

Technical Note Statement

Date: 24/02/2020

Subject: Interpretation of 'Log reduction' in Microbiological Studies

Microbiological test results are often presented as 'Log reductions' rather than as 'Percentage' reductions. This technical note has been prepared to indicate and clarify the association between the two.

- 1 log reduction = 90% reduction
- 2 log reduction = 99% reduction
- 3 log reduction = 99.9% reduction
- 4 log reduction = 99.99% reduction
- 5 log reduction = 99.999% reduction
- 6 log reduction = 99.9999% reduction


The formulas used for the conversion of the Log reduction to a Percentage reduction is presented below:

$$P = (1-10^{-L}) \times 100$$

Where:

P is the percent reduction

L is the Log reduction to be converted.

 24/02/2020
Signed: _____
Teresa Susanto
Sterile Product Testing Manager

 24/02/2020
Signed: _____
Fergus O'Connell
Head of Quality – Eurofins I BPT (AU/NZ)