KITAZATO®

Highlights

Hypure™ Oil Heavy

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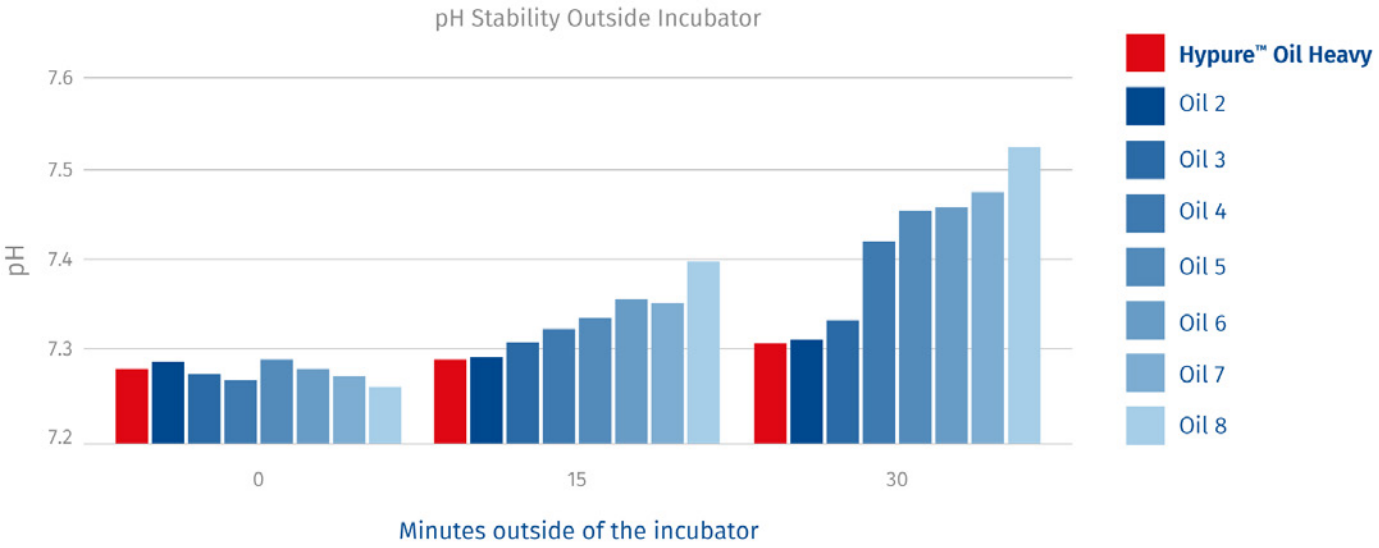
Making changes in the laboratory may be sometimes challenging for embryologists. However, the implementation of new components that may improve the embryo culture system is certainly worth a try.

