

**SLOVENSKI STANDARD**  
**SIST EN ISO 4259-1:2018/oprA1:2019**  
**01-maj-2019**

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**Nafta in sorodni proizvodi - Natančnost merilnih metod in rezultatov - 1. del:  
Določevanje natančnosti preskusnih metod - Dopolnilo 1 (ISO 4259-1:2017/DAM  
1:2019)**

Petroleum and related products - Precision of measurement methods and results - Part 1: Determination of precision data in relation to methods of test - Amendment 1: Test result validity process is to be moved into a separate reporting limit instruction (ISO 4259-1:2017/DAMd 1:2019)

Mineralölerzeugnisse - Präzision von Messverfahren und Ergebnissen - Teil 1: Bestimmung der Präzisionsdaten von Prüfverfahren - Änderung 1 (ISO 4259-1:2017/DAM 1:2019)

Produits pétroliers et connexes - Fidélité des méthodes de mesure et de leurs résultats - Partie 1: Détermination des valeurs de fidélité relatives aux méthodes d'essai - Amendement 1 (ISO 4259-1:2017/DAMd 1:2019)

**Ta slovenski standard je istoveten z: EN ISO 4259-1:2017/prA1**

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**ICS:**

75.080	Naftni proizvodi na splošno	Petroleum products in general
75.180.30	Oprema za merjenje prostornine in merjenje	Volumetric equipment and measurements

**SIST EN ISO 4259-1:2018/oprA1:2019 en,fr,de**

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# DRAFT AMENDMENT

## ISO 4259-1:2017/DAM 1

ISO/TC 28

Secretariat: NEN

Voting begins on:  
2019-03-12Voting terminates on:  
2019-06-04

### Petroleum and related products — Precision of measurement methods and results —

Part 1:

### Determination of precision data in relation to methods of test

AMENDMENT 1: Test result validity process is to be moved into a separate reporting limit instruction.

*Produits pétroliers et connexes — Fidélité des méthodes de mesure et de leurs résultats —*

*Partie 1: Détermination des valeurs de fidélité relatives aux méthodes d'essai*

AMENDEMENT 1

ICS: 75.080

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**ISO/CEN PARALLEL PROCESSING**



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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*.

This document amends the first edition of ISO 4259-1, following several mistakes observed in text during the last ballot phase that required updating.

A list of all parts in the ISO 4259 series can be found on the ISO website.

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# Petroleum and related products — Precision of measurement methods and results —

## Part 1:

## Determination of precision data in relation to methods of test

AMENDMENT 1: Test result validity process is to be moved into a separate reporting limit instruction.

### 1 Modifications to 5.3.1. Transformation of data and outlier tests

Replace the whole third subclause with the following:

"If the points so plotted can be considered as lying about a pair of lines parallel to the  $m$ -axis, then no transformation is necessary. If, however, the plotted points describe non-horizontal straight lines or curves of the form  $D = f_1(m)$  and  $d = f_2(m)$ , then a transformation is necessary"

with:

"Perform linear regression of  $D$  vs  $m$  and of  $d$  vs  $m$  to obtain the following linear relationship:

$$D = b_0 + b_1 \times m; d = b_0 + b_1 \times m \quad (3)$$

where  $b_0$  represents the constant term and  $b_1$  represents the slope.

In both cases, test whether the value of  $b_1$  is statistically different from zero (0) at 5 % significance level. If  $b_1$ 's from both regressions is not statistically different from zero, no transformation is required. Proceed to section 5.3.2 directly and continue.

If, however, at least one of the values for  $b_1$  is significant, or if the plotted points are curves of the form  $D = f_1(m)$  and  $d = f_2(m)$ , then a transformation is necessary. Proceed as follows:"

*And renumber all formulae and references thereto beyond this section.*

*Under the actual Formula (3) replace:*

"where  $K$  is a constant"

