Designed and Optimized for Human IVF

G210 InviCell
G210 InviCell Plus

SYSTEMS
KIVEX BIOTEC A/S

K-SYSTEMS - Kivex Biotec A/S
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G210-V3-18042016

SYSTEMS
KIVEX BIOTEC A/S

CE 0543 MEA tested

Designed and Optimized for Human IVF

Incubator Technology Taken to the Next Level

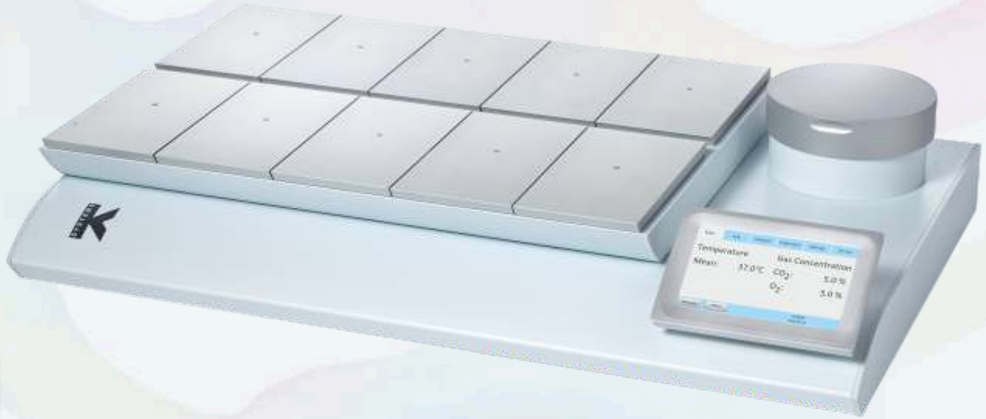
Harmless incubation with non-inductive EM Neutra[tm] technology

Stress free incubation by stable temperature and gas control

Advanced user interface with dedicated security system

Log data and be warned by K-Link[tm] – Extensive Ethernet based monitoring

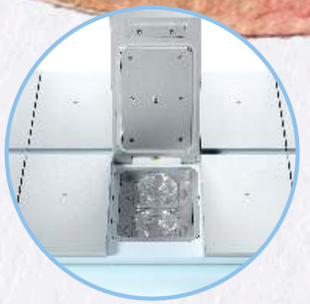
Emulation of the natural basal body temperature cycle with the advanced software based heating technology



+ Continuous pH measurements + *Only for G210 InviCell Plus*

+ Independent external monitoring of CO_2 and temperature + *Only for G210 InviCell Plus*

Optimal Environment for Human Embryos



Decreasing embryo stress is a key factor in long term incubation. The G210 has several characteristics to ensure minimal stress.

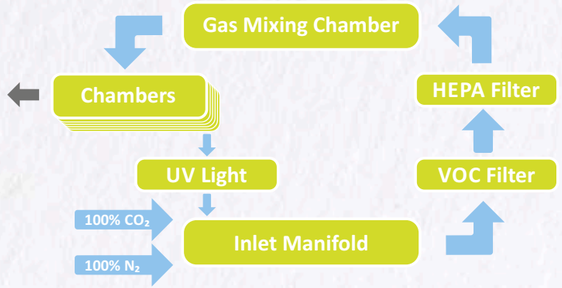
- **Highly stable environment** of both gas and temperature
- VOC filter, HEPA14 filter and UV light ensuring **Clean air** in the chambers
- **Individual chambers** for each patient - 10 in total

Optimal temperature conditions at all times. The advanced heating system of the G210 ensures constant and all-embracing heating in the chambers

- Each isolated chamber has its own temperature sensor to ensure quick and accurate temperature control of all 6 sides in the chamber
- The unique non-inductive EM Neutra[tm] heating system gives **no electro-magnetic fields** around the embryos
- Emulate the natural cycle of **basal body temperature** with the advanced software based heating technology

Embryo conditions including pH levels are kept stabile through the combination of accurate gas and temperature control.

