

**ANALYTICAL
CHEMISTRY,
CLINICAL
EFFICACY,
CLINICAL
SAFETY,
MICROBIOLOGY
AND MEDIA
SUPPORT.
ALS, WE MAKE
IT EASY.**





Index

04. Introduction

06. Beauty, Personal Care and
OTC Drug Tests

08. Safety Studies

12. Image Analysis

16. Clinical Efficacy
& Hair Metrology

20. Efficacy Studies in Deodorants
and Antiperspirants

20. Nails Clinical Studies

21. SPF

23. Surveillance

24. Sensory and Consumer
Studies

26. Physicochemical and
Microbiological Analysis

28. In Vitro Studies

30. Client Satisfaction
Monitoring

31. People, Equipment
and Technical Knowledge
in a single place

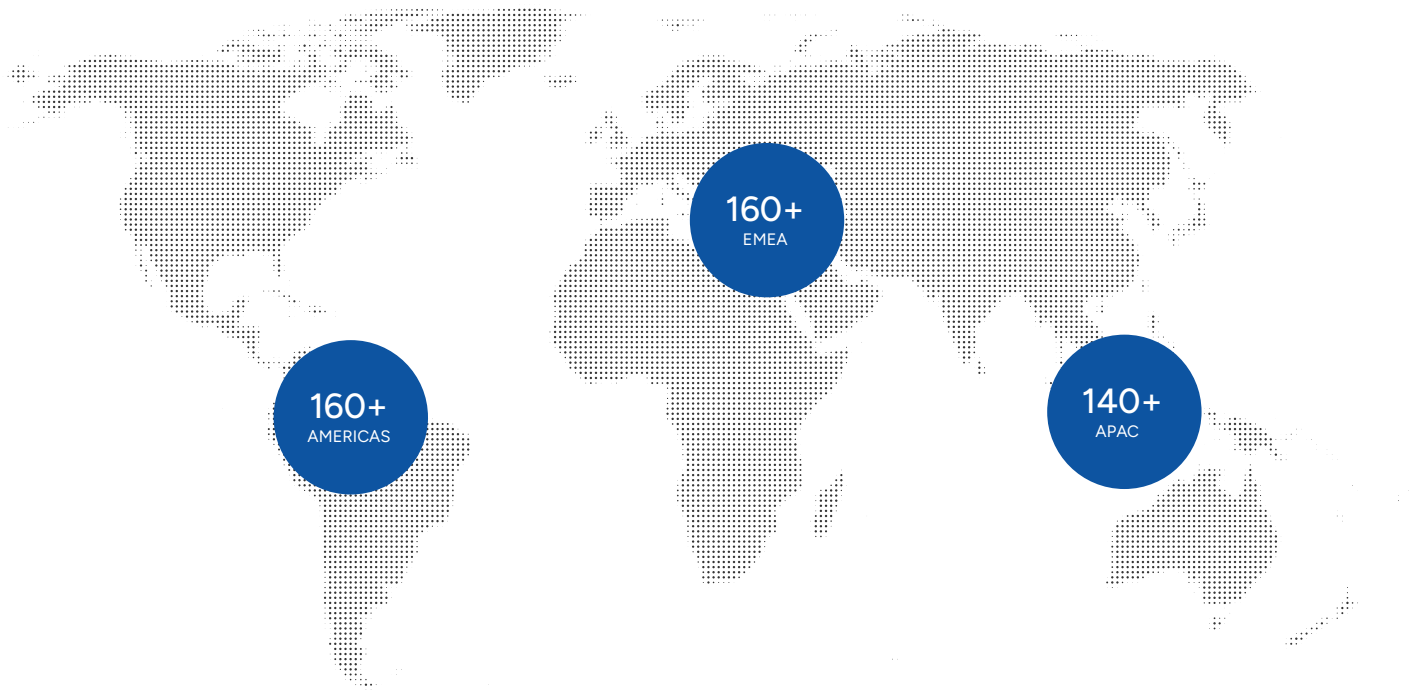
For over 45 years, ALS has provided comprehensive testing solutions to customers in a wide range of industries around the world. The company is a leading global provider of laboratory testing, inspection, certification and verification solutions.

ALS laboratories are internationally recognized for operating in more than 70 countries offering an extensive variety of tests, research, special projects and certifications for the environmental, food, agribusiness, pharmaceutical segments and also PERSONAL CARE - OVER THE COUNTER.

In the PERSONAL CARE segment, ALS brings scientific and analytical solutions for the confirmation and support of claims, which guarantee the safety and efficacy of Personal Hygiene, Perfumery and Cosmetics (HPPC) products. Totally dedicated to the HPPC segment, the PERSONAL CARE division delivers results to clients in 32 countries, with the best and most reliable field solutions for decision making. The adoption of state-of-the-art technology and innovative methodologies, together with the strength of international teams, ensure the delivery of the highest quality services using local expertise and customized solutions.



