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ISO RECOMMENDATION

R 851

SODIUM TRIPOLYPHOSPHATE FOR INDUSTRIAL USE

Measurement of pH

Potentiometric method

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 851, *Sodium tripolyphosphate for industrial use – Measurement of pH – Potentiometric method*, was drawn up by Technical Committee ISO/TC 47, *Chemistry*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question by the Technical Committee began in 1960 and led, in 1966, to the adoption of a Draft ISO Recommendation.

In December 1966, this Draft ISO Recommendation (No. 1112) 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 :

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

No Member Body opposed the approval of the Draft.

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

ISO Recommendation R 851 October 1968

SODIUM TRIPOLYPHOSPHATE FOR INDUSTRIAL USE

Measurement of pH

Potentiometric method

1. SCOPE

This ISO Recommendation describes a potentiometric method for the measurement of the pH value of a solution at a conventional concentration of 10 g/l, of sodium tripolyphosphate for industrial use.

2. PRINCIPLE

Measurement of the pH of a sodium tripolyphosphate solution at a conventional concentration of 10 g/l by means of a pH meter fitted with a glass electrode.

3. REAGENTS

Freshly boiled and cooled distilled water should be used in the test.

3.1 *Sodium tetraborate buffer solution* 0.01 M.

Dissolve 3.81 ± 0.01 g of sodium tetraborate decahydrate ($Na_2B_4O_7.10H_2O$) in water and then dilute to 1000 ml.

The solution should be stored in the absence of atmospheric carbon dioxide and renewed at least once a month.

According to the temperature, this solution gives the following pH values :

°C	pH
15	9.26
20	9.22
25	9.18
30	9.14

The pH change for + 1 degC is equal to – 0.006 pH unit.

3.2 *Sodium tetraborate and sodium hydroxide buffer solution*

Add 100 ml of 0.01 N sodium hydroxide solution to 100 ml of the sodium tetraborate buffer solution (3.1) and mix thoroughly.

According to the temperature, this solution gives the following pH values :

°C	pH
15	9.64
20	9.61
25	9.58
30	9.55

The pH change for + 1 degC is equal to – 0.008 pH unit.