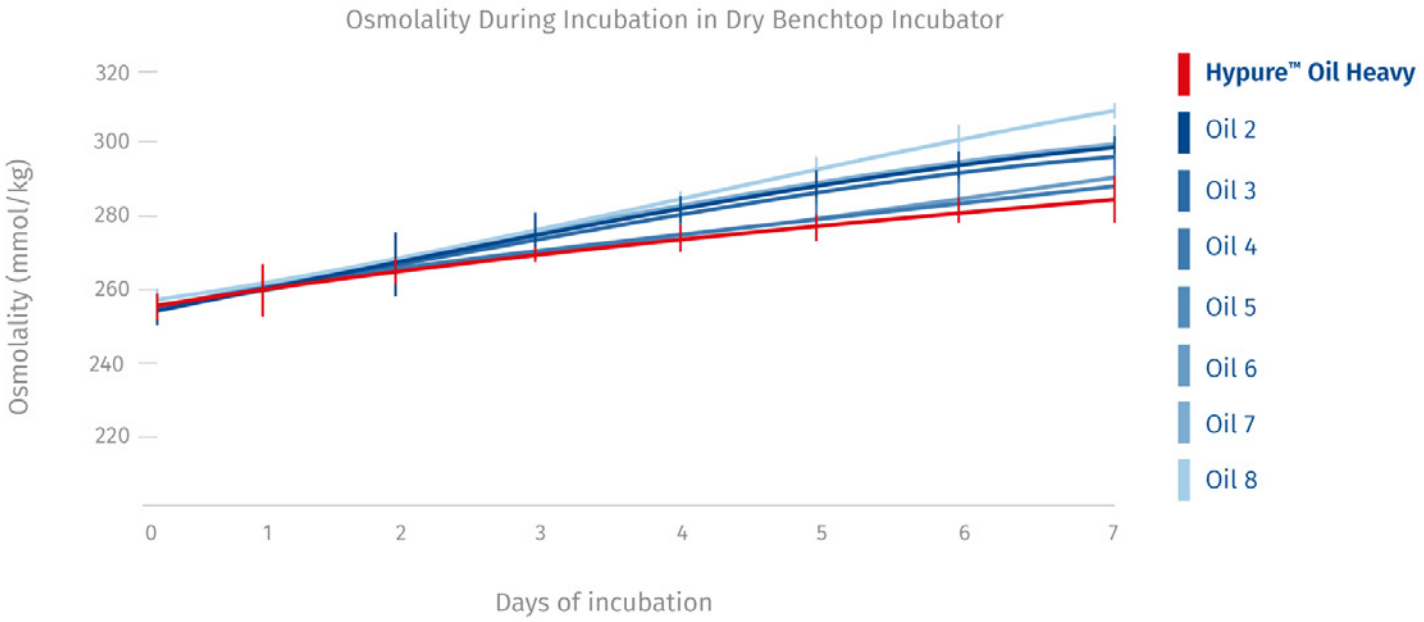


When switching from a light to a heavy oil, there is a small learning curve. Manipulation of a heavy oil may result different at first until the operator gets used to it. However, this change will bring several advantages in the routine practice and outcomes. The increased viscosity of Kitazato **Hypure™ Oil Heavy** allows to be poured directly into the dishes, avoiding the need to use plastic serological pipettes.

Furthermore, the preparation of medium droplets underneath the oil can be easily performed to reduce evaporation during dish set-up. Both the movement of the micro-droplets and the probability of oil spillage are reduced with Kitazato **Hypure™ Oil Heavy**, due to its higher viscosity.

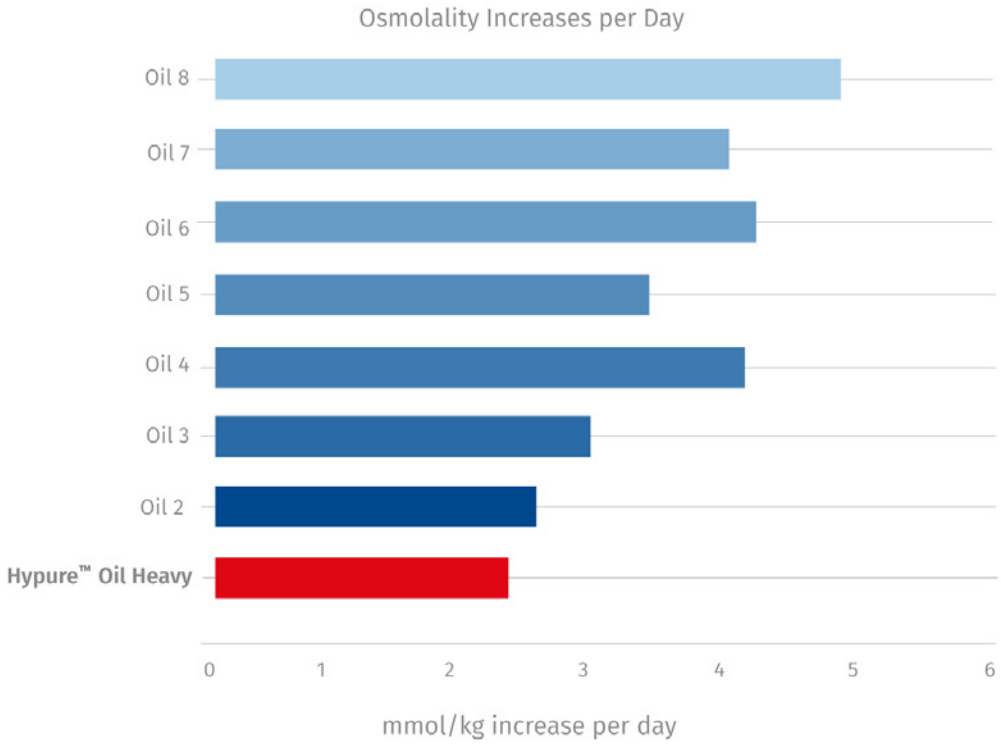
In addition, the level of peroxides found in Kitazato **Hypure™ Oil Heavy** is very low and ensures a safe in vitro culture of gametes or embryos. Kitazato Hypure Oil Heavy is a paraffin oil with complete hydrocarbon saturation that remains inert, whilst unsaturated hydrocarbon chains could become reactive and produce peroxides in the oil, which would result embryo-toxic during culture.

