Product Information

M16 Medium

With Sodium Bicarbonate and Lactic Acid, Without Penicillin and Streptomycin

M7292

Storage Temperature: 2–8 °C

Product Description

M2 and M16 Medium are common media for *in vitro* culture of preimplantation stage embryos. It is a modified Krebs-Ringer bicarbonate solution, which is very similar to Whitten's Medium. M16 contains pyruvate and lactate as energy sources since preimplantation embryos do not utilize glucose efficiently. M2 Medium is a further modification of M16 that substitutes HEPES buffer in place of some of the bicarbonate. M2 is used for collecting and handling embryos for prolonged periods outside a CO_2 incubator.

Biological Performance: This product is tested for its ability to support the development of one-cell mouse embryos to expanded blastocysts. Minimum requirement is 80% development to blastocyst.

Components	g/L
Calcium Chloride • $2H_2O$	0.25137
Magnesium Sulfate (anhydrous)	0.1649
Potassium Chloride	0.35635
Potassium Phosphate, Monobasic	0.162
Sodium Bicarbonate	2.101
Sodium Chloride	5.53193
Albumin, Bovine Fraction V	4.0
D-Glucose	1.0
Phenol Red • Na	0.106
Pyruvic Acid • Na	0.0363
DL-Lactic Acid × Na	2.95

Supplement with 0.06 g/L potassium penicillin-G and 0.05 g/L streptomycin sulfate.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the liquid medium at 2–8 °C in the dark. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date. Deterioration of the liquid medium may be recognized by any of the following:

- pH change
- Cloudy appearance
- Color change

Note: Slight precipitate or particulate matter may be seen throughout the solution, which does not affect the performance of the product.

References

1. Whitten, W. K. (1971, January). Nutrient requirements for the culture of preimplantation embryos in vitro. In *Schering Symposium on Intrinsic and Extrinsic Factors in Early Mammalian Development, Venice, April 20 to 23, 1970* (pp. 129-141). Pergamon.
2. Quinn, P., Barros, C., & Whittingham, D. G. (1982). Preservation of hamster oocytes to assay the fertilizing capacity of human spermatozoa. *Reproduction*, *66*(1), 161-168.
3. Hogan, B., Costantini, F., & Lacy, E. (1986). *Manipulating the mouse embryo: a laboratory manual* (Vol. 34). Cold Spring Harbor, NY: Cold spring harbor laboratory.

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