450 Sites Around the World



70+
COUNTRIES

450+
LOCATIONS

45+
YEARS

22K+
STAFF
WORLDWIDE

AUD 2.9B+
GLOBAL
REVENUE

Beauty, Personal Care and OTC Drug Tests

- ✓ Science | Technology | Claims
- ✓ Skin evaluations by trained clinicians
- ✓ Instrumental analysis
- ✓ Consumer perception
- ✓ Before and After Photos | Marketing support
- ✓ Analytical Chemistry
- ✓ Microbiology





EFFICACY

- Anti-aging
- Skincare
- Elasticity and Firmness
- Moisturization
- Make-up Claims
- Deodorant and Antiperspirant
- Hair Care and Hair Metrology
- In Vitro Efficacy
- SPF Validations
- Image Analysis
- Sports Device Testing

PHYSICAL-CHEMISTRY, MICROBIOLOGY AND PHARMA ANALYSES

- Bioanalysis
- Compatibility
- Development and Chemical Formulation
- Stability
- Medical Devices
- Microbiology
- Analytical Chemistry
- Extractables and Leachables Testing
- Toxicology

SAFETY

- In Vitro Analyses
- Phototoxicity
- Photoallergy
- HRIPT
- Comedogenicity
- Eye Irritation
- Primary and Cumulative Irritation
- Pollution Studies
- Safety in Use
- Dental Products
- Pediatric, Gynecological, Urological and Ophthalmological Tests

REGULATORY AND COMPLIANCE

- PFAS Analyses
- Heavy Metals Assessment
- Food Safety, Allergens, Contaminants, Additives, Nutrients, and Vitamins
- Audit
- Quality Control of Raw Materials and Finished Products
- FDA Regulated Studies
- MoCRA Regulations (USA)
- European Union Regulations
- Dossiers Review and Preparation

SENSORY ANALYSIS AND CONSUMER STUDIES

- Sensory Analysis
- Trained Sensory Panels
- Consumer Perception
- Quantitative and Qualitative Studies
- Visual Proof of Efficacy
- Before & After Photos
- Selfie Content

Safety Studies

Compatibility

Patch Test Methods assess the potential for irritation and/or sensitization of formulations, including:

Over 7,000 tests performed each year (includes all testing)



- ✓ Weekly HRIPT Panels
- ✓ Monthly Sensitive Skin HRIPT panels
- ✓ Primary Irritation (PI)
- ✓ Cumulative Irritation
- ✓ 5, 7, 14 and 21 day (Irritation)
- ✓ Sensitization
- ✓ Photoallergy
- ✓ Phototoxicity

All HRIPT reports include a dermatologist signature as part of our value-added service, increasing your products' marketability.

Comedogenicity/ Acnegenicity - In Use

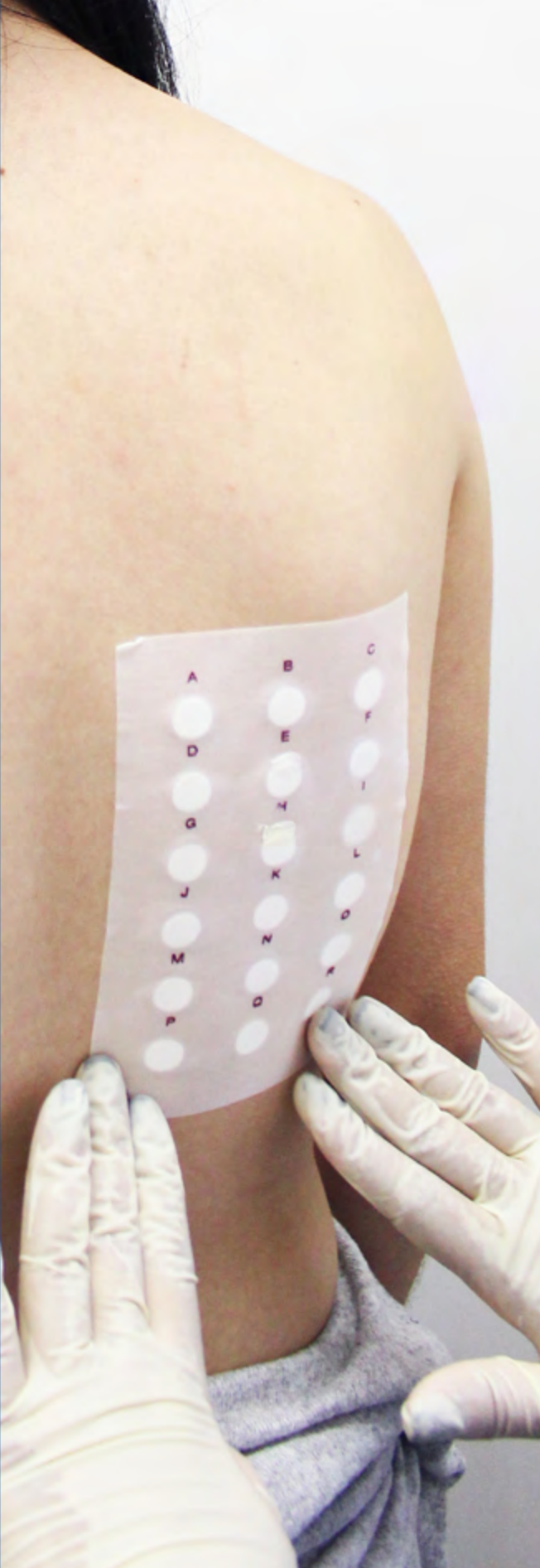
Evaluates the potential of cosmetic products to induce comedones on the face.