- Increased accuracy and stability with dedicated gas control algorithms
- The **built-in advanced gas mixer** allows gas concentration to be set at the required level
- **Ambient humidity based incubation** significantly reduces the risk for fungal growth and cross contamination
- The **unidirectional gas flow system** ensures even gas distribution throughout the chambers
- To optimize recovery time and keep gas consumption low, gas flow is paused when the lid is open



Gas flow in G210

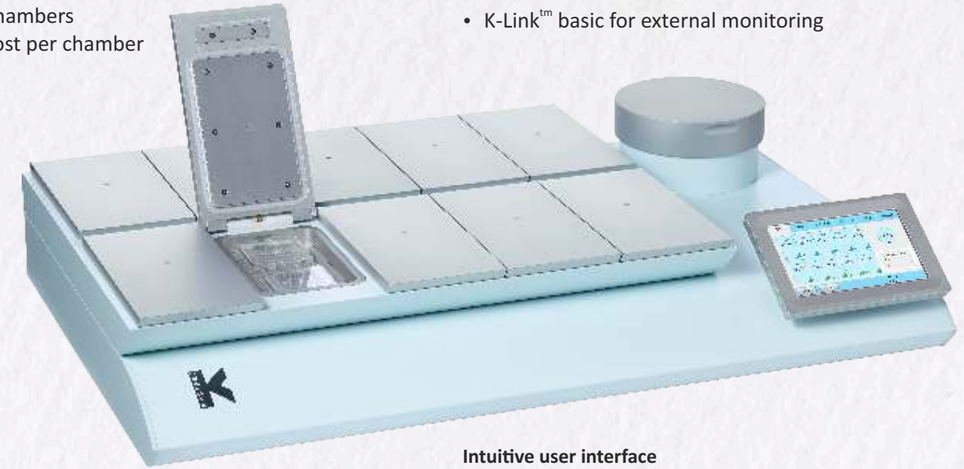
The Ideal Solution for a Busy Clinic

Cost effective

- Advanced gas mixing system integrated. No need for pre-mixed gas
- Low gas consumption with dedicated and effective gas control algorithms
- With its 10 chambers acquisition cost per chamber is minimal

An effective long term incubation solution

- The combination of sensors and advanced software algorithms ensures effective control of all key parameters
- Heated and gassed preparation chamber
- On-screen monitoring
- K-Link[tm] basic for external monitoring



Space saving

- 10 individual chambers for culture of 10 patients
- Optional Stacking System for 3 incubators
- Equilibration chamber

Intuitive user interface

- Constant overview
- Touch screen
- Maintenance and service reminder

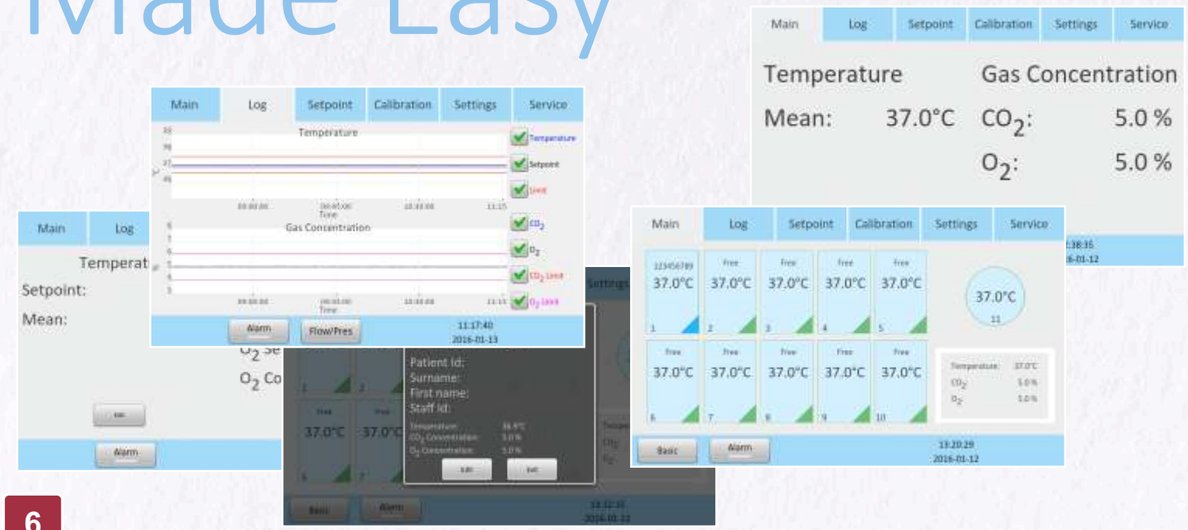
Incubator Control Made Easy

Large 7“ touch-screen display gives you intuitive control of all parameters and on screen data display.

- A **quick overview** of each chamber and key parameters on screen
- Enter **patient data directly** on the screen for each individual. No more writing on the device with markers or pens
- Multi-level password protection ensures no unintended access to settings
- **Graphic display** of key parameters over time

React quickly to changes in the incubator with the extensive audible and visible monitoring and alarms. Alarms can easily be transferred to the hospital central monitoring system.