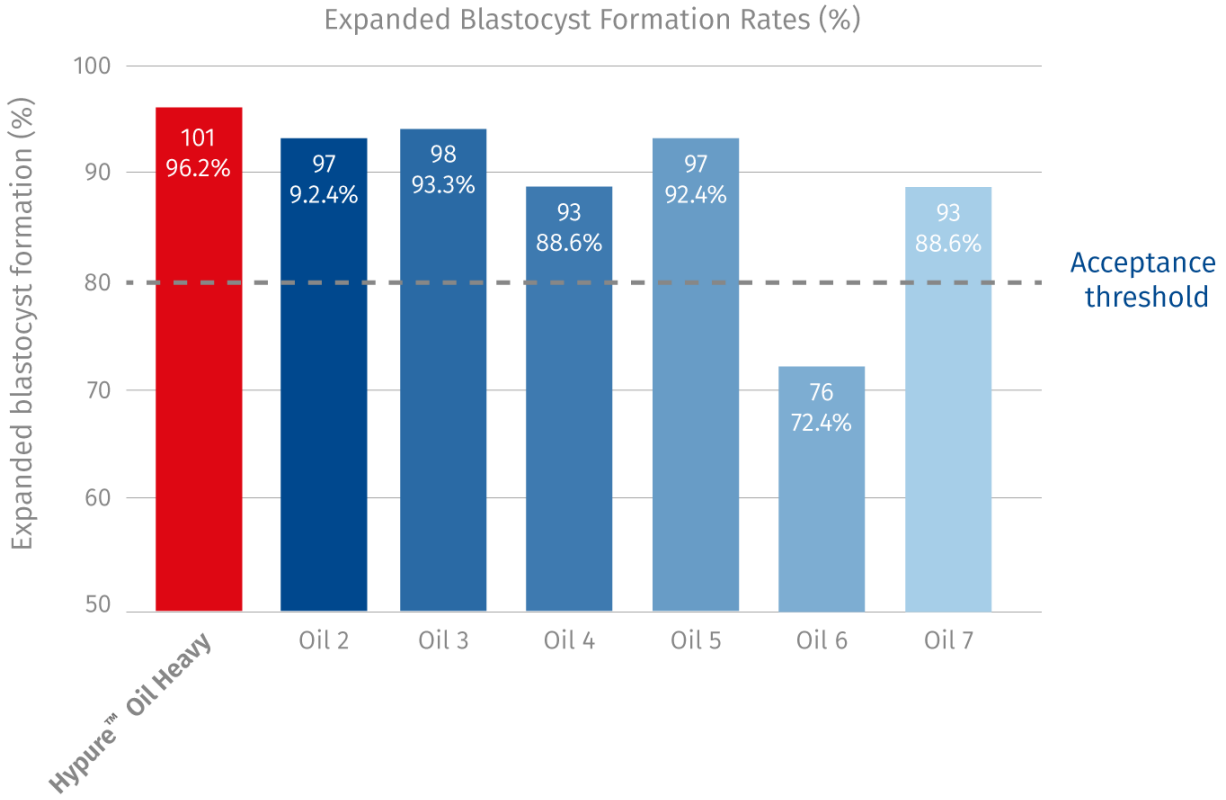
In a recent study, Kitazato **Hypure™ Oil Heavy** has been compared with some competitors' oils. The "*Evaluation of **Hypure™ Oil Heavy***" released by ***Embryotools SL*** has concluded that **Hypure™ Oil Heavy** improves embryo development rates and cellular count and offers better pH stability and lower osmolality than other commercial oils.



