

Product Name

Name: MarrowType Karyotyping Medium Cat. No.: C3630-0100 Size: 100 mL

Product Description

MarrowType Karyotyping Medium is intended for use in short-term cultivation of primary bone marrow cells for chromosome evaluation. MarrowType Karyotyping Medium is based on RPMI-1640 basal medium supplemented with L-Glutamine, fetal bovine serum (FBS), and antibiotic. The medium does not contain any mitogens or conditioned medium.

MarrowType Karyotyping Medium is supplied as frozen medium, which is ready for use after thawing.

Note

- For in vitro diagnostic use. The medium is not intended for therapeutic use.
- It will not affect cell growth performance if a flocculent precipitate is observed in the medium.
- Use of MarrowType Karyotyping Medium does not guarantee the successful outcome of any chromosome analysis testing.
- Do not use MarrowType Karyotyping Medium beyond the expiration date indicated on the product label.

Storage and Stability

The product should be kept at **-20°C**. The product is **light-sensitive** and therefore should not be left in the light.

Shelf life: 24 months from date of manufacture.

Procedure

Thaw MarrowType Karyotyping Medium at refrigerator temperature (2 - 8°C) or at room temperature. Mix gently and intermittently during thawing.

The medium may be supplemented with growth factors or mitogens if required.

Note that the medium already contains L-Glutamine and antibiotic.

Culture of Peripheral Blood Lymphocytes for Chromosome Analysis

The bone marrow karyotyping method has been developed to provide information about chromosomal abnormalities. The ready-to-use medium is intended for the culture of bone marrow cells without any mitogens or conditioned medium. After 48 - 72 hours, a mitotic inhibitor is added to the culture to stop mitosis in the metaphase stage. After treatment by hypotonic solution, fixation, and staining, chromosomes can be observed microscopically and evaluated for abnormalities.

Test Procedure

- Thaw MarrowType Karyotyping Medium at refrigerator temperature (2 - 8°C) or at room temperature. Mix gently and intermittently during thawing. The medium may be supplemented with growth factors or mitogens if required.
- Inoculate approximately 0.5 mL of bone marrow suspension into a plastic tube or



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MarrowType Medium product information



- tissue culture plate with 10 mL of medium. Invert tubes gently to mix specimen.
- 4. Incubate the culture for 72 hours.
- Add 0.1 0.2 mL of Colcemid Solution to each culture tube. Incubate the culture for an additional 15 - 30 minutes.
- 6. Transfer the culture to a centrifuge tube and spin at 500 x *g* for 5 minutes.
- Remove the supernatant and resuspend the cells in 5 – 10 mL of hypotonic 0.075 M KCI solution. Incubate at 37°C for 10 - 12 minutes.
- 8. Spin at 500 *xg* for 5 minutes.
- Remove the supernatant, agitate the cellular sediment (pellet), and add drop-by-drop 5 -10 mL of fresh, ice-cold fixative made up of 1- part acetic acid to 3 parts methanol. Leave in 4°C for 10 minutes.
- 10. Repeat steps 6 and 7.
- Resuspend the cell pellet in 0.5 1 mL of fresh fixative, drop onto a clean slide, and allow to air dry.
- 12. At this stage, the preparation can be stained with Orcein or Giemsa. (Giemsa banding is the most common method to obtain the staining and the slides needed to treat with trypsin-EDTA 10X solution for a few seconds).

Quality Control

MarrowType Karyotyping Medium is tested for appearance, capacity limit, sterility, pH, osmolality, cell culture, and endotoxin concentration.

Quality Assurance

- Manufactured under ISO 13485 QMS.
- Manufactured under controlled environments and processes per:

- PI-C3630 V1.1
- ISO 13408 Aseptic Processing of Health Care Products
- 2. ISO 14644 Cleanrooms and associated controlled environments

Manufacturer

Shanghai Dr. Cell Co., Ltd.

Issue Date

January 2025

Precaution and Disclaimer

For in vitro diagnostic use, not for treatment.

