



# Abbott Analytical



Consulting Scientists to the Disinfectant Industry

## Certificate of Analysis

**Sample(s) :** One sample of GreenGold Concentrate

**Received from:** Busy Cleaning Ltd, Charter Court, Phoenix Way, Swansea, SA7 9FS

**Date received:** 19 August 2010      **Date tested:** 15 September 2010

**Certificate no:** 10H.090Lp-KR.CLE      **Certificate date:** 17 September 2010

**Sample ref:** 10H/090      **Page:** 1 of 2

**Analysis required:** EN 13623, Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity against *Legionella pneumophila* of chemical disinfectants for aqueous systems - Test method and requirements (phase 2, step 1)

  

**Product stored at:** Room temperature

**Active substance:** Not declared

**Test conditions:** N/A

**Interfering substance:** 0.0005% yeast extract

**Product test concentration:** 20% v/v

**Product diluent used during test:** Sterile hard water 300mg/l CaCO<sub>3</sub>

**Contact time:** 60 minutes

**Test temperature:** 30°C ± 0.5°C

**Neutralising solution:** 30g/l polysorbate 80, 3g/l lecithin, 1g/l histidine, 1g/l cysteine

**Incubation temperature:** 37°C ± 1°C

**Identification of bacterial strain(s) used:** *Legionella pneumophila*      NCTC 12821

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## Test results:

Test Organism	<i>Legionella pneumophila</i>	
Validation Suspension (N <sub>v</sub> )	Vc1 308	Vc2 244
	$\bar{x} = 276$	
Experimental Control (A)	Vc1 272	Vc2 206
	$\bar{x} = 239 \geq 0.5N_{v_0}$	
Neutraliser Control (B)	Vc1 234	Vc2 252
	$\bar{x} = 243 \geq 0.5N_{v_0}$	
Method Validation (C)	Vc1 218	Vc2 242
	$\bar{x} = 230 \geq 0.5N_{v_0}$	
Test Suspension (N)	10 <sup>-6</sup> Vc1 258	Vc2 216
	10 <sup>-7</sup> Vc1 28	Vc2 32
	$\bar{w} = 2.43 \times 10^8$	
	lg N = 8.39	
(N <sub>0</sub> = 0.1N)	lg N <sub>0</sub> = 7.39	
Results (Na)	10 <sup>0</sup> Vc1 <14	Vc2 <14
	10 $\bar{x}$ < 140	
	lg Na < 2.15	
	lg R > 5.24	
Pass: lg R ≥ 4	PASS	

Vc = plate count per ml  
 $\bar{x}$  = average of Vc1 and Vc2  
 $\bar{w}$  = weighted mean of  $\bar{x}$   
R = reduction (lg R = lg N<sub>0</sub> - lg Na)

## Conclusion:

This batch of GreenGold Concentrate, when diluted to 20% v/v, passes the requirements of EN 13623 for bactericidal activity against *Legionella pneumophila* in 60 minutes at 30°C.

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