BS 6829 : Section 3.1 : 1989
ISO 6841 : 1988

UDC 661.185.1 : 543.2-112

British Standard

Analysis of surface active agents (raw materials)

Part 3. Sodium alkylbenzenesulphonates

Section 3.1 Method for determination of mean relative molecular mass

[ISO title: Surface active agents — Technical straight-chain sodium alkylbenzenesulfonates — Determination of mean relative molecular mass by gas-liquid chromatography]

Analyse des agents de surface (matières premières)
Partie 3. Alkylbenzènes sulfonates de sodium
Section 3.1 Méthode de détermination de la masse moléculaire relative moyenne

Analyse von Tensiden (Rohstoffe)
Teil 3. Natriumalkylbenzensulfonate
Abschnitt 3.1 Verfahren zur Bestimmung der mittleren relativen Molmasse

British Standards Institution

Contents

National foreword

This Section of BS 6829 has been prepared under the direction of the Chemicals Standards Committee. It is identical with ISO 6841 : 1988 'Surface active agents — Technical straight-chain sodium alkylbenzenesulfonates — Determination of mean relative molecular mass by gas-liquid chromatography', published by the International Organization for Standardization (ISO).

This Section of BS 6829 supersedes BS 6829 : Section 3.1 : 1987 which is withdrawn.

The principal difference between this Section of BS 6829 and the 1987 edition is that attention is drawn to the fact that minor cyclic derivatives and branched-chain alkylbenzenes present are not taken into account in the calculation.

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

The symbol 'l' has been used to denote litre (and in its submultiples). In British Standards it is current practice to use the symbol 'L'.

In British Standards it is current practice to use the spelling 'sulphur', etc., instead of 'sulfur', etc.

Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Section of BS 6829'.

Cross-reference

International standard	Corresponding British Standard
ISO 607 : 1980	BS 3762 Analysis of formulated detergents Part 1 : 1983 Methods of sample division (Identical)

Additional information. With reference to clause **4**, water complying with grade 3 of BS 3978 'Specification for water for laboratory use' is suitable. With reference to **4.1**, the acid required is orthophosphoric acid.

This Section describes a method of test only and should not be used or quoted as a specification defining limits of purity. Reference to this Section should indicate that the method of test used is in accordance with BS 6829 : Section 3.1.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

British Standard

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Introduction

When using the two-phase titration for the determination of anionic active matter content, it is necessary to know the mean relative molecular mass of the substance.

An accurate and rapid method consists of determining by gas-liquid chromatography (GLC) the mean relative molecular mass of the alkylbenzene used to manufacture the monosulfonated products; the relative molecular mass of the respective monosulfonate or monosulfonic acid can then be calculated by adding the relative molecular mass of the SO_3Na group minus Na, or that of the SO_3H group minus H.

The GLC technique is only applicable to straight-chain alkylbenzenes, since branched-chain types will give chromatograms from which it is impossible to identify and to calculate the relative molecular mass for individual chains.

NOTE — Any ortho-fused polycyclic hydrocarbon derivatives of low relative molecular mass present, such as indan, and tetrahydronaphthalene, as well as branched-chain alkylbenzenes, are not taken into account in the calculation of the relative molecular mass of the technical straight-chain sodium alkylbenzenesulfonate analysed.