

# ABS White Willow Bark Extract Powder

Alternative to Synthetic Salicylic Acid + Natural Preservation in Cosmetic Formulas

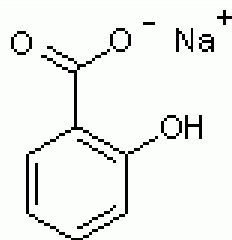


# ANTIMICROBIAL ACTION

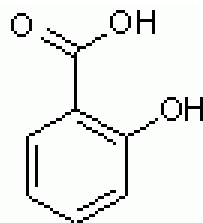


## Natural Salicylic Acid

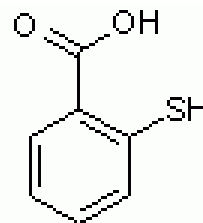
- Salicylic acid has been identified as part of the willow tree's endogenous defense mechanisms – protects against invading pathogens
- The bark of the White Willow is a natural source of salicylic acid-like ingredients



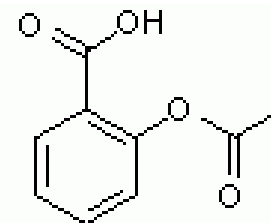
B. sodium salicylate



C. salicylic acid



D. thiosalicylic acid



E. acetyl salicylic acid (aspirin)

# ABS White Willow Bark Extract Powder

## Efficacy Data



### In-vivo Efficacy Studies

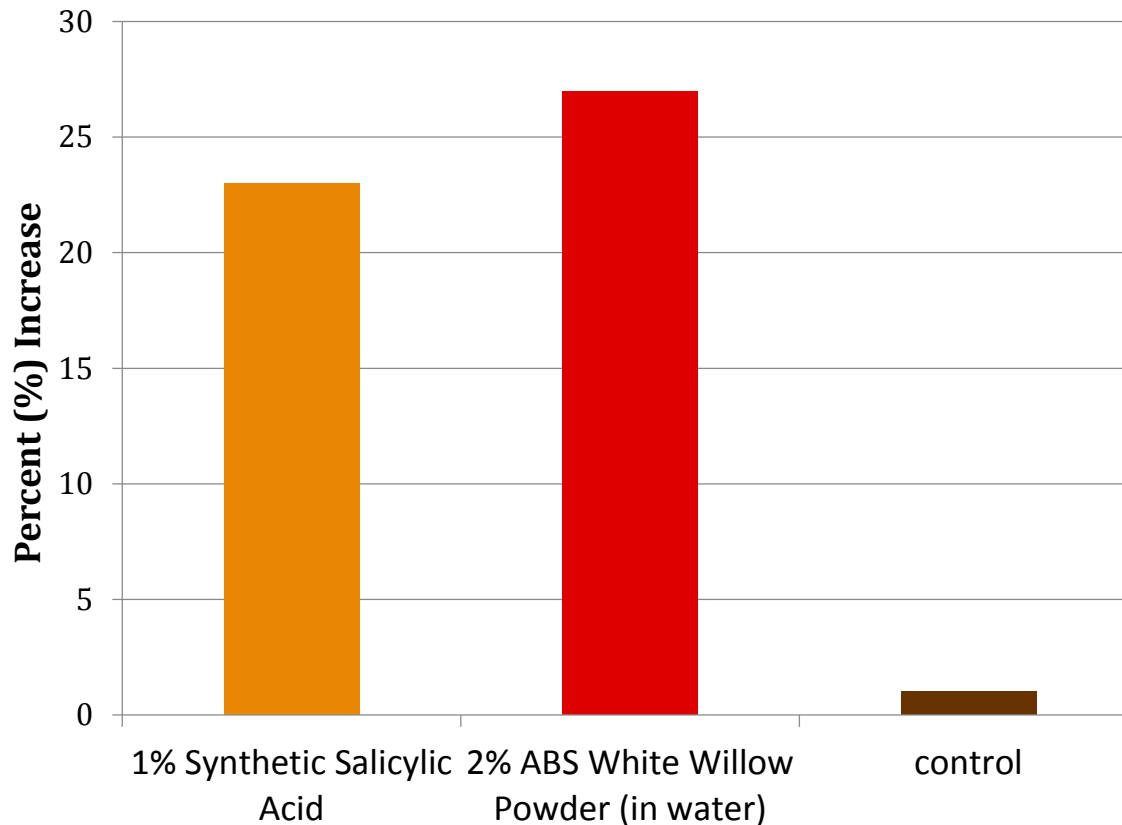
- Cellular Renewal
- High Resolution Ultrasound Skin Imaging Assay

