

DIN EN 17181:2019-05 (E)

Lubricants - Determination of aerobic biological degradation of fully formulated lubricants in an aqueous solution - Test method based on CO₂-production

Contents		Page
European foreword		3
Introduction		4
1 Scope		5
2 Normative references		5
3 Terms and definitions		5
4 Principle		8
5 Test environment		8
6 Reagents		8
7 Apparatus		9
8 Procedure		10
8.1 Preparation of mineral medium		10
8.2 Preparation of the test volumes		10
8.2.1 Test sample		10
8.2.2 Reference compound		11
8.2.3 Inhibition control		11
8.2.4 Elimination control		11
8.3 Preparation of the inoculum		11
8.3.1 General		11
8.3.2 Inoculum from an activated sludge plant		11
8.3.3 Pre-conditioning		11
8.3.4 Pre-exposure		11
8.4 Test		12
Table 1 -- Overview on the desired final test matrix		12
9 Calculation and reporting of results		13
9.1 Theoretical amount of CO ₂ released from test sample		13
9.2 Percentage biodegradation		13
9.3 Expression of results		14
10 Validity and precision		14
10.1 Validity		14
10.2 Precision		15
10.2.1 General		15
10.2.2 Repeatability		15
10.2.3 Reproducibility		15
11 Test report		15
Annex A (informative) Comparison table of most common mineralisation methods		17
Annex B (informative) Sample insertion		22

Annex C (informative) Specification of reference compound High Oleic Reference Oil (HORO)	24
Annex D (informative) Example of degradation curves	25
Figure D.1 -- Example of degradation curve	25
Bibliography	26