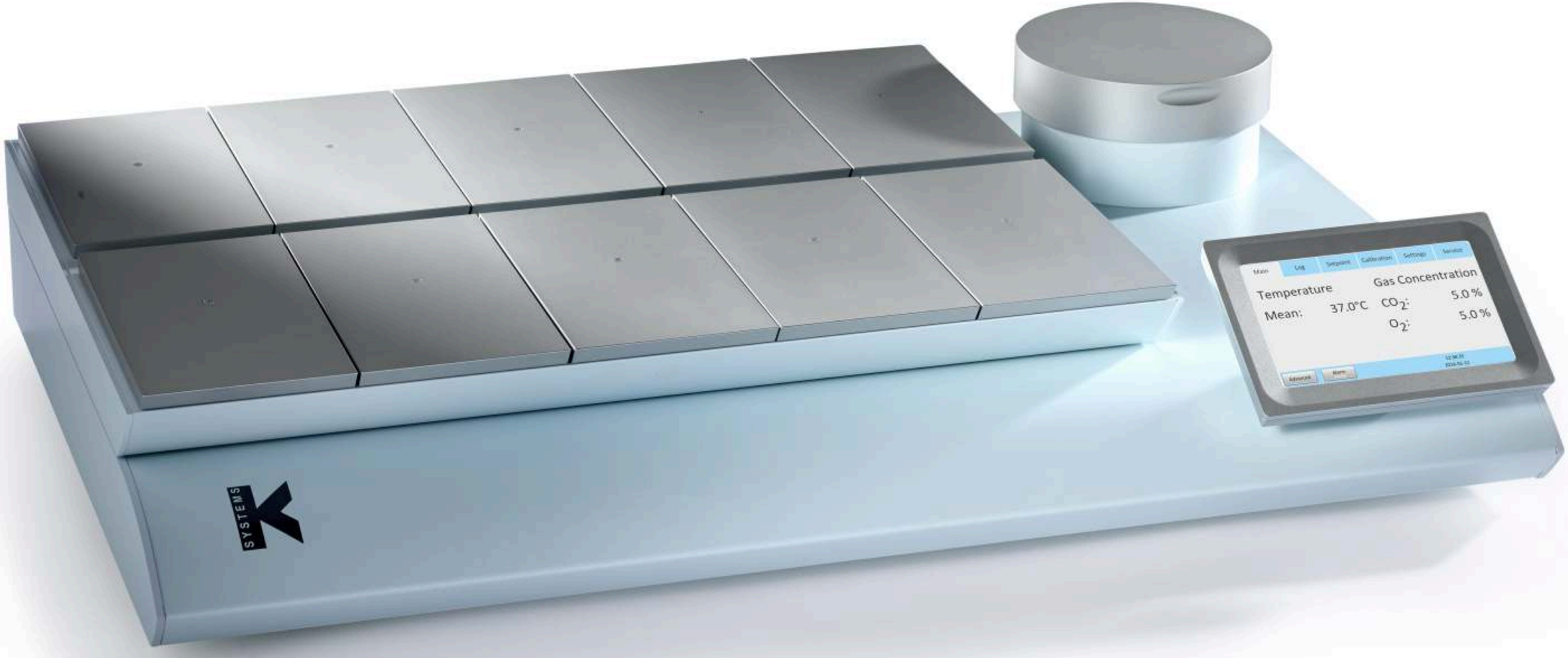
- Temperature
- Gas
- Service needs



Innovative Danish Design

The G210 brings attractive and user friendly design to everyday embryo incubation. The intuitive minimalistic design makes it appealing and comfortable to work with on a daily basis.

- One-step lids makes it **easy to operate** during use
- Clean lines and soft corners make the G210 **easy to clean**
- Dish inserts can be taken out and autoclaved for effective cleaning
- Built-in preparation/equilibration chamber

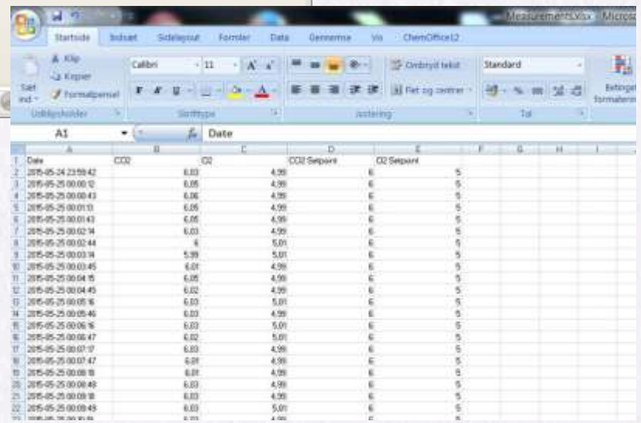

SYSTEMS
Temperature
Mean:
37.0°C
Gas Concentration
CO_2:
5.0 %
O_2:
5.0 %

Keep Track of Incubator from Anywhere in the Clinic

K-Link Ethernet based monitoring system
Monitor all your incubators directly from your office. The K-Link Ethernet based software provides external monitoring of all key parameters in your G210 InviCell. Multiple G210s can be monitored from the same PC.