### In-vitro Efficacy Studies

- Antimicrobial Assay – *S.aureus*
- Antimicrobial Assay – *P.acnes*
- ORAC Assay
- IL-6 ELISA Assay
- COX-II Percent Inhibition

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vivo* Cellular Renewal Assay

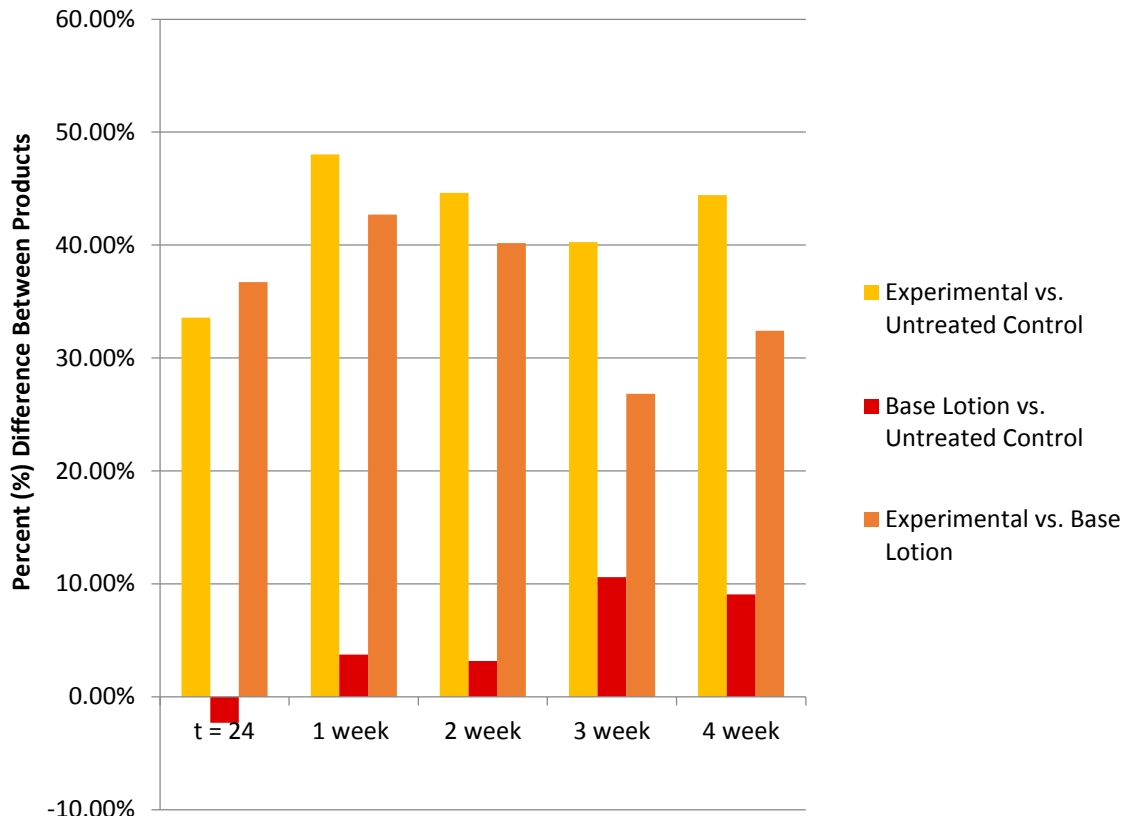


### Protocol

- 15 female participants
- Control: 5.0% Petrolatum-Based Dansyl Chloride Solution
- Test materials: 1.0% Synthetic Salicylic Acid (3.9 pH w/w) + 2.0% ABS White Willow Bark Extract Powder (equivalent to 1.0% Synthetic SA)
- UV light was used to determine the color intensity relative to the level of binding and percent increase in cellular renewal