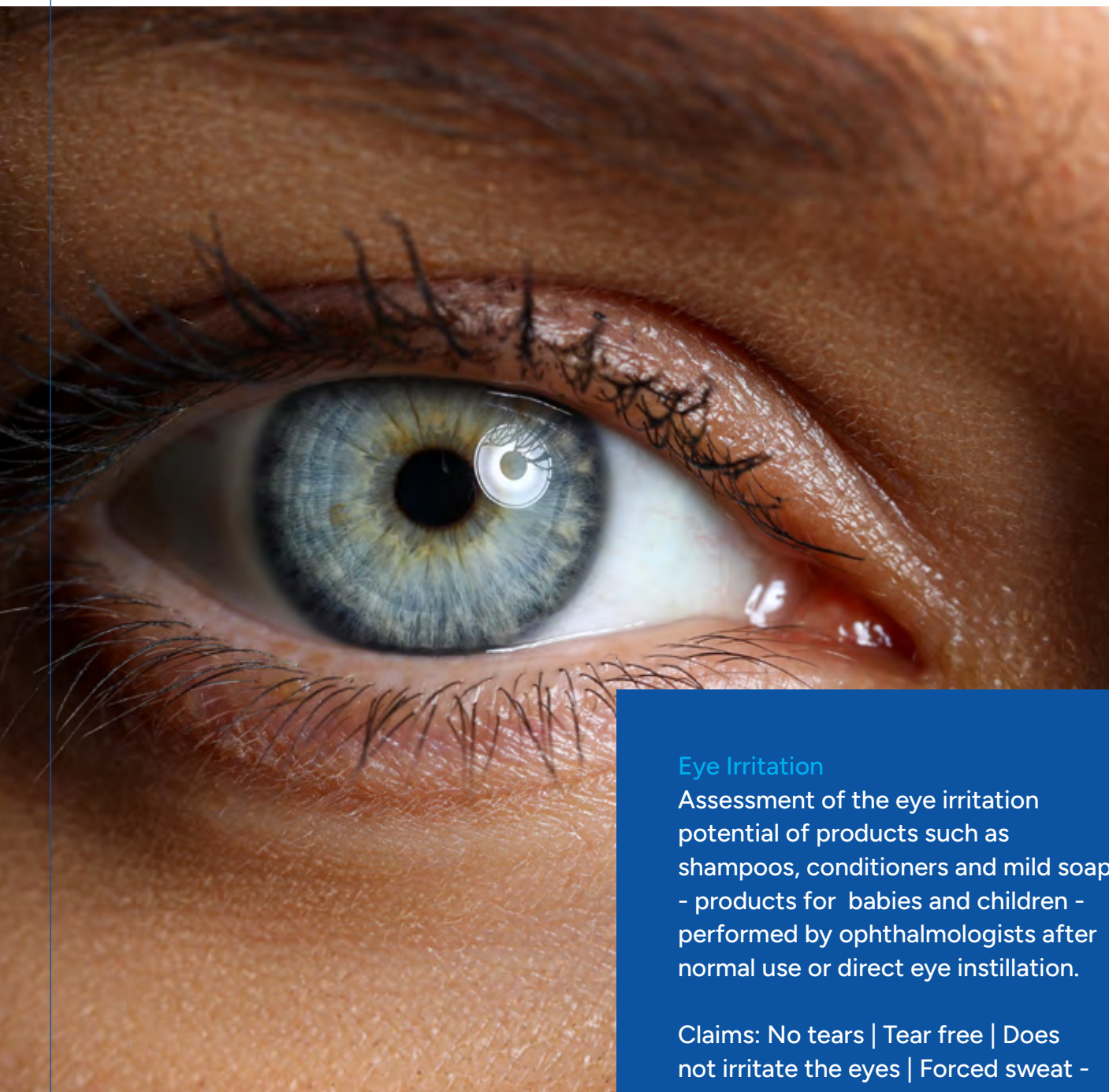
Comedogenicity - Follicular Biopsy

Comedogenic Potential Assessment
(product's ability to cause microcomedones)
through laboratory and clinical assessments.

Claims:

Non Acnegenic | Dermatologically Tested |
Noncomedogenic





Eye Irritation

Assessment of the eye irritation potential of products such as shampoos, conditioners and mild soaps - products for babies and children - performed by ophthalmologists after normal use or direct eye instillation.

