ACB Willow Bark Extract 20%

Revolutionary + Natural + Antimicrobial

Tomorrow’s Vision... Today!®
ACB Willow Bark Extract 20%

Technical Information:

**Product Code:** 20200

**INCI Name:** Salix nigra (Black Willow) Bark Extract

**INCI Status:** Approved

**Suggested Use Levels:** 1.0–10.0%

**Suggested Applications:** Natural Preservation, Exfoliation, Problem Skin, Antimicrobial, Soothing
Antimicrobial Effects:

• Salicylic acid has been identified as part of a plant’s endogenous defense mechanism against invading pathogens

• The bark of the Black Willow, used interchangeably with Salix alba or White Willow, is a source of salicylic acid-like ingredients

• ACB Willow Bark Extract 20% is standardized for 20% salicylates
ACB Willow Bark Extract 20% Efficacy Assay Results

Antimicrobial Insult Test 1

Log CFU/ml

Initial  Day 3  Day 7  Day 14  Day 21  Day 28

mold

yeast

E.coli

S.aureus

B.subtilis

P.aeruginosa
ACB Willow Bark Extract 20% Efficacy Assay Results

Antimicrobial Insult Test 2

Log CFU/ml

Day 28 Initial  Day 31  Day 35  Day 42  Day 49  Day 56

mold  yeast  E.coli  S.aureus  B.subtilis  P.aeruginosa
ACB Willow Bark Extract 20% Efficacy Assay Results

Antimicrobial Insult Test 3

Log CFU/ml

Day 56 Initial  Day 59  Day 63  Day 70  Day 77  Day 84

- mold
- yeast
- E.coli
- S.aureus
- B.subtilis
- P.aeruginosa
Salicylic Acid & UV Damage

• Salicylic acid has been found to significantly inhibit UVB induced NF-κb activation in keratinocytes
  o NF-κb (Nuclear Factor Kappa B) is a cell signaling molecule for inflammation. Its activation induces the expression of COX-2, which leads to tissue inflammation

• Salicylic acid was also found to have an anti-inflammatory effect on normal keratinocytes

ACB Willow Bark Extract 20% Efficacy Assay Results

**Protocol**

- 15 female test subjects
- Control: 5.00% Petroleum base Dansyl Chloride solution
- Test materials:
  - 1.00% Synthetic Salicylic Acid (aqueous solution pH 3.90)
  - 2.00% **ACB Willow Extract 20%** (1.00% Salicylic Acid)
- UV light was used to determine the color intensity relative to the level of binding and percent increase in cell renewal

**Cellular Renewal**

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<thead>
<tr>
<th></th>
<th>0%</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
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<tbody>
<tr>
<td>1% Salicylic Acid</td>
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<td>2% ACB Willow Bark Extract 20%</td>
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ACB Willow Bark Extract 20% Efficacy Assay Results

ORAC Assay

**Protocol**
- Trolox was used as the positive control
- Solutions were prepared at three concentrations as a reference
- Fluorescent measurements were taken every two minutes for two hours
- **ACB Willow Bark Extract 20%** showed antioxidant activity at 0.1% concentrations
ACB Willow Bark Extract 20% Efficacy Assay Results

**Protocol**

- Human dermal fibroblasts were seeded into 12-well tissue culture plates and allowed to grow to confluency in complete DMEM.
- Concentrations: 0.1%, 1.0%, 0.01%
- ACB Willow Bark Extract 20% was added to complete DMEM containing 1µg/mL LPS and incubated with fibroblasts for 24 hours.
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Benefits:

- Enhances cell turnover
- Replacement for synthetic salicylic acid
- Natural Preservation
- Exfoliates
- Treats Problem Skin
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THANK YOU
For more information – Visit our website!
www.activeconceptsllc.com