

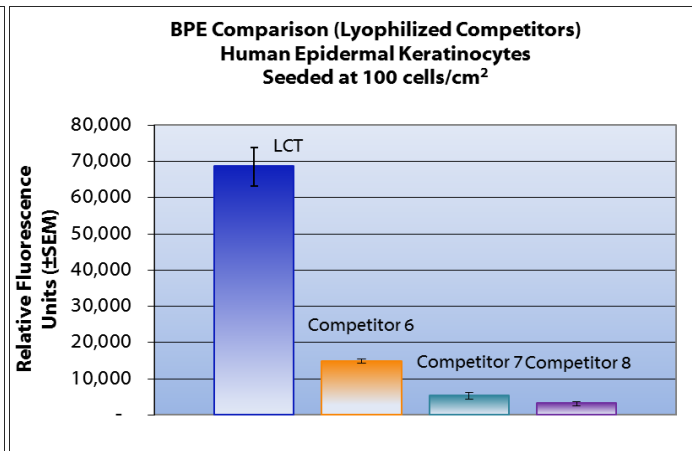
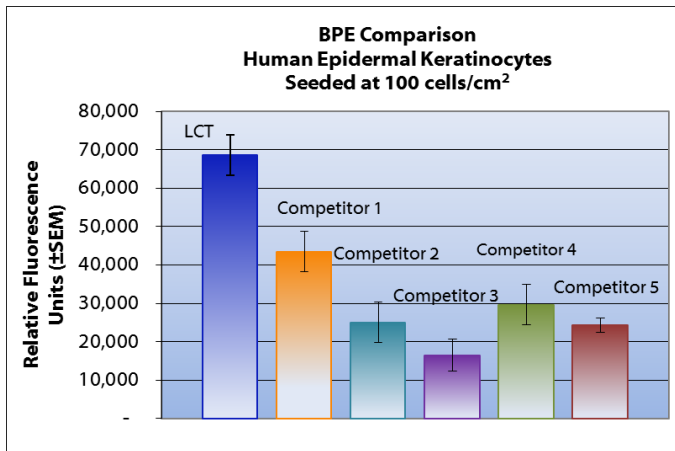
Extract P™ Bulk Bovine Pituitary Extract (BPE) Supplement Specification and Instruction Sheet



Quality Control Testing

- Sterility
- Mycoplasma-free
- Cell Culture Evaluation

Product	Part No.	Volume	Concentration of Supplement	Storage
Extract P Supplement	LS-1037	2 mL	≥10 mg/mL crude protein	-20°C
Extract P Supplement	LS-1094	4 mL	≥10 mg/mL crude protein	-20°C
Extract P Bulk Supplement	CM-0097	25 mL	≥10 mg/mL crude protein	-20°C
Extract P Bulk Supplement	CM-0066	≥500 mL	≥10 mg/mL crude protein	-20°C



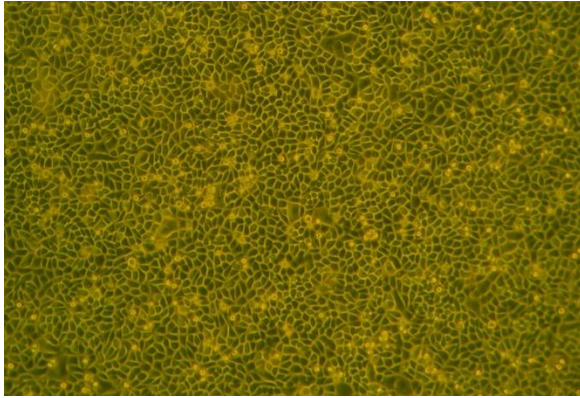
Shown above: Left, liquid competitors; right, lyophilized competitors vs LCT liquid

Competitor Comparisons:

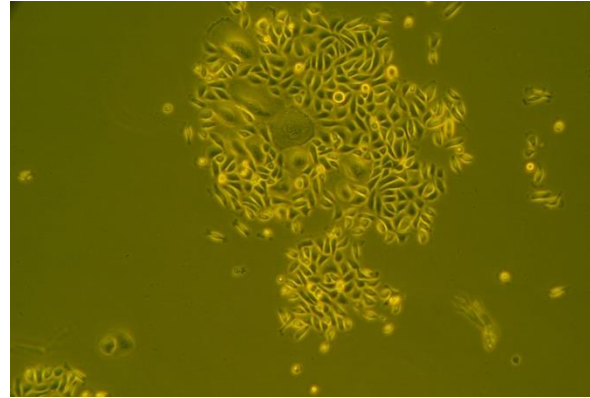
Human Epidermal Keratinocytes were cultured in Dermalife® K LifeFactors® Kit. Extract P from the Dermalife K LifeFactors kit was substituted with BPE from competitors. Cells were cultured for 1 passage and then inoculated into 24-well plates at 100 cells/cm² and cultured for 7 days without a media change. Higher fluorescence represents a greater number of cells per well and therefore better proliferation.

To place an order, please visit lifelinecelltech.com or call technical and customer service at 877.845.7787.

