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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 966 withdrawn 1981

SEEDS

SAMPLING AND METHODS OF TEST

1st EDITION

February 1969

For each individual country the only valid standard is the national standard of that country.

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BRIEF HISTORY

The ISO Recommendation R 966, *Seeds – Sampling and methods of test*, was drawn up by Technical Committee ISO/TC 34, *Agricultural food products*, the Secretariat of which is held by the Magyar Szabványügyi Hivatal (MSZH).

Work on this question led to the adoption of a Draft ISO Recommendation.

In April 1967, this Draft ISO Recommendation (No. 1231) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	India	Romania
Bulgaria	Iran	South Africa, Rep. of
Canada	Israel	Thailand
Colombia	Korea, Rep. of	Turkey
Czechoslovakia	Netherlands	U.A.R.
France	New Zealand	U.S.S.R.
Germany	Norway	Yugoslavia
Greece	Poland	
Hungary	Portugal	

Two Member Bodies opposed the approval of the Draft :

Ireland
United Kingdom

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1969, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 966 February 1969

SEEDS

SAMPLING AND METHODS OF TEST

INTRODUCTION

The testing of seeds has been developed in order to help agriculture to eliminate certain risks in the production of crops, by obtaining the necessary information about the seeds. This information may be required by the producer of the seeds or by the merchant, in order to guide users of the seeds or to enable the seeds to be subjected to control. In every case, the ultimate aim is to determine the value of the seeds for sowing purposes.

As living products are concerned, the behaviour of seeds cannot be predicted with the certainty that is characteristic of tests on products of a non-biological kind. The exchange of seeds between countries requires that the tests carried out in one laboratory should agree with those carried out in another. Standardized techniques for determining the quality of seeds have therefore been established in order to furnish information on the composition of samples of seeds and on the fitness of the seeds for producing plants.

Methods including definitions, as well as basic techniques founded on perfect knowledge of the principles entailed in seed testing, have been considered necessary to enable different laboratories to obtain comparable results on a given sample of seeds. The methods covered by this ISO Recommendation epitomize the experience accumulated by seed analysts as well as the lessons of research; they form a basis for exact and uniform tests on seeds.

1. SCOPE

This ISO Recommendation concerns methods for the sampling and testing of seeds.

It recommends the adoption of the methods described in the International Rules for Seed Testing, prepared and published by the International Seed Testing Association*.

2. GENERAL PRESENTATION

The International Rules for Seed Testing establish prescriptions for sampling and the technique of preparing the analysis sample. They also describe methods for :

(*a*) analysis of purity, in order to ascertain the composition of the lot of seeds and the identity of the different species of seeds and of inert matter composing the sample;

(*b*) determination of the number of weed seeds and seeds of other cultivated plants; this determination is not carried out for tree seeds;

(*c*) testing for germination, in order to obtain information on the value of the seeds for sowing in open ground and for providing results that can be used to compare the value of different lots of seeds;

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* Copies may be obtained direct from the International Seed Testing Association, Box 68, 1432 Vollebekk, Norway, or may be ordered through the national standards organizations or through the ISO Central Secretariat, Geneva.

Price per copy : with normal cover N.kr 18.60 (SwFr 11.30; US$ 2.60);
with special cover N.kr 23.25 (SwFr 14.10; US$ 3.25).

(*d*) determination of viability by a biochemical test also called the *tetrazolium test;* this is a rapid method specially intended for certain species which sprout slowly under present methods of germination;

(*e*) checking of the hygienic condition, aimed at discovering not only the presence or absence of disease organisms and animal parasites but also of any deficiency or any sign of ageing;

(*f*) determination of the identity of the species and of the cultivar; this may be carried out in the laboratory, in the greenhouse or in portions of soil, as the case may be;

(*g*) determination of the moisture content; according to the seed analysed, this may be carried out by oven-drying at 130 °C or at 105 °C, or by azeotropic distillation with toluene;

(*h*) determination of the provenance or origin, i.e. the locality where the seed has been actually harvested;

(*i*) determination of the mass of 1000 seeds;

(*j*) determination of the heterogeneity of the lot of seeds by several different tests.

Finally, these rules give all the information necessary for assessing the difference between results that may be obtained in two different laboratories on two representative samples of a single lot of seeds.