

Tristel Rinse Assure

Reducing TVCs down to zero at Neath & Port Talbot Hospital

The Endoscopy Outreach Department at Neath & Port Talbot Hospital uses four QED Washer Disinfectors (WDs) to disinfect medical devices including bronchoscopes, gastroscopes, colonoscopes, cystoscopes and duodenoscopes. The quality of the water going into the washers had been tested in accordance with HTM2030.

Shirley Kivi joined as Decontamination Manager of Abertawe Bro Morgannwg University Health Board in September 2013. When she reviewed rinse water quality testing at Neath & Port Talbot Hospital Endoscopy department, she found endoscopy final rinse water issues.

As a result of water testing changes in February 2013, from a three-day testing regime to the new five-day regime, the department was regularly exceeding the acceptable levels for rinse water; the average was in excess of 100 TVC's (Total Viable Count) per 100ml of sample water.

Shirley explains: "A lot of remedial work had been done such as changing filters, using new flexible tubing and self-disinfecting the WDs with double doses of chlorine tablets, but water testing results did not improve. All the practical changes we could make, we made, but with no resolution. I then met Steve at one of Tristel's water quality presentations in Builth. We got together to talk about the issues that we had at Port Talbot and I found out about Tristel Rinse Assure."



Tristel Rinse Assure is a management system for rinse water in WDs. It provides a continuous supply of CFPP 01-06 and EN15883 compliant rinse water.

Tristel Rinse Assure doses low levels of Tristel's patented chlorine dioxide chemistry into the water used during a WDs decontamination process, ensuring that all water delivered is of the highest quality.

"At the time, nobody had trialled Tristel Rinse Assure. We didn't have anything to lose, so I spoke to my seniors and we gave it a go", says Shirley.

On 11 April 2014, T.E.S.T. engineers installed one Tristel Rinse Assure to dose two of the four QED WDs on bays three and four. Bays one and two continued to operate with the existing filtered mains water configuration to act as control bays. Once the installation of Tristel Rinse Assure was complete, several high dose cycles were run to purge the WDs. Daily samples were taken by the hospital and sent to three laboratories.

Prior to the installation of Tristel Rinse Assure, full water samples were taken by T.E.S.T., Llandough Water Lab and Carmarthen Water Lab to assess the quality of the water that was currently supplied to the four QED WDs. All results showed high TVCs:

Date sample taken:	04-03-2014 (prior to start of trial – testing according to CFPP 5 days)	
	T.E.S.T. results	PASS/FAIL
PT1 BAY 1 (final rinse water)	TVC 704	FAIL (prior to Rinse Assure install)
PT1 BAY 2 (final rinse water)	TVC 408	FAIL (prior to Rinse Assure install)
PT1 BAY 3 (final rinse water)	TVC 992	FAIL (prior to Rinse Assure install)
PT1 BAY 4 (final rinse water)	TVC 672	FAIL (prior to Rinse Assure install)

By 16 April and up to 13 May 2014, all T.E.S.T. water sample test results for bays three and four showed zero TVCs. Llandough Water Lab took water samples from all four bays during the same period. These results showed that in bays one and two there were high TVCs in excess of 100cfu. Bays three and four, the Tristel Rinse Assure bays, passed with no growth detected. Only 5 days after installation, Tristel Rinse Assure had reduced TVCs to zero:

Date sample taken:	16-04-2014 (five days after Rinse Assure installation)	
	T.E.S.T. results	PASS/FAIL
PT1 BAY 1 (final rinse water)	>100CFUs, unable to give ID due to fungal growth	FAIL (control bay)
PT1 BAY 2 (final rinse water)	>100CFUs, unable to give ID due to fungal growth	FAIL (control bay)
PT1 BAY 3 (final rinse water)	TVC 0	PASS (Rinse Assure installed)
PT1 BAY 4 (final rinse water)	TVC 0	PASS (Rinse Assure installed)

Date sample taken:	25-04-2014	
	Llandough Water Lab Results	PASS/FAIL
PT1 BAY 1 (final rinse water)	>100CFUs, unable to give ID due to fungal growth	FAIL (control bay)
PT1 BAY 2 (final rinse water)	>100CFUs, unable to give ID due to fungal growth	FAIL (control bay)
PT1 BAY 3 (final rinse water)	No growth detected	PASS (Rinse Assure installed)
PT1 BAY 4 (final rinse water)	No growth detected	PASS (Rinse Assure installed)

"We were a little bit sceptical, wondering how long these results would last", Shirley says, "but results continued and still continue to be good. Hence the reason we bought a system before the trial had even finished. We were convinced that Tristel Rinse Assure would prove its efficacy, so we went on to buy a second Tristel Rinse Assure system not long after."

Shirley also considered UV disinfection. The original plan was to connect Tristel Rinse Assure with two of the four WDs and connect UV disinfection with the remaining two. "Eventually we decided not to, because once we got Tristel Rinse Assure in it was doing such a good job. We didn't know how efficient the UV system was going to be." Overall, the implementation of Tristel Rinse Assure ran smoothly. "Even though we are a PFI, installing Tristel Rinse Assure didn't create any additional costs because no drilling or plumbing was required."

The second Tristel Rinse Assure system was installed in Bridgend, where it replaced an RO system. In Neath Port Talbot it had replaced filtered mains water. "I would absolutely recommend Tristel Rinse Assure. It does what it says on the tin and it solved our problems", Shirley says. "Steve from Tristel and Andy at T.E.S.T. have always been easily contactable."

Most recent developments are that a third Tristel Rinse Assure system was installed at Moriston Hospital in March 2015. Only three hours after installation, water sample test results showed zero TVCs. Chlorine dioxide was dosed at 0.5ml/L.

Contributors:

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