CBMC-MCpore1 microcarriers

Product Information

Cat#No#	MCpore-01

Product Overview

The macroporous structure of CBMC-MCpore microcarriers encourages cell growth into the bead, while the micropores provide maximum nutrient availability. The characteristics enable growth of cells which require high recirculation rates and high nutrient-availability. Optimized for growth of r-CHO in stirred tank cultures but is applicable to cell lines requiring similar surface charge. Transparent for easy microscopic examination of attached cells.

Form	dry powder

Characteristic

CBMC-MCpore1 is designed to meet the requirements for adhering CHO cells to microcarriers. It has a macroporous structure with a microporous matrix. The matrix is based on a cross-linked cellulose which is substituted with positively charged N,N,-diethylaminoethyl groups. The charged groups are distributed throughout the microcarrier matrix.

The microporous matrix supplies nutrients to the cells from both the apical and basolateral sides. A result of the macroporosity is the high ratio of surface area to volume which allows very high cell densities. It gives the cells easy access to the interior of the carrier upon inoculation. This provides the cells with protection from shear forces, enabling an increase in aeration and stirrer speed, which in turn permits the use of higher microcarrier concentrations, thereby achieveing higher cell densities. It is easy to maintain the microcarrier in suspension as only gentle stirring is required, however, the microcarriers are easily separated from the medium.

CBMC-MCpore particle size deviation is very small and therefore provides for even suspensions and simultaneous reaching of confl uence. The cellulose matrix is non-toxic to the cells and is biodegradable after use. In swollen conditions the microcarriers are tough, they keep their shape and can tolerate mechanical stress. They are also autoclavable.

Applications

CBMC-MCpore microcarriers are designed for use in stirred suspension culture systems for the growth of

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CBMC-MCpore1 microcarriers

adherent recombinant CHO cells and the production of recombinant proteins.

Quality control analysis

Each batch of CBMC-MCpore is subjected to stringent quality control tests to examine both physiochemical and functional properties. Each lot is function tested with CHO-K1 cells in a stirred culture.

Matrix

Cross-linked cotton cellulose

Swelling

40 ml/g

Average particle size

230 µm Spherical

Storage

CBMC-MCpore is supplied as a dry powder and must be hydrated and sterilized before use. Unopened packs of CBMC-MCpore stored in dry conditions are stable for more than eight years. CBMC-MCpore which has been hydrated and sterilized as described above, can be stored sterile in PBS for at least five years.

Size	20g; 100g; 500g; 1kg; 2.5kg; 5kg

Surface

Hydrophilic DEAE exchanger, positive charge

Charge Density

0.90–1.20 meq/g

Approximate Surface Area Dry Weight

1.1 m2/g

Approximate Number of Micro-Carriers Dry Weight

3 × 10^6

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