Claims: No tears | Tear free | Does not irritate the eyes | Forced sweat - "Sports" products

Safety in Use

"Tolerance Assessment" in use to determine the potential for irritation under normal conditions of use.

Pediatric (babies, children) | Sensitive Skin |
Atopic Skin | Microbiome | Genital Area | Ocular | Oral

Conducted by different medical specialties alone or together

Dermatologist | Pediatrician | Ophthalmologist |
Gynecologist | Urologist | Dentist



Image Analysis

Claims support in the assessment of product attributes through the interpretation of image profiles, providing subsidies that identify:

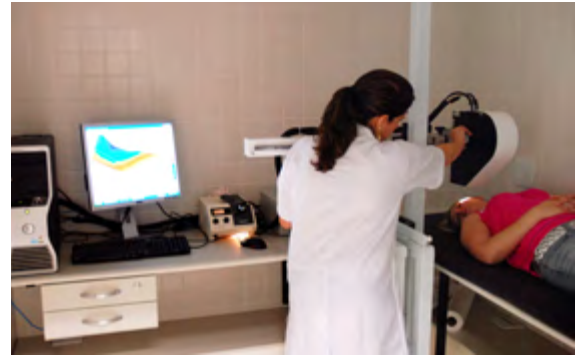
Action mechanisms of active substances

Changes in hair and skin structure

Makeup performance

Equipment

Primos Premium GFM: Produces three dimensional topographic images through a stripe's digital projection, based on digital micromirrors.



Confocal Microscopy: Allows in vivo skin analysis, in a non-invasive manner, without the need of a biopsy or conventional histological processing of the tissue, as well as the prevention of the introduction of artifacts and sample destruction, which might occur in the histological procedure.



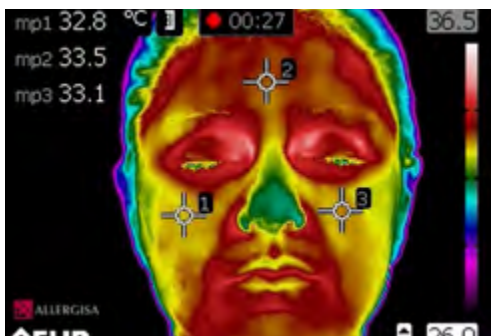
Visia CR: Captures images using standard light 1, standard light 2, UV, crossed polarized and parallel polarized flash modalities.



EvaFACE: Capturing of high-resolution images of small facial regions and of the entire face, enabling accurate analysis of changes in characteristics such as wrinkles, texture, and volume, with micrometric precision.



Equipment



Thermography: Records the radiation emitted by the target and transforms the information into an image that is visible to the human eye, also demonstrating the soothing effect on the skin.



Visioscan: Assessment of skin texture (wrinkles and roughness), dryness and peeling through images captured with exclusive with UVA light.



Quantificare: 3D photography that allows the identification of lifting effect, droopy eyelid, swelling under the eyes, neck and jaw contour.



Dermascan: Assessment of skin echogenicity and density.

FotoFinder: Takes digital captures with up to 20x magnification, offering accurate analysis of the scalp, hair growth and hair loss. It also assesses the whitening of armpits. The software generates detailed reports based on images of multiple areas.



Colorface: Specially designed for detailed facial skin visualization and analysis with high resolution sensor that captures extremely small face effects, multiple lighting modalities and real-time image quality control.

Other instrumentations

- ✓ Cutometer
- ✓ Mexameter
- ✓ Corneometer
- ✓ Skin pH meter
- ✓ TEWL (Open Chamber and Closed Chamber)
- ✓ Tewameter – Vapometer
- ✓ Chromameter
- ✓ Sebumeter

Supported Claims

Products for the Skin: Expression Lines (Reduction) | Wrinkles Depth/Reduction/Volume/Roughness) | Spots (Amount/Intensity/Uniformity/Pigmentation) | Texture (Homogeneity) | Dark circles/Bags | Deep cleansing | Shine (Reduction/Control) | Oiliness (Matte Effect) | Pores (Depth/Size Reduction) | Acne / Blackheads

Make-up: Eyelashes (Elongation/Volume/Curvature) | Matte Effect | Durability/Long Life | Water Resistance | Sweat Resistance | Stain-Proof Clothing | Color/Tone Combination | Lip Moisturizing | Lip Volume



| Hair

Clinical Efficacy & Hair Metrology

Laboratory dedicated to the research of hair swatches and a team of specialized researchers. Through the development of specific tools to analyze the complexity of the hair fibers, the studies are scientifically based on measurements of physical and sensory properties, supporting the most diverse claims.



Analysis of Hair Fiber Integrity

Strength Test: Combability | Friction | Traction Properties | Breakage by Abrasion

Hair Fiber Image Analysis

Surface Damage Assessment | Optical Microscopy | Curls Maintenance | Smooth Effect Maintenance | Colorimetry | Surface | Salon Test | Softness | Hair Type | Elasticity

Differential Scanning Calorimetry (Thermal protection): analysis of keratin denaturation temperature and how much the products reduce or attenuate this effect.



