
INTERNATIONAL STANDARD



3165

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

Sampling of chemical products for industrial use — Safety in sampling

Échantillonnage des produits chimiques à usage industriel — Sécurité dans l'échantillonnage

First edition — 1976-06-15

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UDC 661 : 620.113 : 543.05 : 658.382.3

Ref. No. ISO 3165-1976 (E)

Descriptors : chemical compounds, sampling, safety.

Price based on 6 pages

ISO 3165:1976 • <https://standards.iteh.ai/catalog/standards/iso/297329e6-6c4e-40aa-91b2-4c04f6841f71/iso-3165-1976>

FOREWORD

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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 3165 was drawn up by Technical Committee ISO/TC 47, *Chemistry*, and circulated to the Member Bodies in July 1973.

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

Australia	Hungary	South Africa, Rep. of
Austria	India	Spain
Belgium	Ireland	Switzerland
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Chile	Italy	Turkey
Czechoslovakia	Netherlands	United Kingdom
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No Member Body expressed disapproval of the document.

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Sampling of chemical products for industrial use — Safety in sampling

0 INTRODUCTION

In some cases the act of taking a sample exposes the sampler to a risk of personal injury or may risk the creation of hazardous conditions endangering the safety of others. This International Standard is intended to assist those engaged in sampling or in directing the activities of samplers, and also those responsible for premises within which a sampling operation is performed, to ensure that sampling shall be a safe operation.

Attention is also directed to the existence of legislation regulating the carriage of dangerous goods, and users of this International Standard should ensure compliance with these requirements and with those imposed by the carriers.

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives recommendations relating to safety in the sampling of chemical products for industrial use.

2 GENERAL RECOMMENDATIONS

2.1 The following recommendations apply to all sampling operations whatever the nature of the material being sampled. The operator should have :

- safe access to and from the place where the sample is taken, and
- a safe working place with adequate light and ventilation.

Sampling points in fixed installations should be arranged to satisfy these needs as well as any special conditions arising from the nature of the material being sampled. Precautions shall be taken against falls when the sample is withdrawn from the top of a tank or tank vehicle and against the collapse of stacked containers or solids in bulk.

2.2 If the material being sampled is itself hazardous, the following general recommendations apply :

2.2.1 The sampling operation shall be carried out in such a manner as not to prejudice the security of the bulk.

This applies particularly to the sampling of fluids through cocks where the seizure of the cock in an open position could lead to the escape of large quantities of the fluid. It is recommended that the devices used for such sampling be

arranged so as to limit the total quantity drawn at any one time and to restrict the rate of flow to a convenient value.

In the case of liquids, it is reasonable to assume that spillages will occur and to provide both a drained trough and a tundish to trap spilt liquids safely and a permanent splash guard to protect the sampler.

For liquids and gases, provision shall be made whenever possible for isolating the sample point from the bulk or line by a valve near to, but not immediately adjacent to, the sample point so that in the event of an accident the flow may be controlled from a safe place.

In all cases it is part of the sampler's task to ensure satisfactory re-closure by appropriate personnel of all opened packages and sample points.

2.2.2 When it is necessary to purge or rinse a sample container with the material to be sampled, and this material presents a hazard, then appropriate facilities shall be provided for the disposal of material used in purging. Gases should be vented away from the vicinity of the sampler and other personnel.

2.2.3 The size of the sample and the frequency of sampling shall not be greater than are necessary for the examination proposed.

2.2.4 The sample in its container shall be carried in a suitable carrier designed and constructed to facilitate handling and to minimize the risk and consequences of breakage of the sample container.

2.2.5 The equipment, including all tools and containers, shall be compatible with the material being sampled and suitable for the intended purpose. For example, the sample container shall be capable of tight closure and shall be fitted with a pressure release. Samples shall be kept away from other chemical products liable to interact with them.

2.2.6 Before sampling, or as soon as possible, mark the container to indicate the nature of the material and the risks associated with it.

2.2.7 The person taking the sample shall be made fully aware of the nature of the hazards involved and the precautions to be taken. He shall be instructed in the use of all appliances provided for his safety, including fire extinguishers, protective goggles and clothing, etc. He shall