



Nucleus Pulposus Cell Medium – No Glutamine (NPCM-NG)

Catalog #4701-NG

Product Description

Nucleus Pulposus Cell Medium – no glutamine (NPCM-NG), when used with Nucleus Pulposus Cell Growth Supplement (NPCGS) and FBS is a medium designed for optimal growth of normal nucleus pulposus cells *in vitro*. It is a sterile, liquid medium which contains essential and non-essential amino acids, vitamins, organic and inorganic compounds, hormones, growth factors, trace minerals and a low concentration of fetal bovine serum (2%). The medium is HEPES and bicarbonate buffered and has a pH of 7.4 when equilibrated in an incubator with an atmosphere of 5% CO₂/95% air. The medium is formulated (quantitatively and qualitatively) to provide an optimally balanced nutritional environment that selectively supports the growth of normal nucleus pulposus cells *in vitro*.

NPCM-NG does not contain L-glutamine, an essential amino acid that is unstable in solution at 37°C. NPCM-NG should be supplemented with L-glutamine (L-Glu; cat #0813) or stable L-glutamine dipeptide, L-alanyl-L-glutamine (LALG, Cat. #0733). The recommended LALG concentration ranges from 2mM to 10mM but may vary with culture conditions.

Components

NPCM-NG consists of 500 ml of basal medium, 10 mL of fetal bovine serum (FBS, Cat. #0010), 5 mL of Nucleus Pulposus Cell Growth Supplement (NPCGS, Cat. #4852) and 5 mL of penicillin/streptomycin solution (P/S, Cat. #0503). *Note: FBS, NPCGS and P/S are not pre-mixed in NPCM-NG; they must be added separately to make the complete NPCM-NG.*

NOTE: NPCM-NG should be supplemented with L-glutamine prior to use. L-glutamine is not provided with this kit and must be purchased separately.

Product Use

NPCM-NG is for research use only. It is not approved for human or animal use, or for application in *in vitro* diagnostic procedures.

Storage

Store the basal medium at 4°C and the NPCGS, FBS and P/S solution at -20°C. Protect from light.

Shipping

Basal medium: room temperature. Supplements: dry ice.

Instructions for Use

Thaw NPCGS, FBS and P/S solution at 37°C. Gently tilt the tubes several times to ensure the contents are completely mixed before adding to the medium. Spray the medium bottle and tubes with 70% ethanol, and wipe to remove excess liquid. In a sterile field, remove the caps without

Rev. 0

touching the interior threads with fingers. Add NPCGS, FBS and P/S solution to the medium and mix well. Since several components are light-labile, the medium should not be exposed to light for extended periods. We do not recommend warming medium in a 37°C water bath prior to use. When stored in the dark at 4°C, the reconstituted medium is stable for one month.

Caution: If handled improperly, some components of the medium may present a health hazard. Take appropriate precautions when handling it, including the wearing of protective clothing and eyewear. Dispose of properly.