Active Penetration

Analysis by Fluorescence Microscopy:

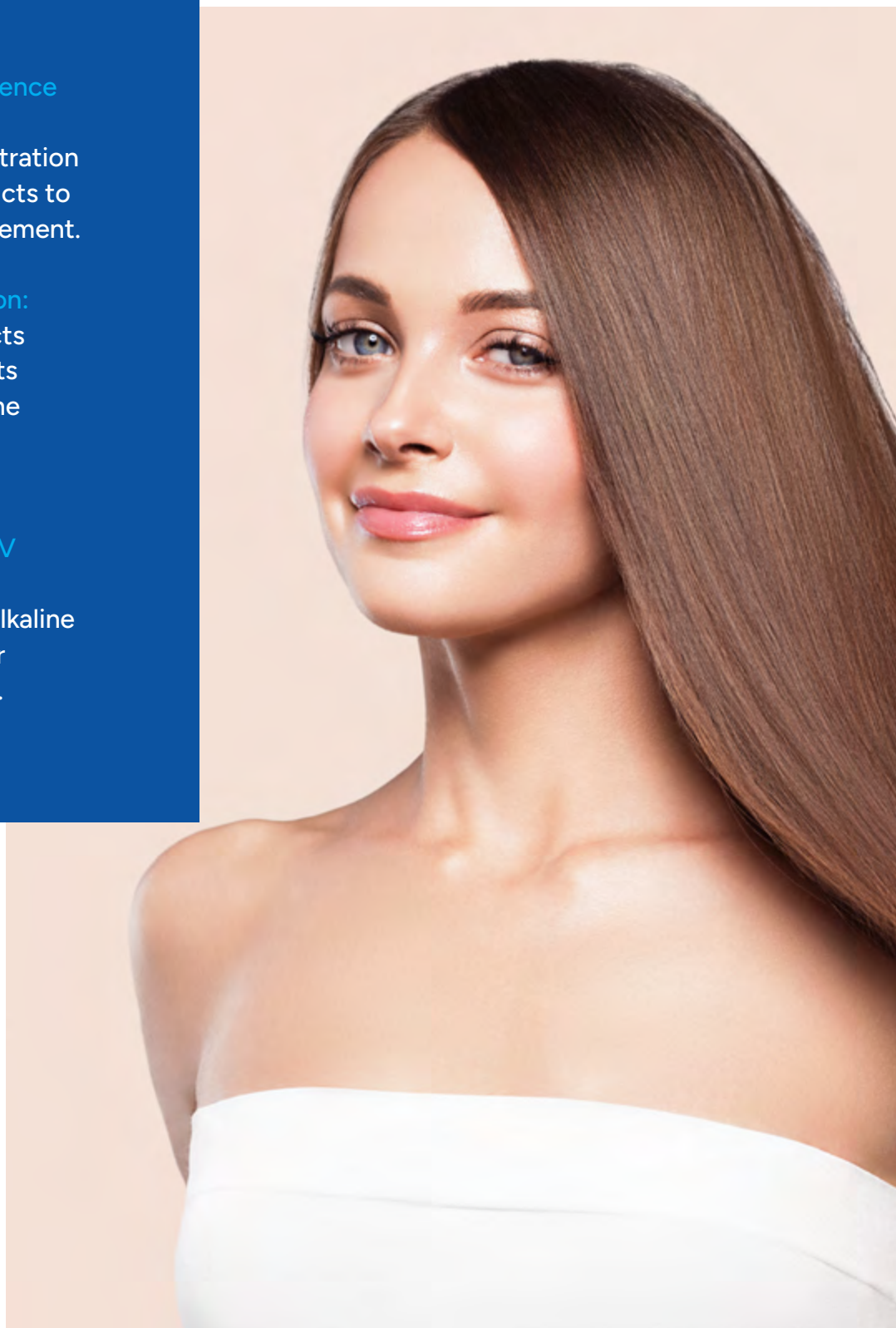
Analysis of the penetration of actives and products to support mass replacement.

