

Survey of Cosmetics

Dr Linroy Christian

Study Outline

- Study aim
 - To screen skin lightening creams and other cosmetics for the presence of mercury
- Objectives
 - Measure the mercury content of skin lightening creams and cosmetics bought in retail outlets in Antigua and Barbuda
 - Analyse a statistically representative number of samples in order to inform on generalized risk posed by skin lightening creams and cosmetics

Human Health Risk

- Adverse health effects associated with **inorganic mercury** exposure through use of skin lightening creams and soaps:
 - Kidney damage
 - Skin rashes
 - Skin discoloration
 - Scarring
 - Reduced resistance to fungal and bacterial infections
 - Anxiety
 - Depression
 - Psychosis
- Associated risk through exposure to **organic forms** of mercury typically found in **mascara and eye makeup cleaning products**:
 - Vary degrees of toxicity to the nervous, digestive and immune systems
 - Effects on the lungs, kidneys, skin and eye

Best quantified in
blood and urine

Products not
covered by
the
Convention



Sample Collection

- 135 brands collected in duplicate thus far
 - Skin lightening creams
 - Lotions
 - Soap
 - Serum
 - Mascara
 - Eyeshadow
 - Eyeliner

Analytical Procedure

- Initial screening with X Ray Fluorescence



- Final analysis with Milestone DMA

Terrible 80 Survey

The image displays five sequential screenshots from the Amazon mobile app, each showing search results for a different product. The screenshots are timestamped from 3:12 to 3:29. Each screen shows the search bar, navigation tabs (prime, Delivery, Brand), and a list of product listings with images, titles, prices, and ratings.

- 3:12:** Search for "gluta speed white sakura". Results include Sakura DJ White Gluta speed White UVA UVB SPF 50 PA++ 15 g. Silk Sunscreen (1 box) for \$34.01.
- 3:04:** Search for "aranda balsamo blanco". Results include La Vaquita Balsamo Blanco, Anti-inflammatory Ointment 100g, 3.5 Ounce for \$10.99.
- 3:17:** Search for "jalea real gris". Results include Royal Jelly Anti Age Soap 100% Natural by Grisi... Jabon Jalea Real for \$11.84 and Jalea Real Grisi Face Cream for \$7.99.
- 3:23:** Search for "mena whitening". Results include Face Wash Cleanser For Men for \$16.99 and Mena Facial Whitening Cream 6 units for \$10.50.
- 3:28:** Search for "pond's clarant b3". Results include Jar (298ml) (6 Pack) for \$36.96 and POND'S CLARANT B3 for \$11.95.
- 3:29:** Search for "pond's rejuveness". Results include POND'S Rejuveness Anti-Wrinkle Cream 7 oz (Pack of 2) for \$18.37.

Antigua and Barbuda Platform

The screenshot shows a web browser window displaying an AliExpress search results page for the keyword "jiaoli". The browser's address bar shows the URL: `aliexpress.com/premium/jiaoli.html?d=y&origin=y&catId=0&initiative_id=SB_20210121135418&SearchText=jiaoli`. The AliExpress logo is visible in the top left corner. A search bar at the top center contains the text "jiaoli".

On the left side of the page, there are sections for "Related Categories" (Beauty & Health) and "Brands" (JIAOLI). Below these is a promotional banner for the "AliExpress Mobile App" with a QR code and the text "Search Anywhere, Anytime!".

The main content area displays a grid of product listings:

- Whitening-Cream Jiaoli Face Freckl...:** US \$14.93 / lot, 23 Sold, Welcome!!!!!!!!!!!!
- Jiaoli Miraculous cream (Day and N...:** US \$12.87, 4.3 stars, 58 Sold, Welcome!!!!!!!!!!!!
- High Quality Jiaoli whitening cream...:** US \$25.64 / lot, 5.0 stars, 6 Sold, Welcome!!!!!!!!!!!!
- Whitening-Cream Jiaoli Skin-Remo...:** US \$7.95 / lot, 6 Sold, Lanthomeskincare Store
- Night-Cream-Set Face-Cream Skin ...:** US \$4.96
- Night-Facial-Cream-Set Speckle-Cr...:** US \$7.79 / lot, Just seven days, Freckle, Skin care, Whitening
- Night-Cream-Set Pigment Face-Cre...:** US \$7.50, Just seven days, Freckle, Skin care, Whitening
- Retail Jiaoli whitening cream for fa...:** US \$10.82, Add to cart, Fast shipping, BUY 2 GET 2% OFF, Following us get \$1

The Windows taskbar at the bottom shows the system clock as 4:54 PM on 1/21/2021, along with various application icons and a search bar.

Next Steps

- Expression of interest from countries
- Provision of necessary laboratory services by Antigua and Barbuda
- Collaboration with GEF project on skin lightening cream
- Review of imported cosmetics of interest into Antigua and Barbuda
- Risk determination and complementary research

Thank You!



— Department of —

Analytical Services

• Quality Science for Applied Solutions •