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vivo* High Resolution Skin Imaging

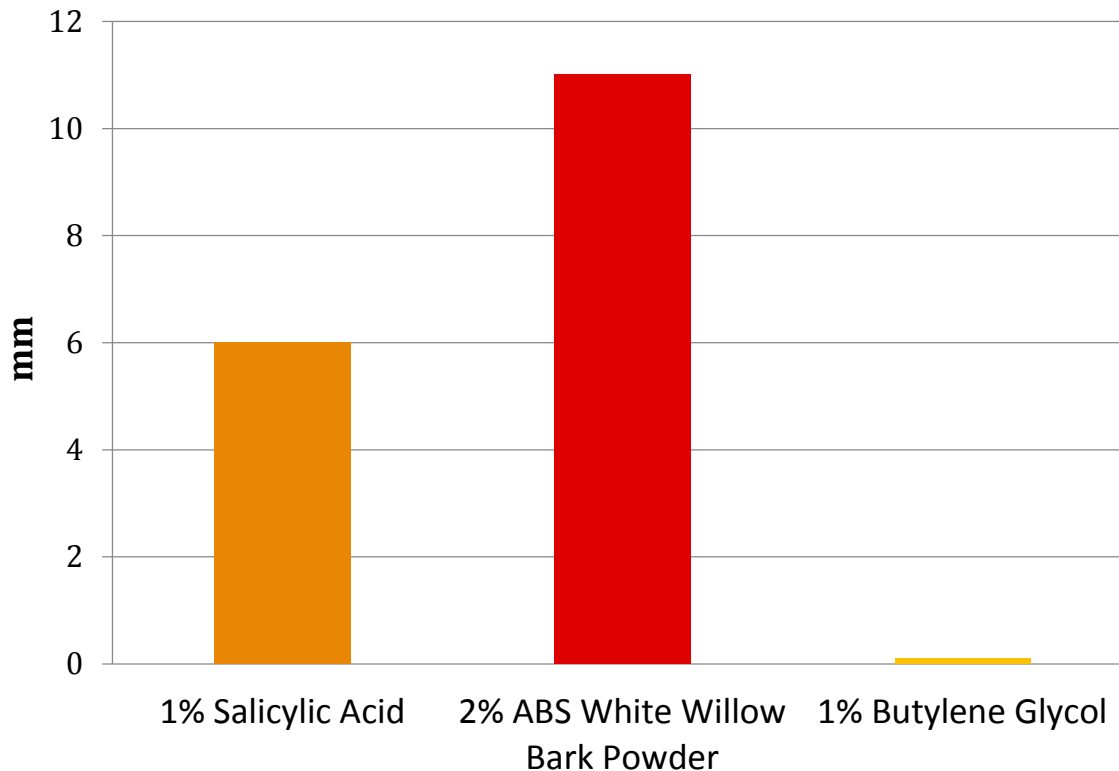


### Protocol

- 10 M/F
- Equipment: DermaLab
- Apply 2 mg of each test material on their volar forearms
- Concentration: 2.0%

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* Antimicrobial Assay – *S.aureus*

