

ACB Botanical Sugar Complex

Moisturization + Antioxidant + Hair Nourishing



Tomorrow's Vision... *Today!*[®]

ACB Botanical Sugar Complex

Technical Information:



Product Code: 20039

INCI Name: Tapioca Starch and Lactobacillus Ferment Lysate

INCI Status: Conforms

Suggested Use Level: 1.0 – 10.0%

Suggested Applications: Moisturizing, Wound Healing, Antioxidant

Tapioca

Characteristics & History:

- Starch derived from South American cassava plant
- Distinct composition of carbohydrates, vitamins, minerals, and organic compounds
 - Rich in fiber, protein, and good cholesterol
 - Low levels of saturated fat, sodium, and bad cholesterol
- Commonly used in the nutritional industry as a gluten-free thickening agent
- Enjoyed throughout the world as the main constituent of bubble tea



Tapioca

Characteristics & History:

- Cassava has traditionally been used as an herbal remedy for skin sores
- Today, tapioca starch is a vital tool used in developing countries to fight dehydration
- Cassava derived sugars contain an active carbohydrate profile that offers a wide range of cosmetic benefits
 - Traditional sugar based materials are used as exfoliators



ACB Botanical Sugar Complex

Development:



- **ACB Botanical Sugar Complex** harnesses the benefits of tapioca starch through the fermentation of cassava root with Lactobacillus
- Fermentation allows for the isolation of the tapioca starch and enhanced bioavailability of the active
 - Increases skin and hair benefits by enhancing the ability of the constituents to be more readily absorbed



ACB Botanical Sugar Complex

Benefits:



- ✓ Increases Cellular Metabolism
- ✓ Intense Moisturization
- ✓ Antioxidant
- ✓ Hair Nourishing
- ✓ Enhanced Bioavailability
- ✓ Wound Healing
- ✓ Restores Moisture Balance
- ✓ Increases Cellular Viability

