

Water Quality Report

Client	Kieron Vorster
Site	4B Beech Grove Epsom Downs Surrey KT18 5UD
Visit	EcoloBlue Water Quality Monitoring Visit 2.
Visit date	19 th November 2007
By	Dean Francis BSc (Hons) MWMSoc
Reported by	Dean Francis BSc (Hons) MWMSoc

Prepared by

Aqua Legion UK Ltd
Suite 335
Kemp House
152-160 City Road
London
EC1V 2NX

Tel: +44 (0) 20 8555 3797
Fax: +44 (0) 20 8555 3797
enquiries@aqualegion.com
www.aqualegion.co.uk

November 2007

EcoloBlue – Atmospheric water vend machine

1. Summary

We are pleased to report that microbial examination of the water supplied from the EcoloBlue chilled water vend machine returned generally acceptable water quality with an absence of coliform bacteria, Escherichia Coli and Pseudomonas bacteria. Total bacteria counts were recorded above the Water Supply (Water Quality) Regulations 1989 used by Aqua Legion UK to indicate optimum drinking water quality.

However, limits set on total bacteria colony counts in drinking water have been removed from the current Water Supply (Water quality) Regulations 2000. Results obtained are therefore regarded as acceptable.

A sample was also collected from the mains water services for comparison purposes. Microbial examination of the water supplied from the mains water services also returned acceptable water quality with the absence of coliform bacteria, Escherichia Coli and Pseudomonas bacteria. Total colony counts obtained from the mains water tap were recorded above the Water Supply (Water Quality) Regulations 1989 used by Aqua Legion UK to indicate optimum drinking water quality. However it should be noted that total colony counts were recorded below the results obtained from the EcoloBlue vend machine.

The mains water supply will typically have a background concentration of chlorine and other chemicals present to aid microbial quality. It is likely that chemical examination of the mains water supply would return significantly higher levels of dissolved solids and other compounds than levels returned from the EcoloBlue machine. In total comparison of chemical and microbial quality it is possible that the EcoloBlue machine would match or be superior in provision of drinking water quality.

It is therefore in our opinion that with a regular and adequate cleaning procedure for the EcoloBlue vending machine that a superior water quality could be produced. This can be demonstrated when assessing and comparing both the microbial and chemical quality of the waters produced from each service.

Suitable hot and cold water temperature measurements were recorded from the machine and mains water service with the cold below the 20°C guideline maximum and hot water well above 70°C.

2. Recommendations

It is recommended that a set of formal written cleaning procedures be drafted for the routine maintenance of the machine. These procedures should be followed to ensure suitable water quality is maintained and issued with any sale of a machine.

It is also recommended that a programme of routine quarterly cleaning and sampling be included or recommended in the sale of the machine. Particularly to commercial clients as this would help to ensure a good level of water quality is always maintained. Where bottled water is usually purchased for commercial premises, the cost savings realised by using the EcoloBlue machine could be used to implement the routine maintenance and sampling programme for the Machine. This also ensures routine water quality maintenance tasks are carried out wherever the EcoloBlue machine is. This will further help to build a safety ethic into the business or brand.

EcoloBlue – Atmospheric water vend machine

3. Examination of Services

Examination of the vend machine outlet showed it to be in a visibly clean condition with no scale or other deposits identified.

4. Site Measurements and Analytical Results

Temperature measurements taken, together with the free residual chlorine concentrations, are recorded in Table 1 below.

Location	Temperature (°C)	Free Residual Chlorine (mg/l as Cl₂)
Vend Machine Cold Supply	8.7	<0.2
Vend Machine Hot Supply	82.1	-
Mains water tap	8.9	
<i>HSC Recommendation</i>	<i><20°C and >50°C</i>	-

Table 1, Water Temperature Measurements – EcoloBlue vend Services

Water samples were collected from the mains water service and EcoloBlue vend machine cold water supply for examination by an UKAS accredited laboratory. Laboratory analysis showed generally acceptable microbial quality with no coliform bacteria or Escherichia Coli detected. Psuedomanas bacteria were not detected in any of the samples collected.

Mr Kieron Vorster
4B Beech Grove
Epsom Downs
Surrey
KT18 5UD.

26th November 2007

MICROBIAL EXAMINATION REPORT

Project No.	PN1001
Client:	Kieron Vorster
Site:	Epsom
Samples Collected On:	19 th November 2007
Samples Collected By:	Dean Francis

		Atmospheric water vend machine	Mains Water Supply Service	Drinking Water Guideline Maximum
		S1048	S1049	
Total Colony Counts 48 Hours @ 37°C	colony forming units per ml	97	45	10⁽¹⁾ 1000⁽²⁾ -⁽³⁾
Total Colony Counts 72 Hours @ 20- 22°C	colony forming units per ml	212	14	100⁽¹⁾ 10000⁽²⁾ -⁽³⁾
Total Coliforms	colony forming units per 100ml	0	0	0³
Escherichia coli	colony forming units per 100ml	0	0	0³
Pseudomonas	Colony forming units per 100ml	0	0	0¹

¹ Aqua Legion UK Ltd and *Water Supply (Water Quality) Regulations 1989*

² *Vending machine guideline limits*

³ *Water Supply (Water Quality) Regulations 2000 Maximum Admissible Concentration*

Unless otherwise stated analysis is covered by the laboratory's UKAS accreditation.