Customer Case Study

Ninewells Hospital chooses the ION Science Tiger

Ninewells hospital are using an ION Science Tiger to adhere with the Human Fertilisation and Embryology (HFEA) regulations for air quality in tissue laboratories and to ensure optimum culture conditions for embryos.

Company: NHS Ninewells Hospital - Dundee
Industry: University/Laboratories
Application: VOCs monitoring in assisted conception units
Requirements: Portable PID detector after being recommended to upgrade

The Background

Ninewells is an NHS Teaching Hospital where they provide treatment on both an NHS and self-funded basis. Assisted conception treatment has been carried out since the early 1980s when John Mills and Geoff James established the Unit and developed it into one of the largest centres in Scotland. The first baby born from IVF treatment in Scotland was born in 1984.

Ninewells Hospital is one of the oldest IVF facilities in the UK. It performs numerous investigations to ascertain why couples are not getting pregnant naturally and try to overcome fertility issues to achieve a pregnancy. Every year it has an average of 400 cycles of IVF and ICSI, and a further 250 cycles utilising previously frozen embryos.

Philip Milne, Clinical Embryologist at Ninewells Hospitals Assisted Conception Unit:

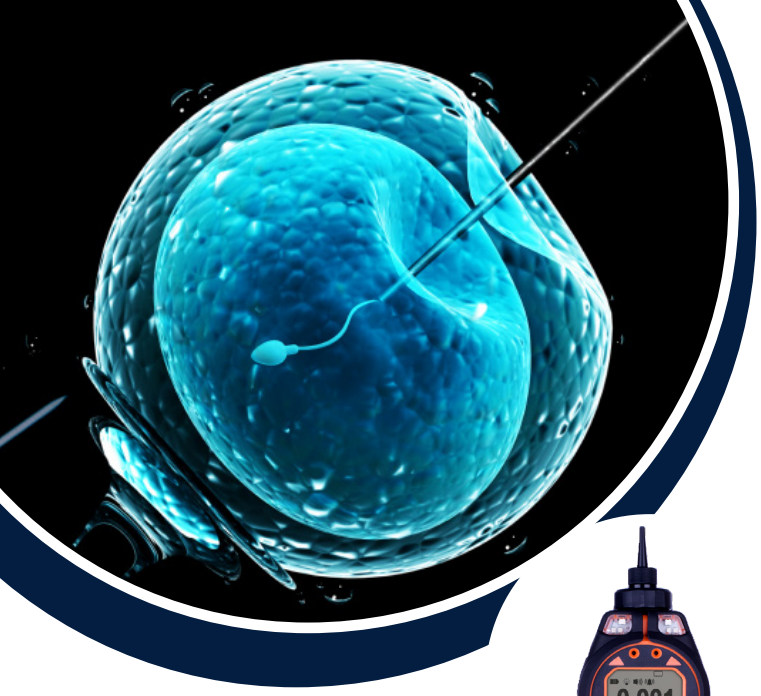
"The aim of the HFEA regulation is to implement standards of air quality in laboratories where tissues are prepared for use in humans, including assisted conception facilities. Part of this is measuring and maintaining the air found in tissue laboratories with particle and microbial counts being done on a regular basis."

Requirement

The Assisted Conception Unit at Ninewells Hospital in Dundee has purchased an ION Science Tiger handheld volatile organic compound (VOC) detector in adherence with the Human Fertilisation and Embryology (HFEA) regulations for air quality in tissue laboratories and to ensure optimum culture conditions for embryos. This follows an independent external review that recommended the facility upgrade to a more sensitive photoionisation detector (PID) that measured VOC levels in parts per billion (ppb).

With even low levels of VOCs potentially affecting embryo development, the Ninewells Hospital's Assisted Conception Unit regularly monitors VOCs in its laboratories to minimise contaminants, maintain the best possible conditions and help ensure successful IVF outcomes.

In the UK, assisted reproduction is regulated and governed by the Human Fertilisation and Embryology Authority (HFEA). Human embryos are very sensitive to the environment and although the incubators offer a relatively clean area for culture, sperm, eggs and embryos have to be handled and processed within the laboratory, exposing them to harmful VOCs which can impact embryo development. Whilst most Assisted Conception Units will have air purification technology or HEPA filters, these do not eliminate VOCs.



The Outcome

Philip Milne Clinical Embryologist at Ninewells Hospital Assisted Conception Unit:

"We needed a cost effective VOC instrument that was accurate, repeatable and user-friendly as our older one was cumbersome and difficult to use. The ION Science Tiger, purchased from Shawcity, fitted our ergonomic requirement whilst providing an affordable and reliable replacement."

"Regular monitoring of our laboratory's air quality with the ION Science Tiger has shown very low levels of VOCs. With major building work taking place outside the air intakes from our laboratory, the use of the instrument is even more critical to maintaining those levels"

"We have been very pleased with the ION Science Tiger to date and would not hesitate to recommend it to other facilities."

The ION Science Solution

Instrument: Tiger Portable PID Detector

As a result, the Assisted Conception Unit uses a PID to monitor VOC levels within its laboratory. However, the facility's previous VOC instrument measured in parts per million (ppm) but an independent external review recommended it was replaced with a more sensitive ppb instrument like the ION Science Tiger which is able to detect very low levels of VOCs.

Offering a robust and reliable design, the well proven ION Science Tiger boasts a market leading measurement range of 1 ppb to 20,000 ppm*. It is easy to set up and provides advanced VOC detection and software features. It also provides a response time of just two seconds and can be connected directly to a PC via the USB offering rapid data download capabilities.

Like all ION Science instruments, the Tiger incorporates the company's latest MiniPID sensor and patented fence electrode technology for increased resistance to humidity and contamination.

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