

# SANYO Biomedical Incubation Reference Colorado Center for Reproductive Medicine

## Colorado Center Overview:

The Colorado Center for Reproductive Medicine (CCRM) is one of the nation's leading fertility clinics, providing a wide variety of infertility treatments ranging from basic care to the most advanced in vitro fertilization (IVF) technology available. For the past two decades, Dr. Gardner's research has focused on the physiology and metabolism of the mammalian embryo.



## SANYO Product Solution: MCO-5M, MCO-17AC, MCO-175M and MCO-20AIC

### Application: In Vitro Fertilization

Director Dr. David Gardner's work has led directly to the development of new sequential media capable of supporting the development of highly viable embryos in several mammalian species, including the human.

### SANYO Advantages:

- The advantage of the MCO-175M is the ability to culture embryos at reduced oxygen concentrations, specifically at 5%. At such reduced oxygen concentrations, mammalian embryos develop at a higher rate.
- Praising the MCO-20AIC, the resultant blastocysts have the same developmental potential when transferred to a recipient, demonstrating that the copper used had absolutely no toxic effect on mouse embryos.



MCO-20AIC

### Competitive Analysis:

Dr. Gardner has used the SANYO MCO-17AC as the main workhorse incubator for his research for several years. He was extremely impressed by the quick setup time that it took to settle and reach equilibrium in just 72 hours. Other incubator manufacturers can take up to two weeks just to perform bioassay.

## Industry Highlights and Current Research:

The first step in overcoming infertility is to pinpoint the obstacles to conception. Are you ovulating normally? Are your fallopian tubes normal? Is your partner's sperm normal and functional? These are just a few of the questions that must be answered before your doctor can recommend an appropriate treatment plan. As a direct result of Dr. Gardner's research, the implantation rates in clinical in vitro fertilization (IVF) have been increased, while the number of human embryos transferred to each patient consequently reduced. This means high levels of pregnancy can be attained with lower number of embryos replaced, thereby decreasing the problems associated with multiple gestations.



**"I am so impressed by the performance of the new MCO-18M SANYO Incubator and, from what we have seen, would recommend them to other laboratories. What is so impressive about the chambers we have tested is the speed at which we have been able to get them on line. Typically, new incubators need a 'burn out' tome to ensure off-gassing of potential embryo toxins such as VOCs but this did not appear to be required for the new SANYO chambers. We were able to use them much quicker." -Dr. David Gardner**

Dr. David K. Gardner, Scientific Director  
Colorado Center for Reproductive Medicine,  
Englewood, Colorado, USA

## Conclusions:

Dr. Gardner recently acquired a SANYO MCO-20AIC for use in research on follicle development, in vitro fertilization and embryo culture. A concern raised by embryologists has been the possible toxic effects of the copper used in the manufacture of the SANYO MCO-20AIC. Dr. Gardner's research has shown that the embryos of mice will develop equally well in culture when grown in either the SANYO MCO-20AIC or the SANYO MCO-17AC.

Contact Info: Dr. David Gardner, Colorado Center for Reproductive Medicine



Incubation