

Accompanying document for ISO 16140-5:2020, 5.4.3 'Calculation of RLOD'

Instructions for use of the Excel tools:

RLOD_MCS_clause_5-1-4-2_V3_2015-08-15.xlsm

RLOD_inter-lab-study_16140-2_AnnexF_ver1_28-06-2017.xls

RLOD per food item

The following example demonstrates the use of the multi-lab tool **RLOD_inter-lab-study_16140-2_AnnexF_ver1_28-06-2017.xls** tool in the case of 5 laboratories:

A	B	C	D	E	F
RLOD calculation program for comparing labor Information on the RLOD calculation for comparing laboratories/methods and the underlying equations c. This Excel program is distributed in the hope that it will be useful, but without any warranty. It can't There you have also the possibility to subscribe to a newsletter informing about u					
General information on the trial and data for generating the input tables					
Microorganism		Matrix		Date of experiment	
xy		xy		xy	
Sample size <i>s</i> in g or ml		No. of laboratories		No. of inoculation levels	
1		5		3	

Input data					
Laboratory 1	Designation:				
Reference method			Alternative method		
Inoculation level in cfu per gram of sample	No. of inoculated samples	No. of positive samples	Inoculation level in cfu per gram of sample	No. of inoculated samples	No. of positive samples
0.0	8	0	0.0	8	0
0.8	32	17	0.8	32	12
10.0	8	8	10.0	8	8
Laboratory 2 Designation:					
Reference method			Alternative method		
Inoculation level in cfu per gram of sample	No. of inoculated samples	No. of positive samples	Inoculation level in cfu per gram of sample	No. of inoculated samples	No. of positive samples
0.0	8	0	0.0	8	0
0.8	32	18	0.8	32	23
10.0	8	8	10.0	8	8

Factorial analysis

"In addition, effects of the individual factors (e.g. technician) and of the interactions between factors (e.g. culture medium and incubation conditions) can be calculated from the factorial design based on the RLOD values calculated for each laboratory."

The single-lab tool **RLOD_MCS_clause_5-1-4-2_V3_2015-08-15.xlsm** can be used as follows:

With 5 laboratories and 2 levels per factor, there are 10 RLOD calculations to perform **per factor**.

The multi-lab tool **RLOD_inter-lab-study_16140-2_AnnexF_ver1_28-06-2017.xls** only gives one RLOD result per data entry. Hence, the RLOD values must be calculated separately for each lab, each factor and each factor level.