Parameters continuously monitored with K-Link:
- Temperature per chamber
- CO2 and O2 levels
- Gas pressure and consumption
- Alarms and warnings
- Service requirements

K-Link E-mail alerts
In case of an alarm K-Link can be set up to automatically send an e-mail to a designated address.



Excel Export
All data is automatically exported to spreadsheet for in depth analysis.

Continuous pH Measurements

pH is a crucial parameter in embryo culturing. With the G210 InviCell Plus, pH can be measured continuously. By reading the pH in one dedicated chamber, you have the pH for all chambers.

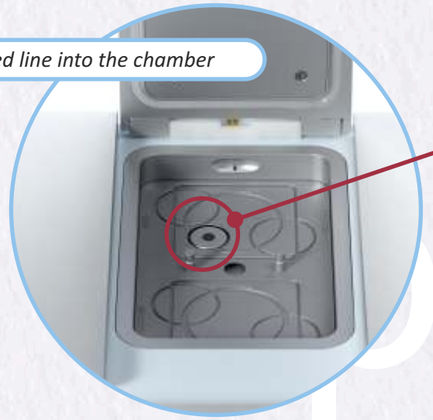
The G210 InviCell Plus is based on a built-in connection to the pH Online System by MTG with the following characteristics:

By connecting the G210 InviCell Plus with the pH online System and placing a special pre-calibrated dish with media in the chamber pH is continuously monitored

Infrared monitoring Resolution of 0.01 pH and an accuracy of +- 0.03 pH
Range 5.5 – 9.0 pH

Receiving and transmitting data

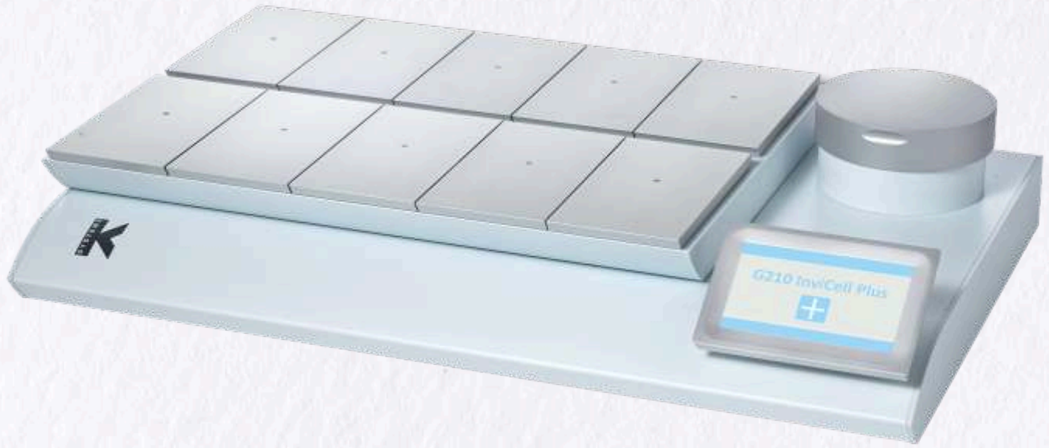
Infrared line into the chamber



Lab Certification

Added safety with Independent Continuous Monitoring

G210 InviCell Plus is designed to meet the increasing demands for external independent monitoring.