Kitazato **Hypure™ Oil Heavy** has the highest capacity to prevent evaporation, yielding significantly lower evaporation rates than other oils when cultured in dry incubator. Kitazato **Hypure™ Oil Heavy** reaches the lowest osmolality (273.0 ± 5.7 mmol/kg) after seven days of culture compared to the rest of oils.

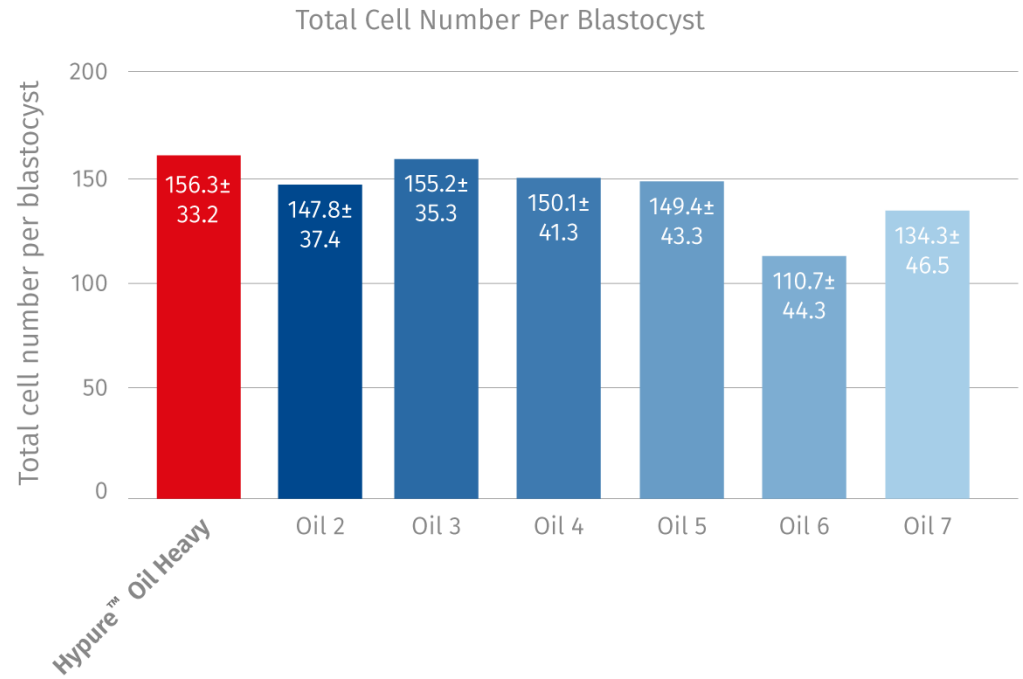
The daily evaporation rate was significantly lower for Kitazato **Hypure™ Oil Heavy** (+2.224 mmol/kg/day) than for other oils.





The potential embryo-toxicity of each of the studied oils was assessed by performing Mouse Embryo Assays (MEA). Each group comprised an initial n of 21 embryos, and five replicates were performed per group (105 total embryos per oil). A 96.2% of the mouse embryose cultured under Kitazato **Hypure™ Oil Heavy** reached the expanded blastocyst stage by the 120h end-point. Kitazato **Hypure™ Oil Heavy** resulted in the highest number of blastocysts produced, compared to the rest of groups.

The mouse blastocysts obtained after culture with **Hypure™ Oil Heavy** showed the highest mean number of cells compared to the rest of groups. The total cell number per embryo is a quantitative measure of embryo quality.



Scientific evidence is key to
determine the preferred choice.

Choose science, choose Kitazato.

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