

## Accompanying document for ISO 16140-4:2020, 5.1.1.4 'Calculation and interpretation of the RLOD'

Instructions for use of the ISO Excel tool RLOD\_MCS\_clause\_5-1-4-2\_V3\_2015-08-15.xlsm

### RLOD per food category

*"Calculations based on all results of the factorial comparison study per (food) category shall be conducted in accordance with ISO 16140-2:2016, 5.1.4.2."*

Comprehensive instructions are provided in the "Help" worksheet.

For the purpose of illustration and clarification, an example is provided for the computation of RLOD, separately per food type. This approach permits a separate assessment of method performance per food type. The RLOD for the entire food category is then obtained as the overall value.

A	B	C	D	E	F
Date:	d/m/yy	Name:	<description>		
Sample size:	25	# matrices:	3	# samples:	3
Name: Food type 1					
Level	n <sub>1</sub>	n <sub>2</sub>	Y <sub>1</sub>	Y <sub>2</sub>	
NC	2	2	0	0	
L1	16	16	10	11	
L2	8	8	8	8	
Name: Food type 2					
Level	n <sub>1</sub>	n <sub>2</sub>	Y <sub>1</sub>	Y <sub>2</sub>	
NC	2	2	0	0	
L1	16	16	7	8	
L2	8	8	8	8	
Name: Food type 3					
Level	n <sub>1</sub>	n <sub>2</sub>	Y <sub>1</sub>	Y <sub>2</sub>	
NC	2	2	0	0	
L1	16	16	6	6	
L2	8	8	8	8	

### Factorial analysis

*"Effects of the individual factors should be analysed based on the RLOD values calculated for each factor level."*

For the factorial analysis, RLOD must be calculated separately for each factor level. With 4 factors, each with 2 levels, there are 8 different RLOD calculations to perform. Hence, there are 8 "matrices".