International Standard 6629

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Chromium ores and concentrates — Methods of chemical analysis — General instructions

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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 6629 was developed by Technical Committee ISO/TC 65, *Manganese and chromium ores*, and was circulated to the member bodies in February 1980.

It has been approved by the member bodies of the following countries :

Australia	France	Poland
Austria	Hungary	Portugal
Bulgaria	India	Romania
China	Italy	South Africa, Rep. of
Czechoslovakia	Japan	United Kingdom
Egypt, Arab Rep. of	Korea, Dem. P. Rep. of	USSR

No member body expressed disapproval of the document.

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Chromium ores and concentrates — Methods of chemical analysis — General instructions

1 Scope and field of application

This International Standard gives general instructions concerning the methods of chemical analysis of chromium ores and concentrates.

2 Reference

ISO 6129, *Chromium ores — Determination of hygroscopic moisture content in analytical samples — Gravimetric method.*[1]

3 General instructions

3.1 Reagents

3.1.1 All the reagents used shall be of recognized analytical grade.

3.1.2 Distilled or deionized water shall be used in the preparation of reagents and throughout the analysis and redistilled or deionized water shall be used in the determination of trace element contents.

3.1.3 Before solutions are diluted to the mark in volumetric flasks, their temperature shall be brought to 20 °C.

3.1.4 The expression "hot water (or solution)" means that the temperature of the liquid is greater than 60 °C, unless otherwise specified. The expression "warm water (or solution)" means that the temperature of the liquid is within the range 40 to 60 °C.

3.1.5 In the expressions "diluted 1 + 1, 1 + 2, 1 + 5, etc.", the first figure indicates the number of parts by volume of concentrated solution; the second, the number of parts by volume of water.

3.1.6 The concentrations of solutions are expressed in one of the following forms :

a) % (m/m), meaning the mass, in grams, of component in 100 g of solution;

b) g/l, meaning the number of grams of component in 1 litre of solution;

c) % (V/V), meaning the volume, in millilitres, of component in 100 ml of solution;

d) mol/l, meaning the amount-of-substance concentrations with the unit mole per cubic decimetre (mol/dm^3) or mole per litre (mol/l).

3.1.7 In each run, the standardization of a standard volumetric solution shall be carried out by not less than three titrations.

3.2 Apparatus

3.2.1 Weighing shall be carried out on an analytical balance to the nearest 0,000 2 g.

3.2.2 The weighing device and laboratory measuring equipment (pipettes, burettes, volumetric flasks, thermometers, etc.) shall be verified and appropriate corrections shall be made during the calculation of the analytical results.

3.2.3 Cells for measurement of the absorbance of coloured solutions shall be chosen so that measurements may be carried out in the optimum range of absorbance.

3.3 Sample[2]

Analysis shall be carried out on an air-dried sample or the sample dried at 105 to 110 °C.

1) At present at the stage of draft.

2) International Standards on the sampling of chromium ores, and on the preparation of samples, are in preparation.