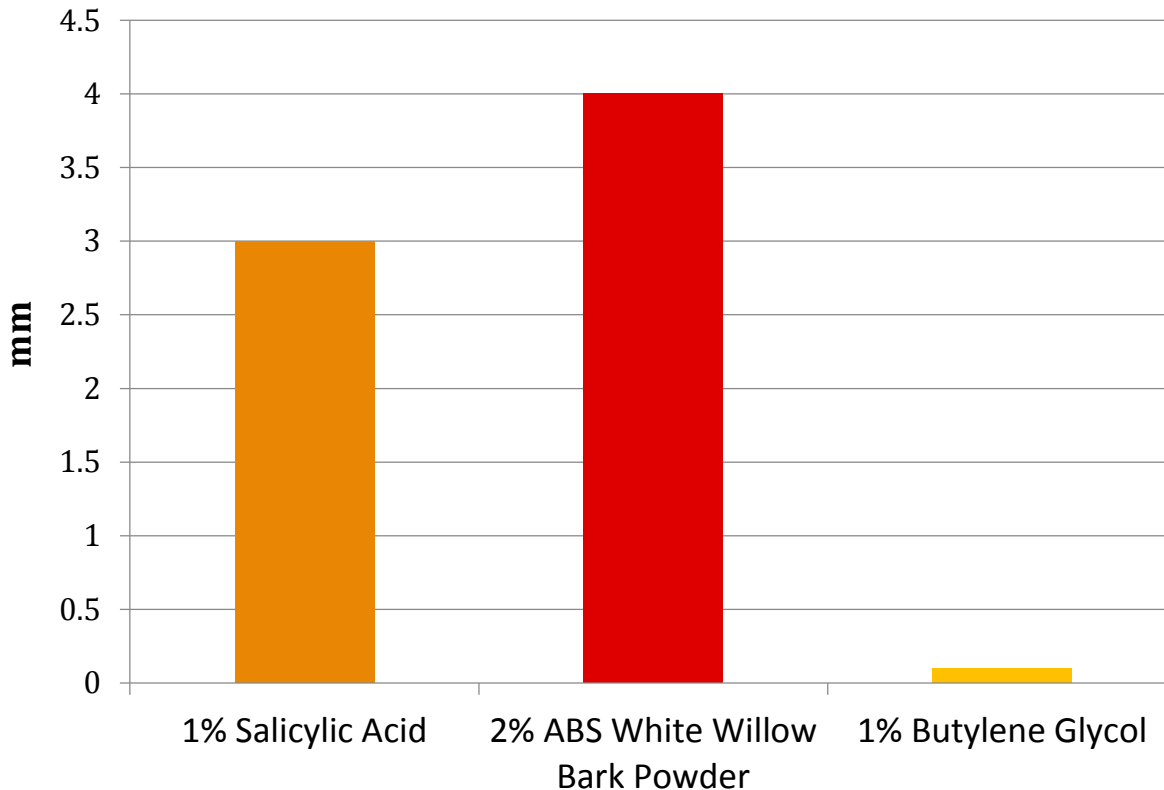


### Protocol

- The zone of inhibition for 2.0% **ABS White Willow Bark Extract Powder** was determined in relation to the zones of inhibition for 1.0% Salicylic Acid and Butylene Glycol
- Tested against *S. aureus* & *P.acnes*

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* Antimicrobial Assay – *P.acnes*

