)          | ± 1         | ± 2*              |

\* The resultant limits of relative humidity are therefore :

- ordinary (normal) tolerances : (45 to 55 %) and (60 to 70 %);
- reduced tolerances : (48 to 52 %) and (63 to 67 %).