M16 Medium

Cell Culture Medium

Catalogue Number: CE003/CE004

Description: M16 and M2 are modified Krebs-Ringer bicarbonate solutions, which are similar to Whitten's Medium. M16 Medium is one of the most common media for *in vitro* culture of preimplantation stage embryos. 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.

Formulation: Ready-to-use, sterile filtered solution

Catalogue Number	CE003 (g/L)	CE004 (g/L)
Product	M2 Medium	M16 Medium
INORGANIC SALTS		
$CaCl_2 \bullet 2H_2O$	0.251	0.251
$MgSO_4$ (anhyd)	0.165	0.165
KCl	0.356	0.356
KH_2PO_4	0.162	0.162
NaCl	5.532	5.532
$NaHCO_3$	0.35	2.101
OTHER		
Albumin, Bovine Fraction V	4.0	4.0
D-Glucose	1.0	1.0
HEPES	5.43	—
Phenol Red•Na	0.01	0.01
Pyruvic Acid•Na	0.036	0.036
Lactic Acid•Na	4.35	4.35
SPECIFICATIONS		
pH	7.4±0.3	7.4±0.3
Osmolality (mOsm)	285±25	285±15

Pack Size: 100 mL

Storage / Stability: 4°C for 6 months from the date of shipping.

References:

4. Whitten, W.K. (1971) Embryo medium: Nutrient requirements for the culture of preimplantation embryos in vitro. Adv. Biosci., 6: 129-141.
5. Quinn, P., Barros, C., and Whittingham, D.G. (1982) Preservation of hamster oocytes to assay the fertilizing capacity of human spermatozoa. J. of Reprod. Fertil., 66: 161-168.
6. Hogan, B., Costantini, F., and Lacy, E. (1986) Manipulating the Mouse Embryo. Cold Spring Harbor Laboratory. Cold Spring Harbor, NY. Section G, pp. 249-252.