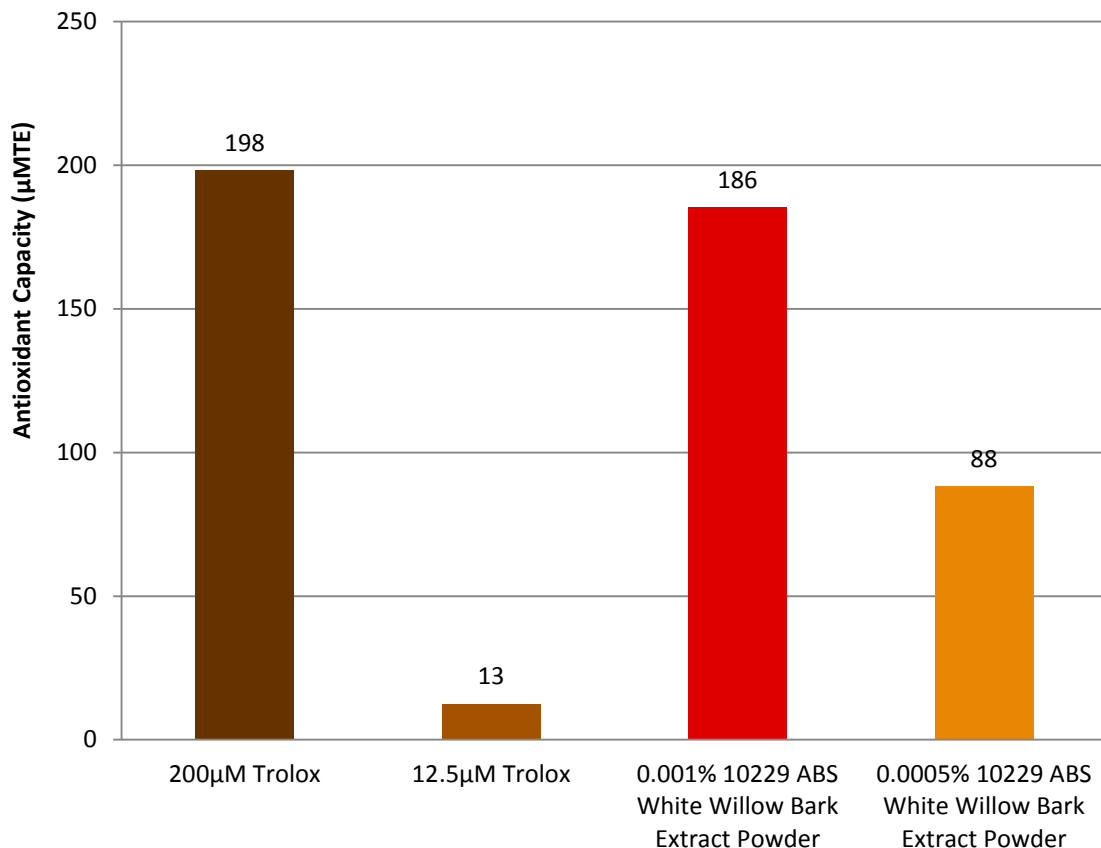


### Protocol

- The zone of inhibition for 2.0% **ABS White Willow Bark Extract Powder** was determined in relation to the zones of inhibition for 1.0% Salicylic Acid and Butylene Glycol
- Tested against *S. aureus* & *P.acnes*

