

XiltriX real-time monitoring solution operating seamlessly for 2 years at Portland Oregon IVF laboratory

XiltriX instrumental in controlling the Oregon Reproductive Medicine IVF laboratory parameters; keeping gametes and embryos safe at all times

SAN DIEGO -- Nov 24, 2017 – Dr. Alison Coates, PhD, the Embryology Laboratory Director, was about to move premises into a brand-new laboratory building when she first approached the XiltriX team. Originally from the UK, Dr. Coates was very familiar with monitoring and alarm solutions used to support laboratory quality management systems and thus eliminating liability. She was adamant in wanting the best system available and, in her search, reached out to the head of the Embryology department at the Hewitt Fertility Centre IVF laboratory in Liverpool (UK). This laboratory has been using XiltriX for a decade and confirmed to Dr. Coates the system's stability, ease of use and robustness.

Once convinced that XiltriX was the best choice, the first step was to jointly look at the new laboratory layout. XiltriX engineers used their vast experience to configure a system design and worked closely together with both the laboratory team as well as the local engineering company, which provided installation support. This joint effort led to a mutually agreed upon design where all critical parameters were monitored for all important equipment.

Dr. Alison Coates: "The cooperation with XiltriX staff has been really smooth, with quick response when needed"



Figure 1: The new Cryo room with XiltriX monitoring installed.

Ensuring that all parameters in the laboratory are accurately controlled was not an easy task. The laboratory chose to use large box-type incubators with CO₂ and low O₂ control. Aside from the fact these sensors are very expensive, they also pose a contamination risk inside the incubators. XiltriX

offered their bespoke CO₂ monitoring solution where only a small gas sample is taken from the incubators and is analyzed by a single CO₂ sensor. This sensor is automatically calibrated 3 times per day, resulting in a very high accuracy. Alongside the gas concentration, temperature and door openings are also automatically controlled by XiltriX.

Dr. Alison Coates: "XiltriX gives me constant temperature and CO₂ level monitoring for my incubators. Also, it monitors the temperature of all my dewars. This allows me to sleep at night".

Accurately monitoring the dewars in the laboratory over a long period of time was performed by using specially designed Teflon mantle pt100 temperature sensors that are pushed through the foam lid of the dewar. The sensor tip sticks into the liquid and monitors the minimum level of the dewar. If staff forget to fill the dewars, the liquid level drops below the sensor tip raising the temperature. If the O₂ level in the room drops below the critical threshold, both a local and XiltriX alarm is activated too. XiltriX automatically records the deviations and sends alarms to staff using its combined flashing light, e-mail and telephone dialer system.

To complete the installation in Portland, XiltriX also monitors the temperature of fridges and freezers as well as all door openings, the laboratory temperature and relative humidity and the failing of mains power. Data is automatically backed-up to a secondary network location and any device malfunction is immediately recorded.



Figure 2: XiltriX engineering built to last for a long time

The seamless operation of XiltriX is in part due to its impeccable engineering. Laboratories are environments where extreme conditions occur quite frequently. The use of liquid nitrogen is common which has an extremely low temperature. The engineering and materials used need to be able to cope with these harsh conditions and for a long period of time. The XiltriX system is built to last for 10 to 15 years, giving customers peace of mind.

Dr. Alison Coates: "XiltriX is extremely stable, we never had any major issue in almost 2 years of use"

Before commissioning, the laboratory team were thoroughly trained and all sensors were calibrated using calibrated equipment traceable to international standards (ISO-17025). This process is repeated annually ensuring the continued accuracy of the system and adherence to the quality system.

Today the partnership between XiltriX and ORM is entering a new phase in which the added value of the CryoFill cryogenic controller is being explored for the monitoring of the automatically filled cryogenic storage tanks. By continuous research and development and close cooperation with its partners, XiltriX will continue to offer unrivaled monitoring solutions for IVF laboratories.

About XiltriX

XiltriX is the industry standard service in providing data analysis, reporting and documentation for compliance and validation worldwide.

XiltriX is a professional service which provides its partners with the tools to acquire complex laboratory data relating to processes and critical ambient conditions in real-time 24 hours a day. These processes and conditions are compared against strict preset parameters which are put in place to protect your scientific work.

If these scientific processes were to fail then you will be alerted immediately to take corrective measures and the XiltriX solution can analyze the data records in order to identify the anomalies. On the basis of the acquired data, the XiltriX team can complete rigorous process analyses.

XiltriX is the solution for every quality system as it meets the highest worldwide standards such as:

- FDA 21 CFR part 11
- GMP
- GLP
- GxP
- GAMP
- USP797
- AAAALAC
- AABB
- CAP
- HACCP
- Joint Commission

XiltriX supports its partners at every stage in the laboratory data management process whether it be data acquisition, analysis and reporting to the creation of documentation for compliance and validation purposes.

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