# Summary of Studies Performed on Sklar® Disinfectant Wipe Cleaning Solution

US EPA Registration No. 70144-1-(31118)

November 2012

**DESCRIPTION:**

Sklar Disinfectant and Soak are the EPA approved brand names for a proprietary antimicrobial liquid chemical solution sub-registered to Sklar Instruments Inc. Meets blood-borne pathogen standard of the Occupational Safety and Health Administration (OSHA), US Department of Labor. Produced adhering to FDA Good Manufacturing Practices.

Sklar Disinfectant’s unique formulation is produced through a combination of solvents, detergents and other ingredients acting in synergy with three distinct antimicrobial active agents. This product may be safely applied to soft or hard surfaces as an effective decontaminant / sanitizer / disinfectant / cleaner.

**STUDIES PERFORMED AT INDEPENDENT EPA APPROVED LABORATORIES**

<table>
<thead>
<tr>
<th><strong>Bactericidal / Fungicidal Efficacy</strong></th>
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<tr>
<td>Acinetobacter baumannii</td>
<td>Salmonella enterica</td>
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<td>Enterobacter aerogenes</td>
<td>Serratia marcescens</td>
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<tr>
<td>Escherichia coli (ESBL Strain)</td>
<td>Staphylococcus aureus</td>
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<tr>
<td>Klebsiella Pneumoniae (CRKP)</td>
<td>Trichophyton interdigitale (formerly Trichophyton mentagrophytes)</td>
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<tr>
<td>Listeria monocytogenes</td>
<td>Vancomycin Resistant Enterococcus Faecalis (VRE)</td>
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<tr>
<td>Methicillin Resistant Staphylococcus Aureus (MRSA)</td>
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<tr>
<td>Mycobacterium bovis BCG (TB)</td>
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<td>Pseudomonas aeruginosa</td>
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<th><strong>Virucidal Efficacy</strong></th>
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<td>Avian Influenza Virus (H3N2)</td>
<td>Human Immunodeficiency Virus (HIV-1)</td>
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<td>Hepatitis B Virus (HBV)</td>
<td>Influenza A Virus</td>
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<td>Hepatitis C Virus (HCV)</td>
<td>Rotavirus (RV-14)</td>
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<td>Herpes Simplex Virus (HSV-2)</td>
<td>Swine Influenza Virus (H1N1 strain)</td>
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<td>Dermal Toxicity / Irritation / Sensitization</td>
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<td>Ocular Irritation</td>
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Summary of Studies Performed on Sklar® Disinfectant Wipe Cleaning Solution

(1) Bactericidal / Fungicidal Study Titles:  (AOAC - Association of Official Analytical Chemists)

- “AOAC Use-Dilution Method – Acinetobacter baumannii”
  Sklar Disinfectant passed the spray test at 2 minutes.

- “Germicidal and Detergent Sanitizing Action of Disinfectants”
  Sklar Disinfectant passed the AOAC Sanitizer Spray Test at 10 seconds.

- “AOAC Use-Dilution Method” - Escherichia coli (ESBL)
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.

- “Use-Dilution Method” - Klebsiella pneumoniae Carbapem Resistant
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.

- “AOAC Use-Dilution Method” - Listeria monocytogenes
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.

- “AOAC Use-Dilution Test” - Methicillin-resistant Staphylococcus aureus
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.

- “AOAC Tuberculocidal Activity of a Germicidal Spray Initial”
  Sklar Disinfectant exhibited no growth of mycobacterium bovis tuberculocidal BCG test at 2 minutes.

- “AOAC Tuberculocidal Activity of a Germicidal Spray - Confirmatory”
  Sklar Disinfectant killed mycobacterium bovis BCG at 2 minutes.

- “AOAC Use Dilution Test Healthcare”
  Sklar Disinfectant passed the spray test at 2 minutes.

- “AOAC Use-Dilution Test” - Serratia marcescens
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.

- “Sanitizer Test for Non-Food Contact Surfaces; Staphylococcus aureus and Enterobacter aerogenes”
  Sklar Disinfectant passed the AOAC Sanitizer Spray Test at 10 seconds.