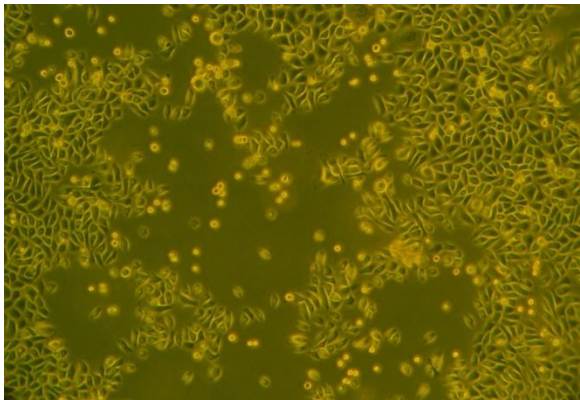
Shown Below: Human epidermal keratinocytes thawed and inoculated into T-25 flasks at 2,500 cells/cm² and cultured in DermaLife K Medium with different BPE supplements. Pictures were taken after 7 days in culture. (100X)



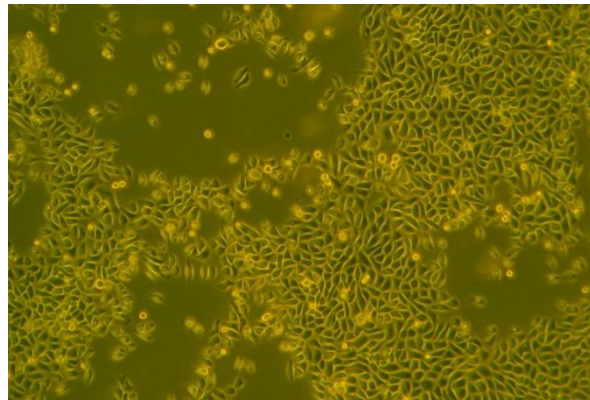
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Competitor 8



Competitor 4



Competitor 2

Extract P Supplement

Extract P is a protein-rich aqueous solution that has been extracted from bovine pituitary glands. Extract P contains a combination of hormones, cytokines, mitogens, and other growth factors that are effective in the *in vitro* culture of several types of human epithelial cells in serum-free growth medium.

The concentration of Extract P required for monolayer growth of epithelial cells in serum-free growth medium can range from 35 to 70 µg/mL. However the final concentration required may vary depending upon the cell type and medium used to culture the cells. The addition of 2 mL of Extract P to 500 mL of serum-free media will provide an effective concentration to support the culture of several types of human epithelial cells.

Lifeline's Extract P is manufactured from New Zealand-sourced bovine pituitaries to minimize the possibility of contamination from Bovine Spongiform Encephalopathy (BSE). Lifeline offers Extract P as an individual supplement to allow you to prepare fresh medium in your laboratory, extending shelf life and enhancing performance.

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Product Storage

Extract P Supplement may be stored at -20°C until ready to use; however for optimal performance, Lifeline recommends storage at -70°C or below. Extract P Supplement should only be thawed once and stored at 4°C for a maximum of one week after thaw. Multiple freeze/thaw cycles are not recommended as an insoluble lipoprotein precipitate forms with each freeze-thaw cycle. Do not use products beyond expiration date.

Safety and Use Statement

Extract P Supplement is for Research Use Only. This product is not approved for human or veterinary use or for use in *in vitro* diagnostics or clinical procedures.

Basic Aseptic Technique

Extract P should only be used in an aseptic environment, a Class II biological safety cabinet with front access and filtered laminar airflow, or an equivalent device. Always wear gloves and eye protection when working with these materials. Wipe or spray all bottles and vials with 70% ethanol or isopropanol, especially around the area of the cap, before placing them in the biological safety cabinet. Allow these surfaces to dry completely before opening the bottle or vials. Transfer the supplement with disposable sterile pipettes. Do not mouth pipette! Take up the volume needed into the pipette, being careful not to touch the sterile tip to the rim of the container or any other surface. Close the container and open the container into which the transfer is being made, again being careful not to touch any surfaces with the sterile tip. Transfer the material and close the container. Wash your hands before and after working with cell cultures. Do not block airflow in a laminar flow hood as this may compromise sterility. Ensure that biological safety cabinets are certified routinely and that the HEPA filters are replaced regularly.

Adding LifeFactors

When supplementing basal medium, Lifeline® recommends the use of a suitable pipette to remove the exact volume of supplement. All procedures should be executed using aseptic technique. Mix supplemented medium by gently pipetting up and down with a large volume pipette (25 or 50 mL) or gently invert the tightly closed 500 mL bottle. Do not shake or froth the medium. The supplemented medium may be stored at 2 to 8°C for up to two weeks.

Pre-warming Medium

If using less than 100 mL of complete medium, Lifeline recommends warming only the volume needed in a sterile conical tube. Repeated warming of the entire bottle over extended periods will cause degradation and reduced shelf life of the medium. When warming the entire bottle of medium, Lifeline recommends using a Lifeline water bath sleeve (included with medium) to help protect the medium from contaminants in a 37°C water bath. Medium will warm to 37°C in 10 to 30 minutes, depending on the volume. Do not leave medium in water bath for extended periods of time.

The Lifeline Guarantee

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. Upon request, we will provide lot-specific QC test results, material safety data sheets, and certificates of analysis. See complete guarantee/warranty statement at lifelinecelltech.com or contact your technical representative for more information.

**For any question on medium supplementation or cell feeding guidelines;
please contact technical service at 877.845.7787.
We are here to help.**

Notes:

Call Lifeline Technical Service and Sales at 877.845.7787
or visit lifelinecelltech.com for more information

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