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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

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

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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*.

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5.3.1, third paragraph in total

Replace

"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 versus m and of d versus m to obtain the following linear relationship:

$$D = b_0 + b_1 \times m; \; d = b_0 + b_1 \times m \tag{3}$$

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 from each regression 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 subclause.
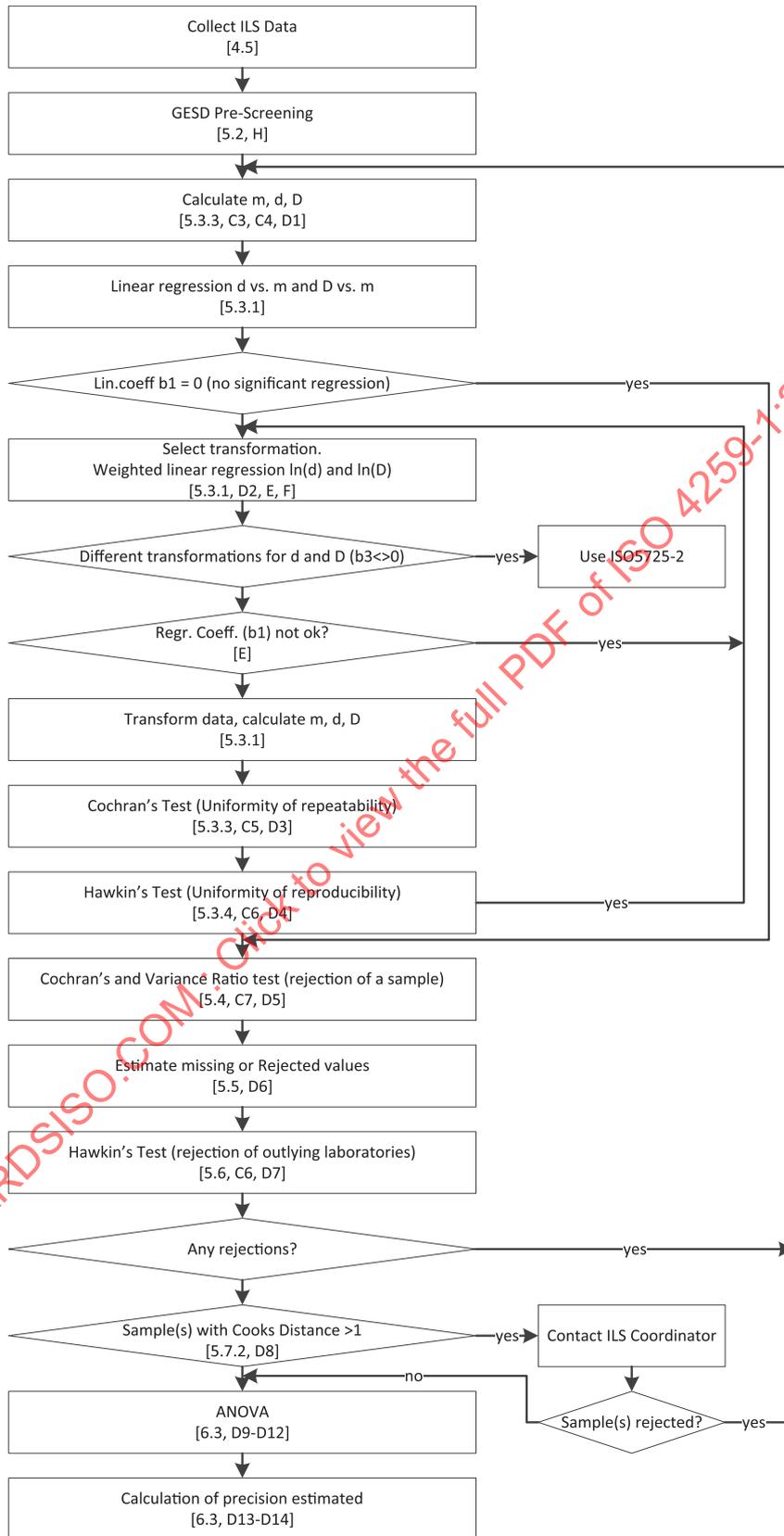
Formula (3)

Replace

"where *K* is a constant"

with:

"where K is a constant".

Figure 1

Replace the Figure with the following:

6.3.2, explanation under the three formulae

Replace

$$\text{"}I2 = 2\frac{(L_N - S')}{L' - 1} \quad \beta = 2\frac{(K - S')}{(L' - 1)}\text{"}$$

with:

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

6.3.3.2, explanation of r_1, r_2 and r_3 under Formula (19):

Replace

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

with

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

6.4.3, second sentence

Replace:

"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".

6.5, first sentence of the 2nd paragraph:

Replace

"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 + 2R, 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 + 2R, where R is evaluated at the lowest retained sample mean."

6.5, end of the 2ⁿᵈ paragraph the whole sentence:

Delete

"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".

6.5, first sentence of the 3ʳᵈ paragraph:

Replace

"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"

with:

"Similarly, the upper limit of the scope of a test method shall be the lesser of highest retained sample mean or highest achievable result – 2R, where R is evaluated at the highest retained sample mean.

6.5, end of the 3ʳᵈ paragraph the whole sentence:

Delete "Due to testing variation, the highest acceptable single result that is deemed as a valid result of the test method shall be higher method scope limit + 1,2*R, where R is evaluated at the high method scope limit value".

New subclause 6.6

Introduce subclause 6.6. Reporting limits instruction for the test method:

"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 lowest retained sample mean value (see 6.5).

Similarly, the highest acceptable single result that is deemed as a valid result of the test method shall be higher method scope limit +1,2R, where R is evaluated at the highest retained sample mean value (see 6.5).

A statement shall be included in the test method indicating the range of acceptable test result values that are deemed to be valid based on the above."

Table F.2, second column all indicators for variables

Replace

"B"

with:

"b".