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# INTERNATIONAL STANDARD



# 853

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

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## Sodium tripolyphosphate and sodium pyrophosphate for industrial use — Determination of loss on ignition

*Tripolyphosphate et pyrophosphate de sodium à usage industriel — Détermination de la perte au feu*

First edition — 1976-11-01

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**Descriptors** : sodium tripolyphosphates, sodium pyrophosphates, chemical analysis, measurement, loss on ignition.

## 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.

Prior to 1972, the results of the work of the technical committees were published as ISO Recommendations; these documents are in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47, *Chemistry*, has reviewed ISO Recommendation R 853-1968 and found it technically suitable for transformation. International Standard ISO 853 therefore replaces ISO Recommendation R 853-1968, to which it is technically identical.

ISO Recommendation R 853 had been approved by the member bodies of the following countries :

Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
Brazil	Japan	Switzerland
Bulgaria	Korea, Dem. P. Rep. of	Thailand
Czechoslovakia	Korea, Rep. of	Turkey
Egypt, Arab Rep. of	Morocco	United Kingdom
France	Netherlands	U.S.S.R.
Germany	New Zealand	Yugoslavia
Hungary	Poland	
India	Romania	

No member body had expressed disapproval of the Recommendation.

No member body disapproved the transformation of the Recommendation into an International Standard.

# Sodium tripolyphosphate and sodium pyrophosphate for industrial use — Determination of loss on ignition

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the loss on ignition of sodium tripolyphosphate (*pentasodium triphosphate*) and sodium pyrophosphate (*tetrasodium diphosphate*) for industrial use.

## 2 PRINCIPLE

Ignition of a test portion at  $550 \pm 25$  °C to constant mass.

## 3 APPARATUS

Ordinary laboratory apparatus and

**3.1 Porcelain crucible**, of diameter approximately 25 mm.

**3.2 Electric furnace**, capable of being controlled at  $550 \pm 25$  °C.

## 4 PROCEDURE

### 4.1 Test portion

Weigh, to the nearest 0,001 g, approximately 5 g of the test sample, into the porcelain crucible (3.1) previously ignited at 550 °C, cooled in a desiccator and weighed to the nearest 0,000 1 g.

### 4.2 Determination

Place the crucible containing the test portion (4.1) in the furnace (3.2), start heating and progressively raise the temperature to  $550 \pm 25$  °C. Maintain at this temperature

for about 1 h. Then remove the crucible from the furnace, place in a desiccator, allow to cool and weigh to the nearest 0,000 1 g. Repeat the heating at  $550 \pm 25$  °C until constant mass is reached, i.e. until two consecutive weighings do not differ by more than 0,000 2 g.

## 5 EXPRESSION OF RESULTS

The loss on ignition is given, as a percentage by mass, by the formula

$$\frac{m_1 - m_2}{m_0} \times 100$$

where

$m_0$  is the mass, in grams, of the test portion (4.1);

$m_1$  is the mass, in grams, of the crucible and test portion before ignition;

$m_2$  is the mass, in grams, of the crucible and test portion after ignition.

## 6 TEST REPORT

The test report shall include the following particulars :

- the reference of the method used;
- the results and the method of expression used;
- any unusual features noted during the determination;
- any operation not included in this International Standard or regarded as optional.