Atmospheric pollution:

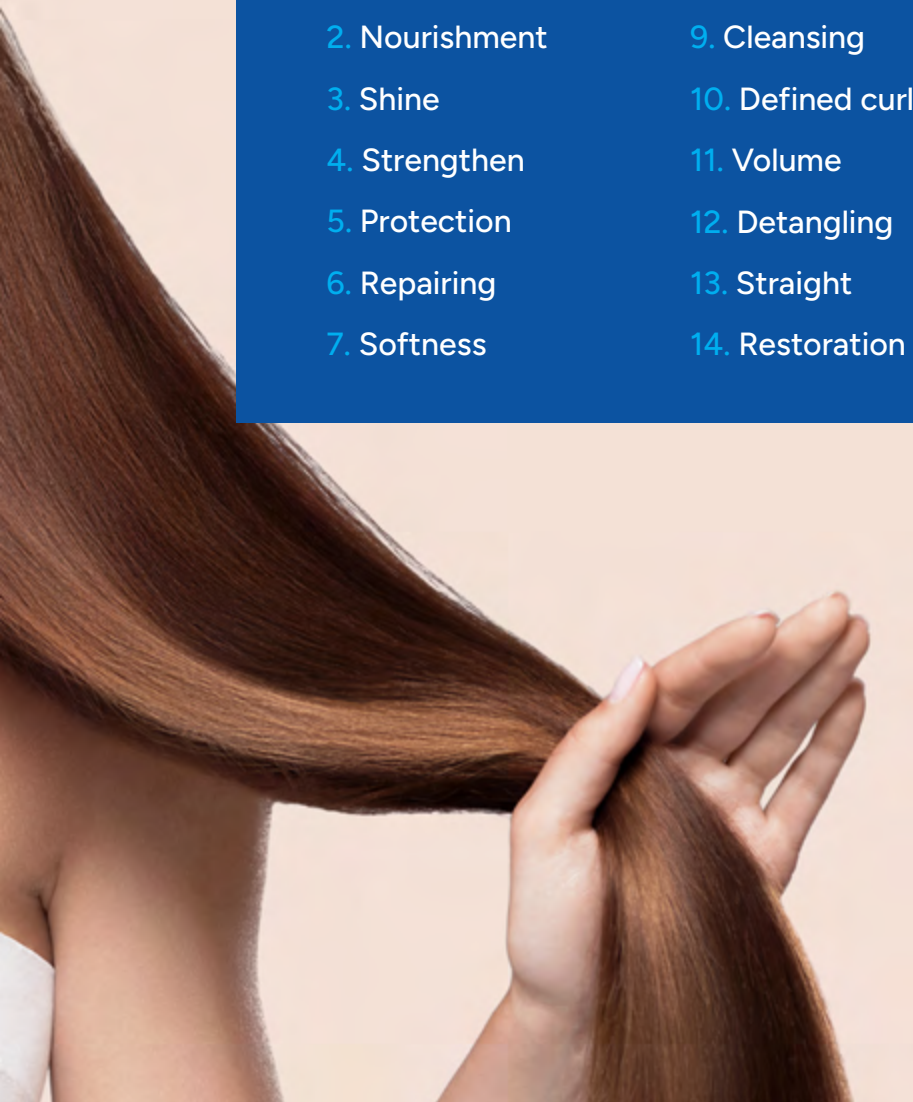
Analysis of the effects of the main pollutants and verification of the attenuation of these effects by products.

Combability and MEV for surface damage:

Tryptophan and/or alkaline solubility analysis for internal degradation.



Top 20 hair product claims in the Global Market:

- 
- | | | |
|-------------------|------------------------|-------------------|
| 1. Moisturization | 8. Reconstruction | 15. Radiant color |
| 2. Nourishment | 9. Cleansing | 16. Frizz control |
| 3. Shine | 10. Defined curly hair | 17. Anti-frizz |
| 4. Strengthen | 11. Volume | 18. Hair detox |
| 5. Protection | 12. Detangling | 19. Sealing |
| 6. Repairing | 13. Straight | 20. Growth |
| 7. Softness | 14. Restoration | |

Scalp

- ✓ Dandruff Efficacy Analysis
- ✓ Fall Reduction Efficacy Analysis
- ✓ Hair Growth

Efficacy Studies in Deodorants and Antiperspirants

Assessments performed by **ALS** follow guidelines and standards being accepted by national and international regulatory agencies for product registration. The facilities are designed with temperature and humidity control, to control environmental factors that can introduce artifacts into the data.

Claims: Lightening/Darkening | Armpit Irritation | Deodorant/antiperspirant function | Stains on clothes (white, black and colored)



Nails Clinical Studies



Expert classification.

Nail polish: duration, shine, film, small bumps, chipping, quick drying, easy to apply.

Claims: Strength | Breakage | TEWL (porosity) | Thickness | Desquamation | Dryness | Roughness/Texture

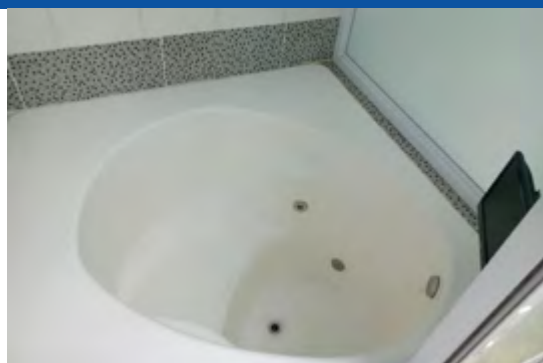
I SPF

Laboratory fully dedicated to proving claims for SPF. With its own infrastructure and team of technicians specialized in the measurement of the sun protection factor, follows the standards COLIPA, ISO 24442 (UVA in vivo) ISO 24443 (UVA in vitro) 24444 (UVB), FDA and AUSTRALIAN.