ACB Botanical Sugar Complex Efficacy Data



In-vitro Scratch Assay

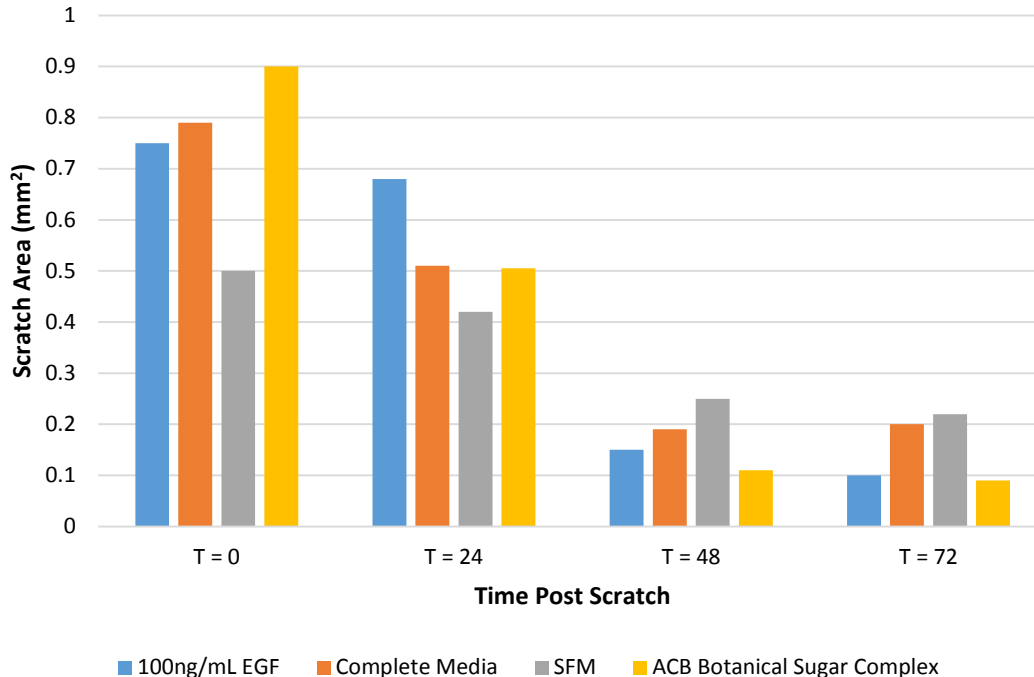


Figure 1. Area of Scratch

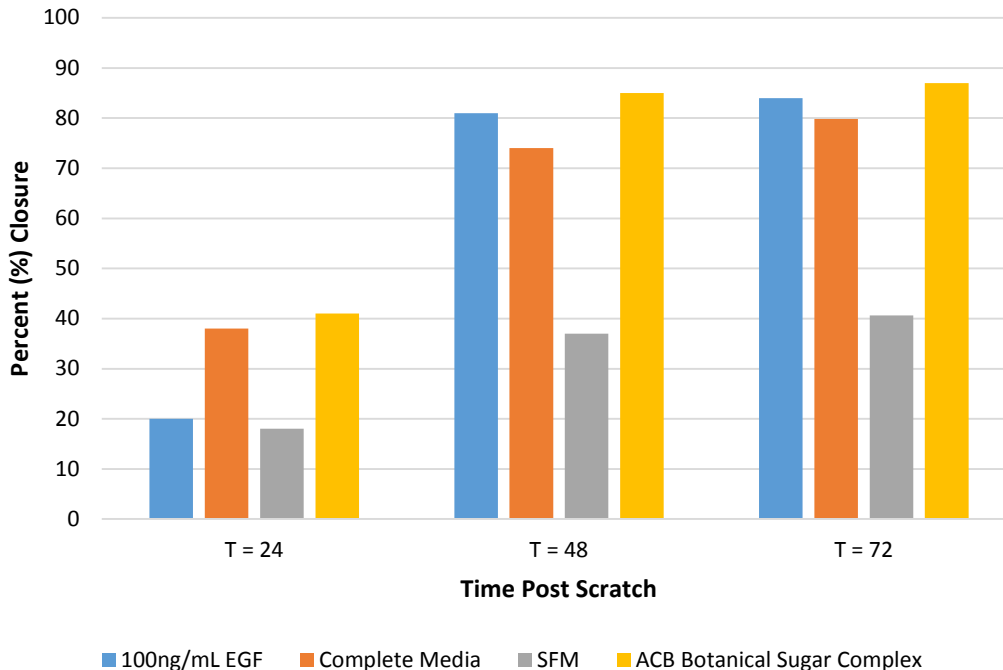
Protocol

- Human dermal fibroblasts were seeded into 6-well tissue culture plates
- 0.01% concentration of **ACB Botanical Sugar Complex** was added to the serum-free DMEM and incubated with fibroblasts
- Scratch took place every 24 hours and up to 96 hours
- **ACB Botanical Sugar Complex** was able to increase cell migration and close the scratch at a rate comparable to the positive control
- Product has healing abilities and cell proliferation properties

ACB Botanical Sugar Complex Efficacy Data



In-vitro Scratch Assay



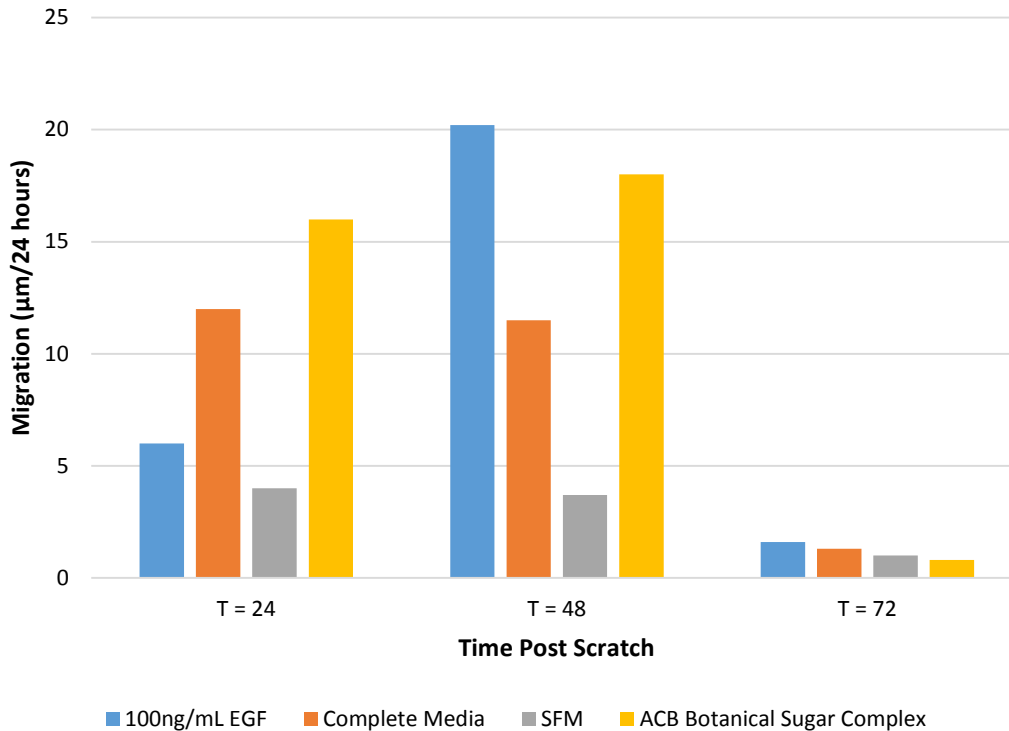
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Figure 2. Percent Scratch Closure