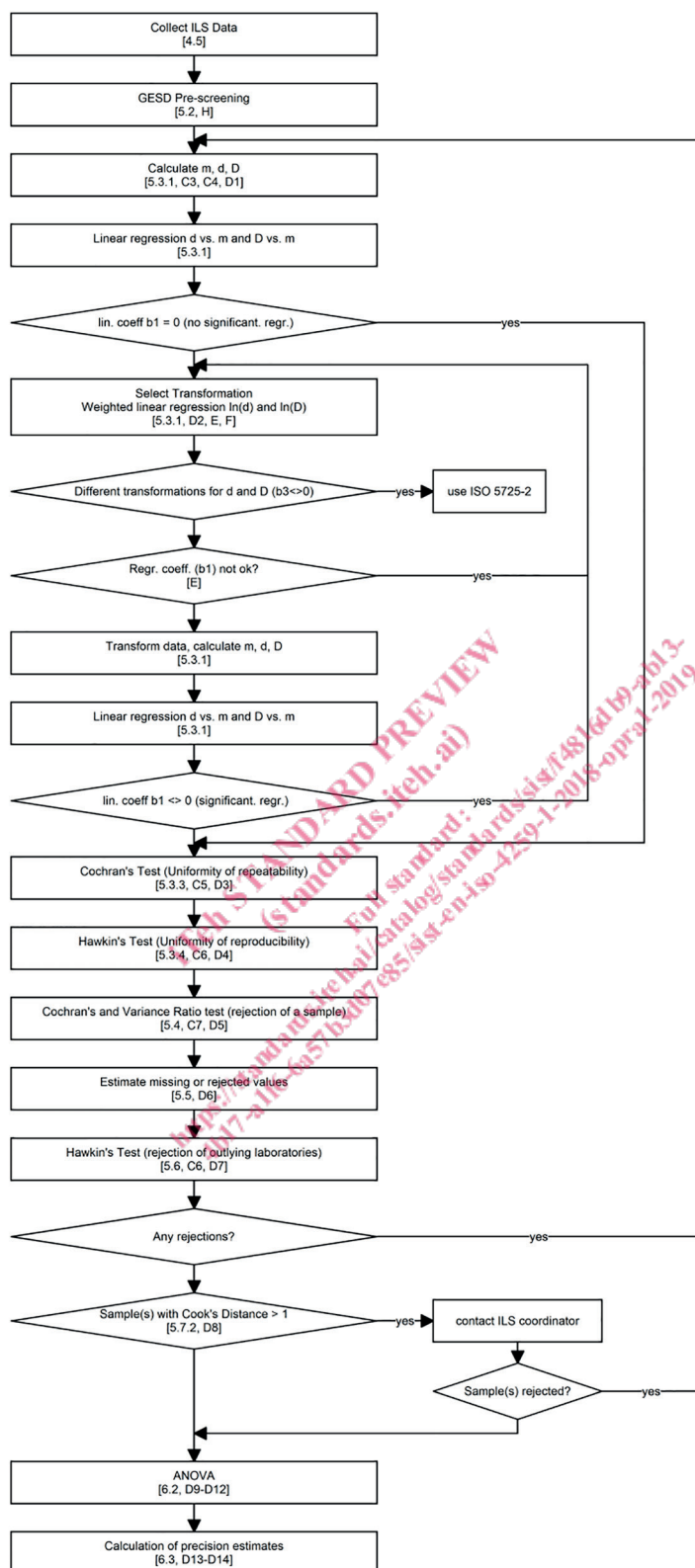
with:

"where  $K$  is a constant".

### 2 Modification to Figure 1 Transformation and outlier procedure

Replace Figure 1 with the following:

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### 3 Modification to 6.3.2 Expectation of mean squares with estimated values

Replace the explanation under the three formulae:

$$T_2 = 2 \frac{(L_N - S')}{L' - 1} \quad \beta = 2 \frac{(K - S')}{(L' - 1)}$$

with:

$$\beta = 2 \frac{(L_N - S')}{L' - 1} \quad \text{or otherwise } \beta = 2 \frac{(K - S')}{(L' - 1)}$$

### 4 Modification to 6.3.3.2 Reproducibility

Replace in the explanation of  $r_1$ ,  $r_2$  and  $r_3$  under formula (19):

"are the three successive terms in Formula (18), i.e.:"

with

"are the three successive terms in Formula (19), i.e.:"

### 5 Modification to 6.4.3

Replace the second sentence:

"At minimum, the summary description shall include the number of laboratories, number and type of materials studied, and range of the measured average property levels"

with:

"At minimum, the summary description shall include the number of laboratories, number and type of materials studied, range of the measured average property levels, and the achieved degrees of freedom for  $r$  and  $R$ ".

### 6 Modification to 6.5 Specification of scope for the test method

Replace the first sentence of the 2<sup>nd</sup> paragraph:

"The lower limit of the scope of the test method shall be the larger of lowest sample mean tested in the ILS or lowest achievable result +  $2^*R$ , where  $R$  is evaluated at the lowest sample mean"

with:

"The lower limit of the scope of the test method shall be the larger of lowest retained sample mean tested after completion of the statistical analysis, or lowest achievable result +  $2^*R$ , where  $R$  is evaluated at the lowest retained sample mean."

Delete at the end of the 2<sup>nd</sup> paragraph the whole sentence:

"Due to testing variation, the lowest acceptable single result that is deemed as a valid result of the test method shall be lower method scope limit -  $1,2^*R$ , where  $R$  is evaluated at the low method scope limit value".

Rewrite the first sentence of the 3<sup>rd</sup> paragraph:

"Similarly, the upper limit of the scope of a test method shall be the lesser of highest sample mean tested in the ILS or highest achievable result -  $2R$ , where  $R$  is evaluated at the highest sample mean"