Water Resistance

Water resistance assessment following the FDA 2021 and ISO 18861/16217 methodologies. All bathtubs are individual and specially designed for Water Resistance-SPF studies and to avoid disruption of the test site.



Static SPF

SPF determination in compliance with the methodologies FDA 2021 and ISO 24444. Total of 18 Multiport Solar Simulators (Solar Light CO) in USA and Brazil for high rate of samples throughput.





Ultraviolet Protection Factor In Fabrics

Test to determine the Ultraviolet Protection Factor (UPF) in fabrics and garments worn close to the skin, as per AS/NZS guideline 4399:2020 Sun Protection Clothing - Assessment and Classification.



In Vitro UVA-PF and Critical Wavelength

UVA Protection Factor (FP-UVA) assessment according to ISO 24443 guidelines. Critical wavelength determination test to assess broad spectrum protection, following the FDA 2021.



Surveillance

Understand how regulatory agencies work in the quality and safety of cosmetics

ANVISA is responsible for the sanitary control of all products and services in Brazil. Among its main regulations is the COSMETOVIGILANCE, defined by the Resolution-RDC No. 332, of December 1, 2005.

ALS has, since 1990, provided the Customer Service, which offers support and guidance to consumers who present adverse events, using products in the marketplace. Our procedure for collecting this information complies with local and federal privacy and security laws.

Modernization of Cosmetics Regulation Act (MoCRA)

Key terms:

- ✓ Mandatory Facility Registration
- ✓ GMP Regulations
- ✓ Responsible Person (RP)
- ✓ Product and Ingredient Listing
- ✓ Adverse Event
- ✓ Safety Substantiation
- ✓ Adverse Event Reporting
- ✓ Mandatory Recall Authority
- ✓ Records Access

The Act applies to all cosmetics manufacturers, importers, marketers, and distributors in the US.

ALS provides manufacturers with detailed reports on their products and ingredients. Additionally, we can help them identify and resolve any issues that may be causing non-compliance.



Sensory Analysis and Consumers Studies

Trained panels combined with **qualitative and quantitative** studies with consumers to validate and strengthen claims of efficacy and preference for products in the areas of food, beverages, cosmetics, personal hygiene products, fine fragrances, colorants, absorbent papers and fabrics, among other consumer categories

- Concept and Product Testing
- Exploratory Studies
- Habits and Attitudes
- Attitudinal Segmentation
- Conjoint
- Brand Stretch
- Line Optimization
- Brand Image Positioning
- Drivers
- Olfactory Assessments
- Comparisons between Products
- Studies of Alternatives for Cost Reduction
- Assessment of Product Use Experience





Neuroscience Applied to Consumer Studies

Neuroscience measures – implicitly and not rationally – emotions, behaviors and unconscious reactions. These measurements complement the learning of qualitative and quantitative study.

Implicit Association Test | Quick Pick Test | Face Coding | Eye Tracking Galvanic | Skin Response | Facial Electromyography | Electrocardiography | Electroencephalogram

Physicochemical and Microbiological Analysis

Microbiological

In an increasingly competitive and demanding market, guaranteeing the quality and safety of products offered to customers has become a differential for companies.

Aerobic Plate Count & Yeast and Mold Count | Pathogen Detection | Challenge Test (USP, EP/ BP, JP, PCPC, ISO) | Time Kill | Inhibition Zone | MIC/MMC Minimum Inhibitory Concentration / Minimum Microbicide Concentration) | Microbiological Dosage of Antibiotics | Micro ID | Maldi-Tof | DNA





Equipment

- ✓ HPLC & UPLC
- ✓ GC & GC-MS
- ✓ ICP-OES & ICP-MS
- ✓ Ion Chromatography
- ✓ UV-Vis
- ✓ Stability chambers with various conditions
- ✓ Photostability
- ✓ Laminar flow chamber
- ✓ Illumina - New generation sequencing equipment
- ✓ FTIR

Analytical

Development & Validation of the OTC Method | Active Ingredients Tests | Impurity Test (PROP 65 & Heavy Metals) | 1,4-Dioxane and Benzene | Stability Studies | In Vitro Skin Permeation | Dissolution Study | Raw Material Test

Certifications

- FDA registered
- DEA registered
- ISO 9001:2015 and ISO 17025 certified

| In Vitro Studies

Tests aligned with recent technological advances for the cosmetic and pharmaceutical industry in support of new claims, through alternative methods that replace the use of animals, particularly evident in models of irritation, corrosion and skin sensitization. The scientists are highly trained in the specialty to meet customer needs, using state-of-the-art technology to offer the best solutions.

