


# Medium 171 and Mammary Epithelial Growth Supplement (MEGS)

Catalog Number M171500, S0155

Pub. No. MAN0001585 Rev. 3.0

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

## Product description

Medium 171 is a sterile, liquid tissue culture media that is intended for use in a complete culture environment for the growth of normal human mammary epithelial cells. Medium 171 is a basal medium, containing essential and non-essential amino acids, vitamins, other organic compounds, trace minerals, and inorganic salts. This medium does not contain antibiotics, antimycotics, hormones, growth factors, or proteins. This medium is HEPES and bicarbonate buffered, and is designed for use in an incubator with an atmosphere of 5% CO<sub>2</sub>/95% air. To support plating and long-term proliferation of normal human mammary epithelial cells, Medium 171 must be supplemented with Mammary Epithelial Growth Supplement (MEGS) (Cat. No. [S0155](#)).

Mammary Epithelial Growth Supplement (MEGS) is a sterile, concentrated (100X) solution intended for use as one component in a complete culture environment for the growth of normal human mammary epithelial cells. MEGS is an ionically-balanced supplement, containing bovine pituitary extract (BPE), recombinant human insulin-like growth factor-I, hydrocortisone and recombinant human epidermal growth factor. Each 5 mL bottle of MEGS contains all of the growth factors, hormones, and tissue extracts necessary for the culture of normal human mammary epithelial cells, and is the correct amount of supplement for a 500 mL bottle of Medium 171. When a 500 mL bottle of Medium 171 is supplemented with MEGS, the final concentrations of the components in the supplemented medium are: BPE, 0.4% v/v; recombinant human insulin-like growth factor-I, 0.01 µg/mL; hydrocortisone, 0.5 µg/mL; and recombinant human epidermal growth factor, 3 ng/mL.

Medium 171 and MEGS are designed for use in the routine culture of normal human mammary epithelial cells. When Medium 171 is supplemented with MEGS, these media will support the plating and proliferation of normal human mammary epithelial cells at densities between  $2.5 \times 10^3$  cells/cm<sup>2</sup> and  $8 \times 10^4$  cells/cm<sup>2</sup>. The Medium 171 and MEGS formulations are based on published supplementation of medium MCDB 170, with modifications.

## Contents and storage

Catalog numbers that appear as links open the web pages for those products.

Product	Cat. No.	Amount	Storage <sup>[1]</sup>
Medium 171	<a href="#">M171500</a>	500 mL	4°C; Protect from light <sup>[2]</sup> ; Do not freeze <sup>[3]</sup>
Mammary Epithelial Growth Supplement (MEGS)	<a href="#">S0155</a>	5 mL	-20°C; Store in a freezer that is not self-defrosting <sup>[4]</sup>

<sup>[1]</sup> When stored as indicated, all products are stable until the expiration date.

<sup>[2]</sup> Several components of these tissue culture media are light-labile. Do not expose the media to light for lengthy periods of time.

<sup>[3]</sup> If the medium is warmed prior to use, do not exceed 37°C.

<sup>[4]</sup> After long-term storage at -20°C, MEGS may contain a small amount of precipitate. This precipitate is formed from cold-insoluble material in the BPE component of the MEGS and will not affect the performance of the product.

## Prepare Medium 171 supplemented with MEGS

1. Thaw one bottle of MEGS. Place the MEGS in a 37°C water bath or overnight at 4°C.  
**Note:** If thawed in a water bath, do not leave the product at 37°C after the product has thawed.
2. Remove one bottle of Medium 171 from cold storage. Make sure that the caps of the vessels are tight.
3. Gently swirl the bottle of MEGS. Avoid splashing the supplement into the cap of the bottle or causing the supplement to foam.
4. Wipe the outside of the containers with a disinfecting solution, such as 70% ethanol or isopropanol.

- Using sterile technique in a laminar flow culture hood, transfer the entire contents of the bottle of supplement to the bottle of Medium 171.
- Tightly cap the bottle of supplemented medium, then swirl the contents to ensure a homogeneous solution. Avoid causing the medium to foam.

Store Medium 171 supplemented with MEGS in the dark at 4°C for up to 1 month. Do not freeze. When stored in the dark at 4°C, the supplemented medium is stable for 1 month.

## Limited product warranty

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Life Technologies Corporation | 3175 Staley Road | Grand Island, New York 14072 USA  
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**Revision history:** Pub. No. MAN0001585

Revision	Date	Description
3.0	17 November 2021	<ul style="list-style-type: none"><li>Replaced "bovine insulin" with "recombinant human insulin-like growth factor-I" in "Product description" on page 1.</li><li>Updated to the current document template, with associated updates to trademarks, logos, licensing, and warranty.</li></ul>

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