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* ORAC Assay



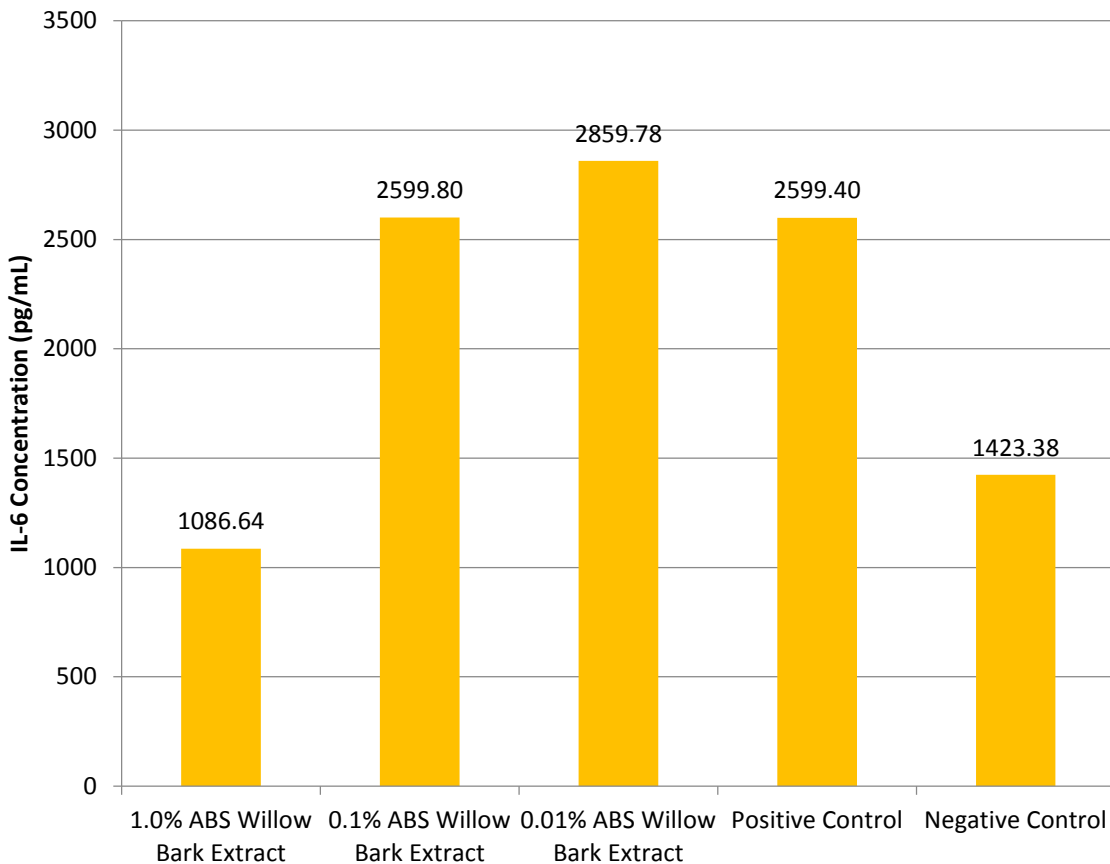
### Protocol

- Trolox® was used as the positive control
- Solutions were prepared at three concentration as reference
- Fluorescent measurements were taken every two minutes for two hours
- **ABS White Willow Bark Extract Powder** showed antioxidant activity at levels as low as 0.0005% concentration



# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* IL-6 ELISA Assay

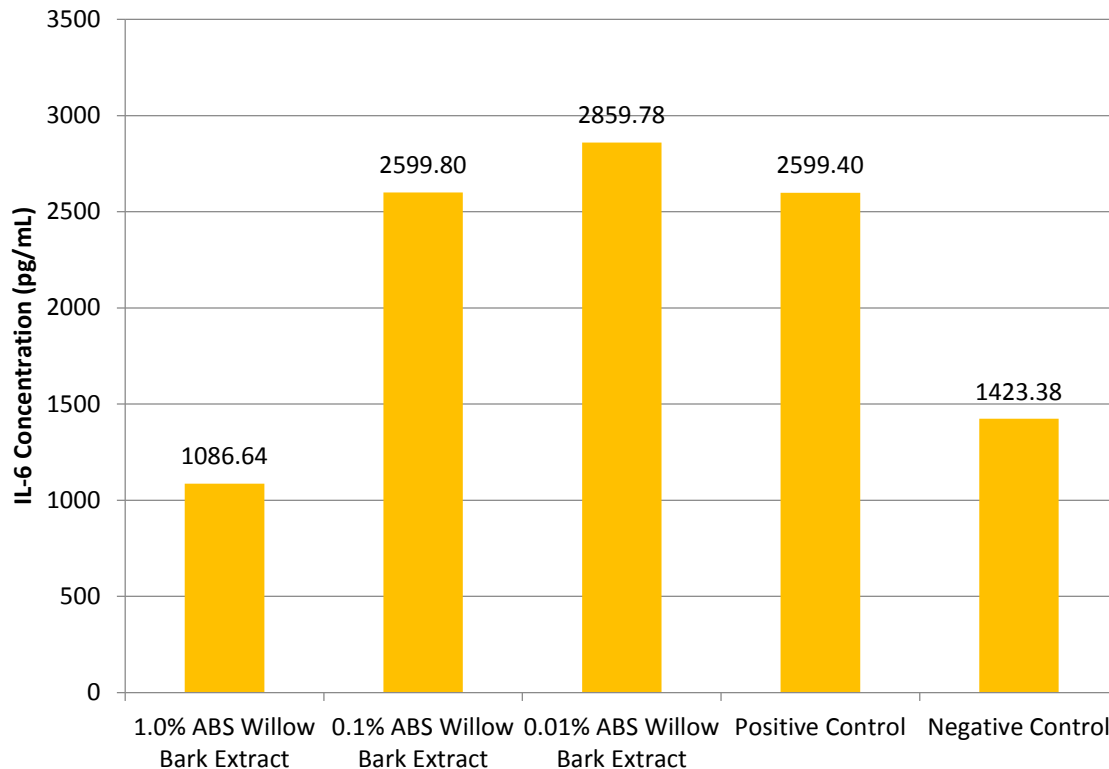


### Protocol

- Human dermal fibroblasts were seeded into 12-well tissue culture plates
- Concentrations: 1%, 0.1%, 0.01%
- Concentrations added to complete DMEM containing 1 $\mu$ g/mL LPS & incubated with fibroblasts for 24 hours

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* Percent Decrease in IL-6 Production

