



Log reduction system	Technical Note:	TM001
	Category:	Disinfect

Log reduction is a mathematical system / term used when testing product efficacy. The system indicates the number of microbes eliminated by the use of a disinfectant. The number of **CFU** (colony forming units) of a given pathogen is counted at the start of testing. The cfu's of the control sample and test sample (using the disinfectant) are recounted after the required test time has elapsed. The difference in CFU between the control and the test sample is then expressed as a log reduction. The below example (based on 1 000 000 cfu's) indicates the difference between various log reductions.

<u>Log Reduction</u>	<u>Number of cfus</u>	<u>Reduction Percentage</u>	<u>Times smaller</u>
0 – log (Log ₀)	1 000 000	0%	N/A
1 – log (Log ₁)	100 000	90%	10
2 – log (Log ₂)	10 000	99%	100
3 – log (Log ₃)	1000	99.9%	1000
4 – log (Log ₄)	100	99.99%	10 000
5 – log (Log ₅)	10	99.999%	100 000
6 – log (Log ₆)	1	99.9999%	1 000 000

Our ECO-VirusX (ECOZYME Virus Gobbler™) detergent-disinfectants achieves a **Log₃** when diluted 1:10 and a **Log₅** or greater reduction undiluted. Products were tested against BS EN 1276:2009 standard and comply when used as directed.