Services

Systemic Toxicity | Dermal Toxicity |
Eye Toxicity | Molecular Selection and
Characterization | Molecular Biology |
Histology and Immunohistochemistry



In Vitro Cosmetic Efficacy

Antioxidant Activity Tests
Enzymatic activity

Markers

Gene Expression
(Real-Time RT-PCR) |
Antioxidant activity |
Anti-inflammatory
activity | Enzyme activity |
Cure | Age Markers |
DNA Photoprotection |
Skin Whitening/Spots |
Collagen Synthesis |
Cell Regeneration | Skin
barrier | DNA Lesion
Marker | Morphology
(Immunohistochemistry) |
Customized Tests



Tissue Bioengineering

Development of In Vitro reconstituted human tissues for the safety and assessment of the efficacy of products and raw materials.

Epidermis equivalent to Episkin | Intestinal
Mucosa | Vaginal Mucosa | Skin Equivalent

Client Satisfaction Monitoring

Your opinion counts

When submitting all reports of efficacy and safety studies conducted in ALS' laboratories, the clients receive the NPS (Net Promoter Score) questionnaire. Considered one of the most important key performance indicators (KPI), through NPS, it is possible to track potential problems and find suitable solutions for the needs of each client.

ALS is interested in listening to its clients and working as a key success partner. The NPS is an important tool in building the monitoring routine and valuing the opinion of those who hire the company's services.



People, Equipment And Technical Knowledge In A Single Place

When these variables intersect,
performance allows for more control
and comparability of results. Diversity
and control all in one place.

Contact us

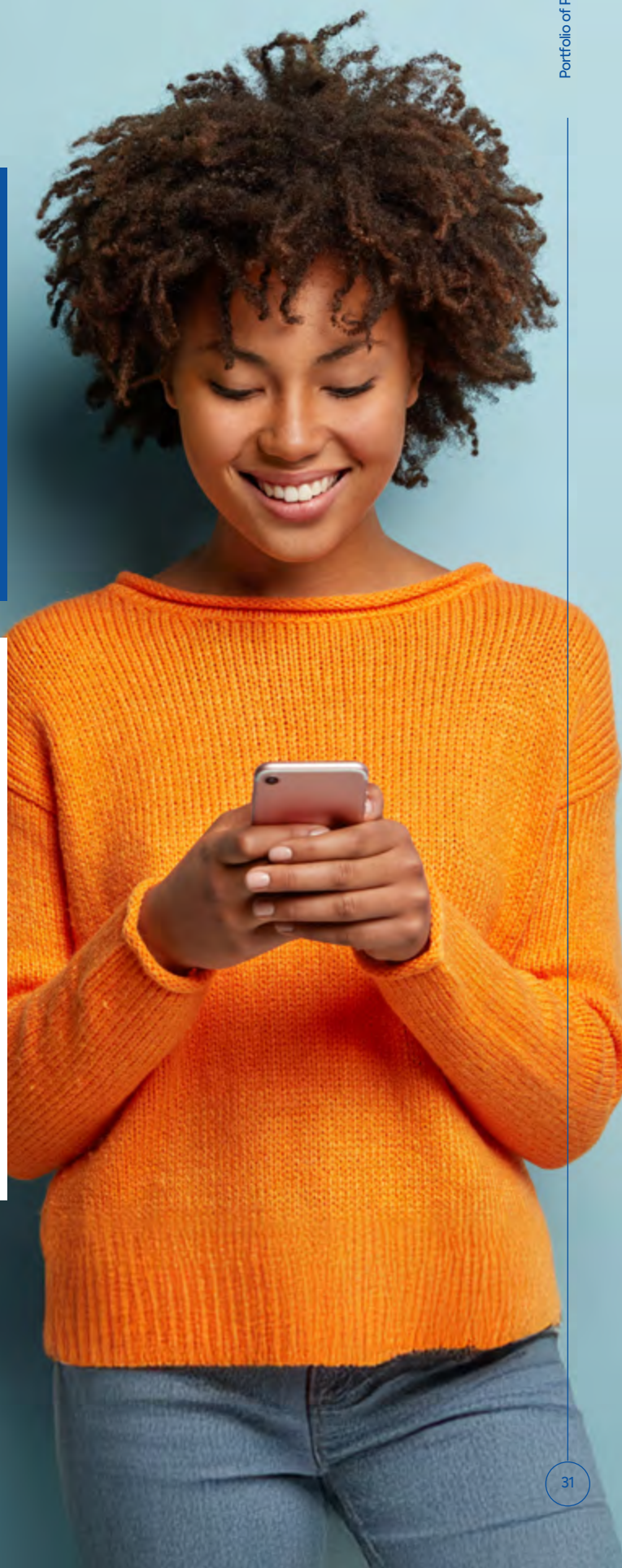
beauty.usa@alsglobal.com
alsglobal.com

USA

Irving: +1 972 573 2902
Torrance: +1 310 214 0043

Latin America

Brazil: +55 19 3789 8610
Colombia: +57 310 257 3293





Join the ALS team:



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Portuguese version

