

---

INTERNATIONAL STANDARD



1104

---

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

---

## Surface active agents — Technical sodium alkylarylsulphonates (excluding benzene derivatives) — Methods of analysis

*Agents de surface — Alkylarylsulfonates de sodium techniques (excepté ceux dérivant du benzène) —  
Méthode d'analyse*

First edition — 1977-11-01

NOV 3 - 1977

ANSI Internat Doc Sect

---

UDC 661.185 : 543

Ref. No. ISO 1104-1977 (E)

**Descriptors:** surfactants, sodium alkylarenesulphonates, chemical analysis, determination of content, water, pH, alkalinity, acidity, sodium sulphites, sulphur, sodium sulphates, sodium chloride.

Price based on 8 pages

## 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.

International Standard ISO 1104 was developed by Technical Committee ISO/TC 91, *Surface active agents*, and was circulated to the member bodies in November 1975.

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

Australia	India	South Africa, Rep. of
Austria	Iran	Spain
Belgium	Italy	Switzerland
Brazil	Japan	Turkey
Canada	Mexico	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.A.
France	New Zealand	U.S.S.R.
Germany	Portugal	
Hungary	Romania	

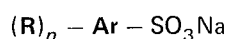
No member body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 1104-1969, of which it constitutes a technical revision.

# Surface active agents – Technical sodium alkylarylsulphonates (excluding benzene derivatives) – Methods of analysis

## 0 INTRODUCTION

Sodium alkylarylsulphonates have the general formula



and are used as surface active agents in a vast range of processes. They are sodium salts of alkylarylsulphonic acids in which the saturated aliphatic radical **R** may have a mean chain length of about 12 carbon atoms; *n* may be equal to 1, 2 or 3 and **Ar** is an aromatic derivative of either toluene or naphthalene.

## 1 SCOPE

This International Standard specifies methods of analysis of technical sodium alkylarylsulphonates. It covers the following determinations :

- Measurement of pH.
- Determination of water content.
- Determination of free alkalinity or free acidity.
- Determination of matter extractable by light petroleum.
- Determination of sodium alkylarylsulphonates content.
- Determination of sodium sulphite content.
- Determination of sodium sulphate content.
- Determination of sodium chloride content.

It also sets out, in annexes

- A : a general scheme of analysis;
- B : a rapid method for the determination of sodium alkylarylsulphonates.

## 2 FIELD OF APPLICATION

This International Standard is applicable to technical sodium alkylarylsulphonates, in paste or powder form, and free from any products extraneous to their manufacture, excluding sodium alkylbenzenesulphonates.

It is not applicable to liquid products as these often contain either solvents or additives or both, which would interfere with the methods of analysis specified in this International Standard.

## 3 REFERENCES

ISO 607, *Surface active agents – Detergents – Methods of sample division.*<sup>1)</sup>

ISO 894, *Surface active agents – Technical sodium primary alkylsulphates – Method of analysis.*

ISO 4314, *Surface active agents – Determination of free alkalinity or free acidity – Titrimetric method.*

ISO 4316, *Surface active agents – Determination of the pH of aqueous solutions – Potentiometric method.*

ISO 4317, *Surface active agents – Determination of water content – Karl Fischer method.*

ISO 4318, *Surface active agents and soaps – Determination of water content – Azeotropic distillation method.*

ISO . . . , *Surface active agents – Determination of sulphate content – Titrimetric method.*<sup>2)</sup>

## 4 SAMPLING

Prepare and store a laboratory sample of approximately 300 g according to the instructions given in ISO 607.

## 5 GENERAL PRINCIPLE<sup>3)</sup>

Preparation of an aqueous alcoholic solution of a test portion, from which are isolated the products extractable by light petroleum.

Dilution of an aliquot portion of the remaining liquid with an appropriate quantity of 2-propanol, saturation with anhydrous sodium carbonate and separation of the sodium alkylarylsulphonates in solution in 2-propanol by salting out.

1) In preparation. (Revision of ISO/R 607.)

2) In preparation.

3) See the general scheme of analysis in annex A.