ACB Botanical Sugar Complex Efficacy Data

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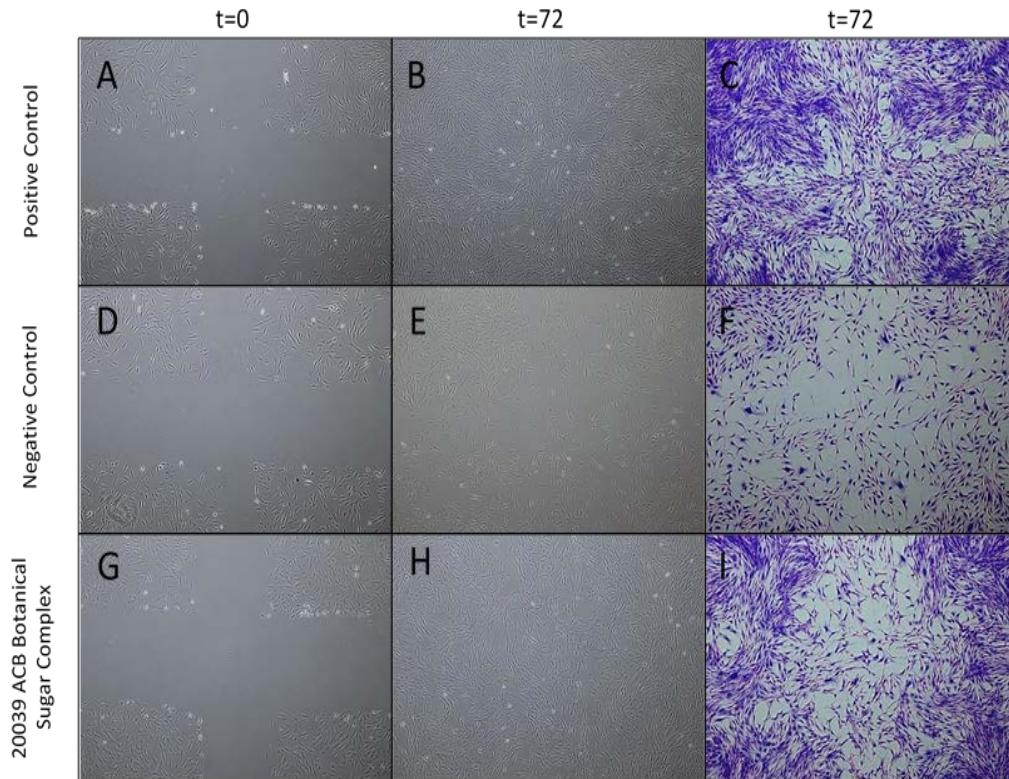


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Figure 3. Cell Migration Rate

ACB Botanical Sugar Complex Efficacy Data



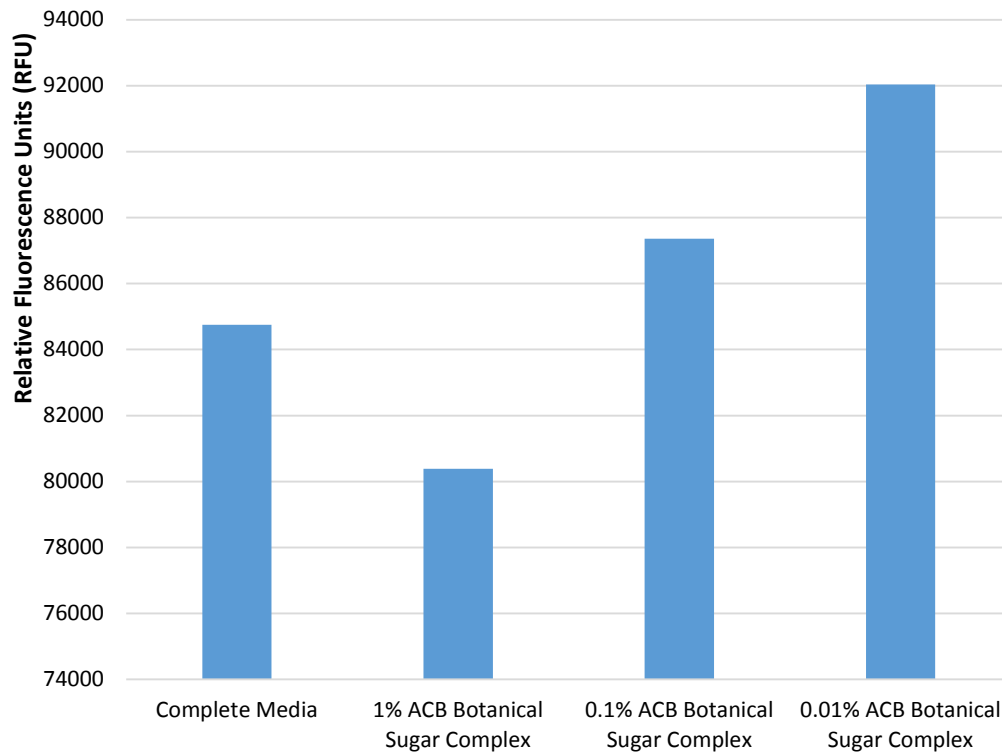
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Figure 4. Images at t=0 hours (A, D, G) and t=72 hours (B, E, H) for **ACB Botanical Sugar Complex**, positive control (EGF-1), and negative control (SFM). At experiment completion (t=72 hours), cells were fixed in paraformaldehyde and stained with crystal violet (C, F, I).

