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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

**ISO RECOMMENDATION
R 842**

**SAMPLING RAW MATERIALS
FOR PAINTS AND VARNISHES**

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 842, *Sampling raw materials for paints and varnishes*, was drawn up by Technical Committee ISO/TC 35, *Paints, varnishes and related products and their raw materials*, the Secretariat of which is held by the Nederlands Normalisatie-instituut (NNI).

Work on this question led, in 1963, to the adoption of a Draft ISO Recommendation.

This first Draft ISO Recommendation (No. 731) was circulated in June 1964 to all the ISO Member Bodies for enquiry. As the results of this consultation were not considered satisfactory, the Technical Committee presented a second Draft ISO Recommendation which was circulated to all the Member Bodies in September 1966 and which was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	Greece	South Africa, Rep. of
Australia	Hungary	Spain
Belgium	India	Switzerland
Brazil	Iran	Turkey
Canada	Ireland	U.A.R.
Chile	Italy	United Kingdom
Czechoslovakia	Japan	U.S.S.R.
France	Netherlands	
Germany	Portugal	

One Member Body opposed the approval of the Draft :

Sweden

The second Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in October 1968, to accept it as an ISO RECOMMENDATION.

SAMPLING RAW MATERIALS FOR PAINTS AND VARNISHES

INTRODUCTION

Correct sampling is a difficult process and one that requires most careful attention. It is therefore essential that it should be carried out under the supervision of an experienced sampler.

The procedures given below are recognized as good practice and it is strongly recommended that they be followed whenever practicable. It is recognized that it is difficult to lay down fixed rules to be followed in every case and particular circumstances may render some modification of the methods desirable. The aim always to be kept in view is that the sample obtained should be properly representative of the bulk.

1. SCOPE

This ISO Recommendation describes methods for the sampling of raw materials for paints and varnishes and describes and illustrates apparatus that can be used for this purpose. Suitable methods are included for sampling oils and other non-volatile liquids, volatile liquids such as solvents, and dry powders such as pigments and extenders.

The sampling of shellac is dealt with in ISO Recommendation R 56, *Specification for shellac*, which may be used, with suitable modifications, as a general guide for sampling other natural resins.

2. DEFINITIONS

For the purpose of this ISO Recommendation, the following definitions apply :

- 2.1 *Batch, lot.* A definite quantity of a particular product produced under conditions which are presumed uniform.
- 2.2 *Consignment.* A quantity of some product delivered at one time. The consignment may consist of one or more batches or parts of batches.
- 2.3 *Sample.* A definite quantity of material taken from a larger bulk and intended to provide information necessary for assessing a characteristic of that bulk.
- 2.4 *Gross sample.* A sample as collected.
- 2.5 *Reduced sample.* A sample obtained by applying a method of reduction to the gross sample.
- 2.6 *Top sample.* A sample taken at not more than 15 cm below the top surface of the material in a container.
- 2.7 *Middle sample.* A sample taken at one-half of the depth of the material in a container.
- 2.8 *Bottom sample.* A sample taken at the lowest part of a container.

3. CLEANLINESS SAFEGUARDS

Special care is necessary to ensure that all sampling apparatus is clean and dry when used. Sampling instruments may first be cleaned with an appropriate (mineral) solvent and subsequently with a hot solution of soap or with another detergent, care being taken to wash away the last traces with scalding hot water. If a source of steam is available, the instruments may receive a final cleansing in a jet of steam. Finally, the operator should ensure that the apparatus is thoroughly dry.

Throughout the sampling operation the operator should have clean hands.

Sampling should be carried out in such a manner as to protect the samples, the material being sampled, the sampling instruments and the containers in which the samples are placed, from adventitious contamination, such as by rain, dust, etc.

Material adhering to the outside of the sampling instrument should be removed before the contents are discharged. The sampling instruments should be emptied and cleaned immediately after sampling.

4. CONTAINERS FOR SAMPLES

For liquid samples, the containers used should be either bottles of colourless or amber glass, or metal cans. For pastes, mixtures of liquids and solids, or solids, wide-mouth metal cans or glass jars should be used. In any case, the container and its stopper should be of a material which will not contaminate the sample.

Bottles and jars of colourless glass have the advantage that their cleanliness can be visually checked and also that they enable a check to be made easily on whether the sample contains free water or other impurities. Bottles and jars of amber glass provide only a relative protection against the action of light; for materials particularly sensitive to the action of light, complete protection should be obtained by putting the bottle or jar in a cardboard box or by covering it with black paper.

Galvanized or aluminium cans or stoppers should not be used for the sampling of volatile alcoholic materials. Glass bottles and jars should be closed either by cork or glass stoppers or by screw caps. In the case of metal cans intended for liquids, only screw caps should be used. For other metal cans, either a screw cap or a suitable lid providing a tight closure should be used. Rubber stoppers should not be used. Cork stoppers should be of good quality, clean and devoid of cracks or pieces of cork which are liable to become detached. Contact between cork and sample should be prevented by covering the stopper with tin or aluminium foil* before inserting it in the bottle or jar, unless otherwise directed. If bottles or jars with ground glass stoppers are used, their freedom from leakage should be checked. Screw caps are more satisfactory if protected by a cork disk covered with tin or aluminium foil*, or any other material which cannot contaminate the sample.

5. SAMPLING INSTRUMENTS

5.1 Types and construction

To make sure that the sampling instruments will not be attacked by the products, and that they can be easily cleaned, they should be made of stainless steel, brass or glass**, and should have smooth surfaces, without folds or grooves. Examples of suitable instruments are described below; those for sampling liquids are illustrated in Figures 1 to 10, and those for sampling solids in Figure 11.

* Aluminium foil should not be used with alcoholic materials. Polytetrafluorethylene foil can generally be used.

** Copper-bearing metals should not be used when sampling vegetable oils.