- G210 Plus can be connected to virtually any log or monitoring system installed in the lab
- External log or monitoring systems remains electrically isolated from the G210. This allow them to detect sensor and circuit errors or power failure
- The independent systems can detect erroneous calibration or unintended changes to set points
- G210 supports independent logging or monitoring of gas and of temperature in all incubation chambers

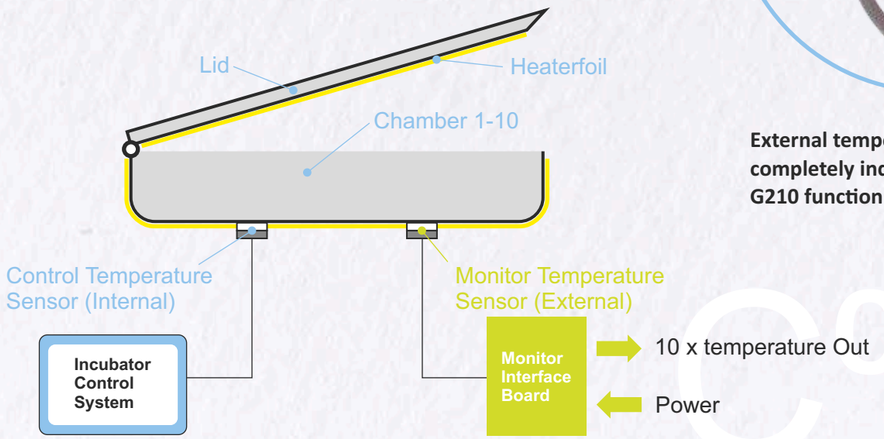
G210 InviCell Plus Extra safety added

Independent Temperature Monitoring

The G210 InviCell plus is prepared for individual temperature monitoring of each culture chamber in G210.

- Monitor Temperature Sensors are isolated from the Control sensors or any part of the Incubator control system
- The system is based on 10 individual Temperature Sensors. One for each chamber
- Sensor interface board is electrically isolated from the G210 Incubator Control system and has its own Power supply

External temperature monitoring is completely independent of the G210 function itself.



G210 InviCell Plus | Extra safety added

Independent External Gas Monitoring

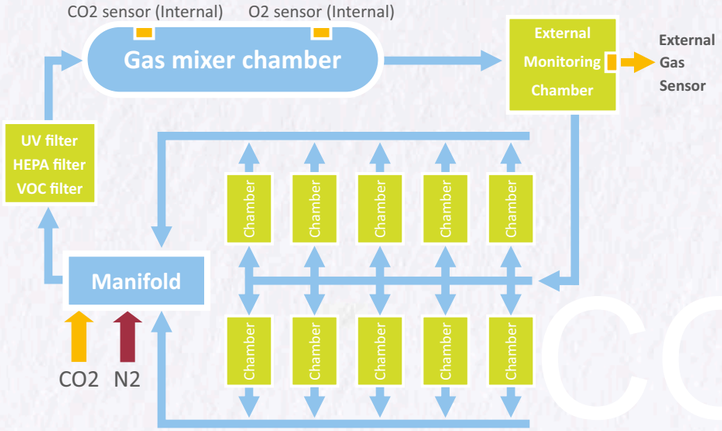
To perform true independent monitoring, it is critical to measure the exact point prior to the gas entering the chambers.

In the G210 InviCell Plus a special gas system access chamber has been installed to allow for this.

- An external sensor can be placed in the gas line just before the chambers
- The sensor can be read independently of the G210
- The sensor is powered independently.

OCTAX Log & Guard, CO2 or Sensecube

GMP 221 Carbon Dioxide Probe



Save Space with the G210 and the K-Systems Stacking System

The unique Stacking System has capacity for 3 incubators - a total incubator capacity of 30 patients

The Stacking System provides:

- Central monitoring for all 3 incubators
- Sliding shelves with soft closure function
- Built in power outlets
- Fan for heat removal
- Tray system for organising tubes and cables

Order Code: 23050

Overall dimensions (WxDxH)
1100x830x1620mm
Weight: 100 kg.

Order Code: 59500

Order Code: 60000

Technical specifications	G210 InviCell	G210 InviCell Plus
Overall dimensions (WxDxH)	860x550x170 mm	860x550x170 mm
Weight	45 kg	46 kg
Temperature range in chambers	Ambient to 42.9°C	Ambient to 42.9°C
CO_2 / O_2 – range in chambers	2-10% / 2-20%	2-10% / 2-20%
Connection to 100% CO_2 and 100% N_2	√	√
Gas consumption (Typically)	1 l/h CO_2 & 5 l/h N_2	1 l/h CO_2 & 5 l/h N_2
Datalogger system - K-Link	√	√
External Alarm Port	√	√
Power consumption	Max: 270 W Avg: 65 W chamber at 37°C	Max: 270 W Avg: 65 W chamber at 37°C
Ambient humidity and temperature	max 75% RH & 20-30°C	max 75% RH & 20-30°C
Heating plates	NUNC/Falcon/Vitrolife	NUNC/Falcon/Vitrolife
Prepared for pH		√
Prepared for external monitoring		CO2 + Temperature
No. of temperature sensors	11	21