- “Germicidal and Detergent Sanitizing Action of Sklar Disinfectant”
  Sklar Disinfectant passed the AOAC Food contact Sanitizing Spray test with a 30-second contact time.

- “AOAC Use Dilution Test Trichophyton mentagrophytes”
  Sklar Disinfectant exhibited no growth of Trichophyton mentagrophytes at 2 minutes.

- “AOAC Use Dilution Test; Vancomycin-resistant Enterococcus faecalis”
  Sklar Disinfectant passed the AOAC Germicidal Spray test with a 2 minute contact time.
(2) **Virucidal Study Titles:**

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Avian Influenza A (H3N2) Reassortant virus"
  Sklar Disinfectant inactivated the Avian Influenza virus with a 2 minute contact time.

- "Confirmatory Virucidal Efficacy Test; Duck Hepatitis B Virus (Surrogate for Human Hepatitis B Virus)"
  Sklar Disinfectant inactivated HBV with a 2 minute contact time.

- "Effectiveness of Sklar Disinfectant to Inactivate Hepatitis C Virus"
  Sklar Disinfectant inactivated HCV with a 2 minute contact time.

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Herpes simplex virus type 2"
  Sklar Disinfectant inactivated HSV with a 2 minute contact time.

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Human Immunodeficiency Virus type 1"
  Sklar Disinfectant inactivated the HIV-1 virus with a 1 minute contact time.

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Influenza A virus"
  Sklar Disinfectant inactivated the Influenza A virus with a 2 minute contact time.

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Rotavirus"
  Sklar Disinfectant inactivated the Rotavirus with a 2 minute contact time.

- "Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces; Virus: Swine Influenza A (H1N1) virus"
  Sklar Disinfectant inactivated the Swine Flu Virus (H1N1) with a 2 minute contact time.

- "Virucidal Hard-Surface Efficacy Test – Severe Acute Respiratory Syndrome – Related Coronavirus 2 (SARS-CoV-2) (COVID-19 Virus)"
  Sklar Disinfectant inactivated the Coronavirus 2 (SARS-CoV-2) (COVID-19 Virus) with a 2 minute contact time.

(3) **Toxicity / Irritation Study Titles**

- "Oral Toxicity"
  Sklar Disinfectant was tested for potential acute oral toxicity in accordance with the procedure outlined in the Pesticide Assessment Guideline, US EPA. Based on the results, the acute oral toxicity LD 50 of Sklar Disinfectant is greater than 5g/kg of body weight. This product is not considered an oral toxin.

- "Acute Inhalation Toxicity"
  An acute Inhalation Toxicity Study was conducted to determine the potential for Sklar Disinfectant to produce toxicity via the inhalation route at an exposure level of 2.0 mg/L. Based on the results, the single exposure Acute Inhalation LD 50 of the test solution is greater than 2.13 mg/L. The test results show this product to be categorized in the least toxic category (Cat IV) for chemical pesticides and is not a primary inhalation toxin.
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“Primary Dermal Irritation”

Sklar Disinfectant was tested for potential dermal irritation in accordance with the procedures outlined in the Pesticide Assessment Guidelines, US EPA. Sklar Disinfectant exhibited slight reversible redness during the observation period. Based on the results, Sklar Disinfectant may produce some reversible, slight skin irritation if directly applied to skin.

“Acute Dermal Toxicity Study”

Sklar Disinfectant was tested to evaluate its potential dermal toxicity. The specimens did not exhibit any signs of toxicity during the 14-day observation period following exposure. Based on the results of this study the LD 50 is greater that 2.0 g/kg of body weight and is non-toxic to skin.

“Primary Eye Irritation Study”

New Zealand Albino Rabbits weighing 2.0-3.0 kg were employed to evaluate the potential irritant effects of Sklar Disinfectant on the eye mucosa. Based on the criteria outlined in Grades for Ocular Lesions: Pesticide Assessment Guidelines, US EPA, Sklar Disinfectant produced some moderate reversible eye irritation. The results indicate that Sklar Disinfectant may produce reversible moderate eye irritation when instilled directly into the eye.