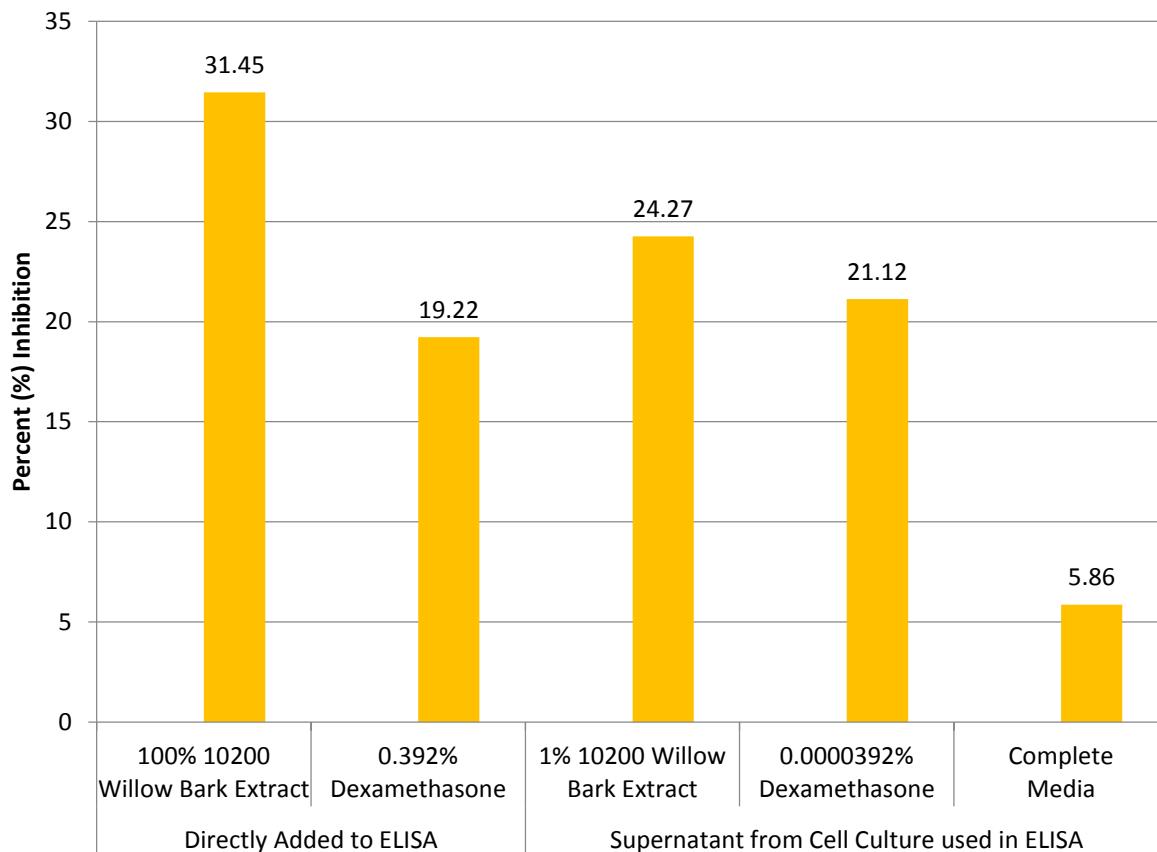


### Protocol

- Human dermal fibroblasts were seeded into 12-well tissue culture plates
- Concentrations: 1%, 0.1%, 0.01%
- Concentrations added to complete DMEM containing 1 $\mu$ g/mL LPS & incubated with fibroblasts for 24 hours

# ABS WHITE WILLOW BARK EXTRACT POWDER EFFICACY DATA

## *In-vitro* COX-II Percent Inhibition



### Protocol

- HaCat Keratinocytes were seeded into 24-well tissue culture plates
- Concentrations: 1%
- Dexamethasone (DEX) was used as a positive control
- The COX reaction is carried out using Human Recombinant COX-II, Heme to activate the peroxidase activity of COX-II, Arachidonic Acid as the reaction substrate, Hydrochloric Acid to stop the reaction, and Stannous Chloride to reduce  $\text{PGF}_2$  to  $\text{PGF}_{2\alpha}$

# ABS WHITE WILLOW BARK EXTRACT POWDER

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## Technical Information:

**Product Code:** 10229

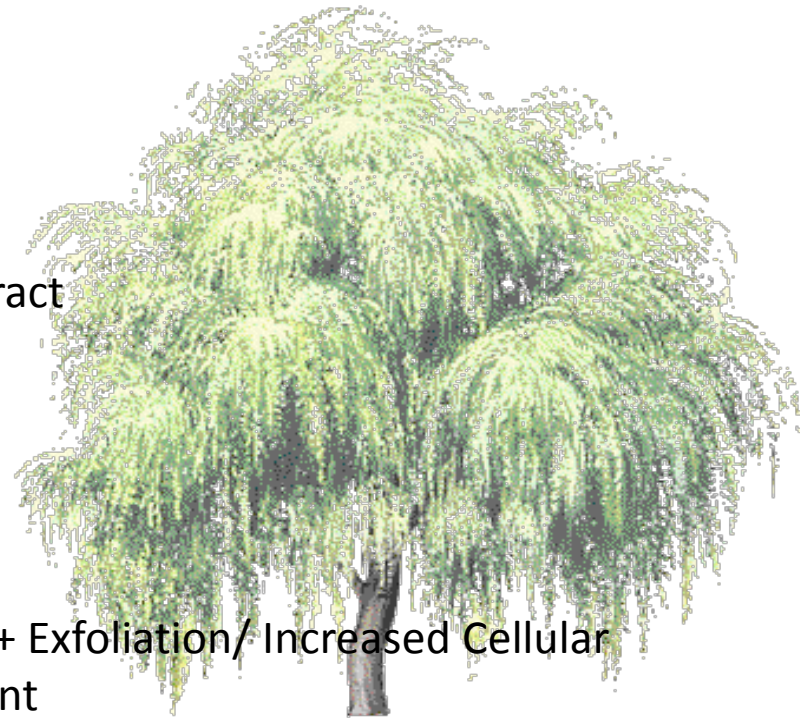
**INCI Name:** Salix alba (White Willow) Bark Extract

**INCI Status:** Approved

**Suggested Use Levels:** 1.0 – 10.0%

**Suggested Applications:** Natural Preservation + Exfoliation/ Increased Cellular Renewal + Problem Skin Treatment + Antioxidant

**Solubility:** Water Soluble



# ACTIVE CONCEPTS LLC

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**THANK YOU**

For more information –Visit our website!

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