ACB Botanical Sugar Complex Efficacy Data

Cellular Viability Assay

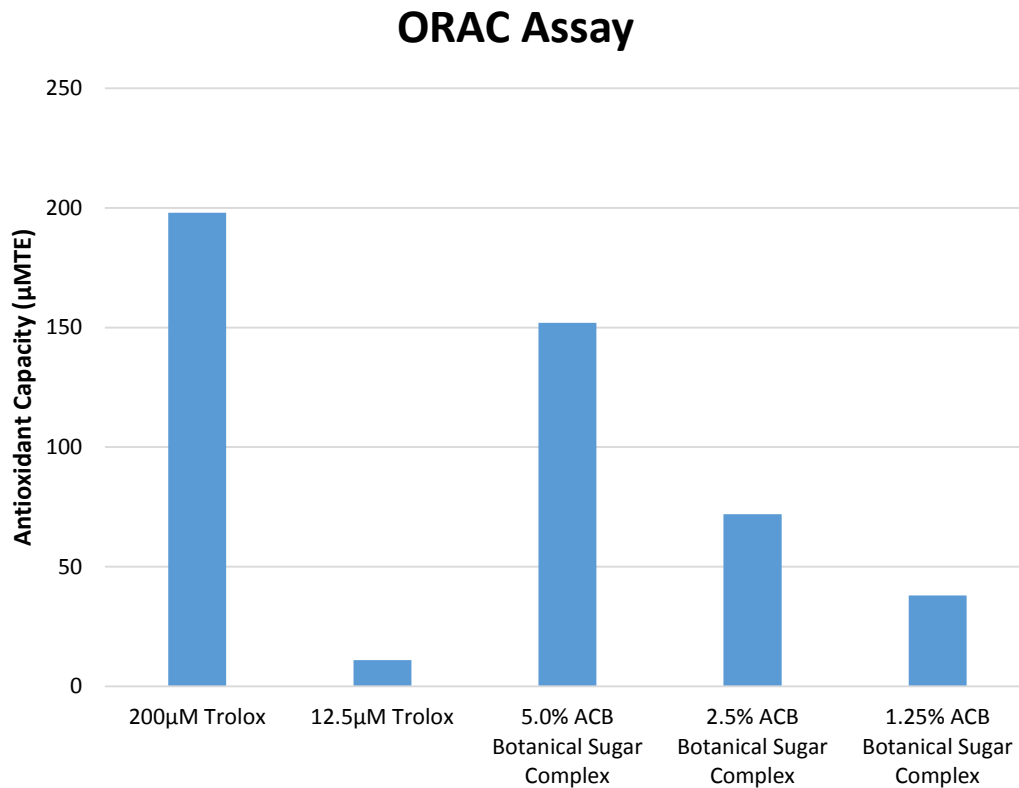


Protocol

- Human dermal fibroblasts seeded into 96-well tissue culture plates
- Concentrations: 0.01%, 0.1%, 1.0%
- 10 μL of viability reagent was added to 90 μL of cell culture media in culture wells
- **ACB Botanical Sugar Complex** exhibited comparable results by increasing cell metabolism

Figure 5. Increase in Cell Renewal following application of **ABS Botanical Sugar Complex**

ACB Botanical Sugar Complex Efficacy Data



Protocol

- Trolox[®] was used as the positive control
- Test Quantity: 5.0%, 2.5%, 1.25%
- Fluorescent measurements were taken every two minutes for two hours
- Antioxidant capacity of **ACB Botanical Sugar Complex** increased as concentration increased

Figure 6. Antioxidant Capacities of **ABS Botanical Sugar Complex**

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THANK YOU

For more information –Visit our website!

www.activeconceptsllc.com

