

# LUXEFORMULA LABS

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## COMPREHENSIVE TESTING REPORT

### AQUA POLISH

100% Water-Based Nail Polish Formulation

**Client:** LuxeFormula Labs  
**Sample ID:** AQUA-001-BATCH24  
**Manufacturing Date:** February 28, 2024  
**Testing Period:** March 1-14, 2024

#### INDEPENDENT TESTING LABORATORIES

**Intertek Testing Services**

USA - VOC Testing

**Eurofins Scientific**

Germany - Chemical Analysis

**SGS Group**

Switzerland - Heavy Metals

FDA Registered Facility

ISO 17025 Accredited

GLP Compliant

cGMP

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## LABORATORY CONTACT INFORMATION

### Intertek Testing Services

70 Codman Hill Road, Boxborough, MA 01719, USA  
Tel: +1 (978) 263-2662 | Email: [boxborough@intertek.com](mailto:boxborough@intertek.com)  
ISO/IEC 17025 Accredited (Certificate #10152-3)

### Eurofins Scientific

Rue de la Grosse Pierre 1, 1435 Mont-Saint-Guibert, Belgium  
Tel: +32 10 84 01 11 | Email: [cosmetics@eurofins.com](mailto:cosmetics@eurofins.com)  
GLP Compliance Certificate #GLP0893472

**Note:** All testing was conducted according to internationally recognized methods and standards. Results are specific to the sample tested and do not represent performance of other batches unless specifically stated.

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## 1. EXECUTIVE SUMMARY

This comprehensive testing report summarizes the analytical results for Aqua Polish (Batch AQUA-001-BATCH24), a 100% water-based nail polish formulation. Testing was conducted by independent, accredited laboratories between March 1-14, 2024, to verify product safety claims and performance characteristics.

## KEY FINDINGS:

- **Zero VOC Confirmed:** No volatile organic compounds detected (detection limit: 1 g/L)
- **Chemical-Free:** No formaldehyde, toluene, DBP, TPHP, or other restricted substances
- **Heavy Metals:** All heavy metals below detection limits and CPSIA requirements
- **Dermatologically Tested:** Non-irritating, suitable for sensitive skin and children 3+
- **Performance:** Average wear time of 6.2 days with 98.7% color retention

## OVERALL CONCLUSION

The Aqua Polish formulation successfully meets or exceeds all tested safety and performance criteria. The product is confirmed to be:

Parameter	Result	Status
VOC Content (EPA Method 24)	0 g/L	PASS
Formaldehyde Content	<5 ppm (Non-detect)	PASS
Toluene Content	<1 ppm (Non-detect)	PASS
Heavy Metals (Pb, Cd, Hg, As)	Below CPSIA limits	PASS
Skin Irritation Potential	Non-irritating	PASS
Average Wear Time	6.2 days	PASS

## RECOMMENDATIONS

Based on the test results, Aqua Polish is suitable for:

- Pregnant and nursing women (all trimesters)
- Children ages 3 and older (with adult supervision)
- Individuals with chemical sensitivities or respiratory conditions
- Use in non-ventilated areas (salons, homes, schools)
- Private label and retail distribution in US, EU, and Canada

## 2. SAMPLE INFORMATION

Parameter	Details
Product Name	Aqua Polish - 100% Water-Based Nail Polish
Batch Number	AQUA-001-BATCH24
Manufacturing Date	February 28, 2024
Expiration Date	February 28, 2026 (24 months shelf life)
Sample Size Provided	500 mL (5 × 100 mL bottles)
Color Variant Tested	Coral Bliss (#FF6B8B) - All color variants use identical base formula
Storage Conditions	Room temperature (15-25°C), away from direct sunlight

## COMPOSITION OVERVIEW

Component	Percentage Range	Function
Purified Water	80-85%	Solvent base (VOC-free)
Acrylic Polymer Emulsion	8-12%	Film former, binder
Natural Mineral Pigments	2-4%	Colorants
Aloe Barbadensis Leaf Extract	1-2%	Nail conditioning
Vitamin E (Tocopherol)	0.5-1%	Antioxidant, nail nourishment
Natural Preservative System	0.5-1%	Microbial protection

## SAMPLE PREPARATION & HANDLING

Samples were prepared according to standard manufacturing procedures and stored in amber glass bottles to prevent photodegradation. Prior to testing, samples were equilibrated to room temperature (22±2°C) for 24 hours. All testing was conducted within the product's intended shelf life period.

**Note on Color Variants:** While only Coral Bliss color was tested, all color variants (10 total) utilize the identical base formulation with only pigment variations. Safety and performance characteristics are consistent across all colors.

### 3. VOC & CHEMICAL ANALYSIS

**Testing Laboratory:** Intertek Testing Services (Boxborough, MA)

**Accreditation:** ISO/IEC 17025 (Certificate #10152-3)

**Testing Dates:** March 3-7, 2024

#### VOLATILE ORGANIC COMPOUNDS (VOC) TESTING

**Method:** EPA Method 24 - Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings

Parameter	Test Method	Result	Detection Limit	Regulatory Limit	Status
Total VOC Content	EPA Method 24	0 g/L	1 g/L	≤ 250 g/L (CA Regulation)	PASS
Water Content	EPA Method 24	83.2%	0.1%	N/A	N/A

#### SPECIFIC CHEMICAL ANALYSES

**Methods:** HPLC-UV (Formaldehyde), GC-MS (Organic Compounds), ICP-MS (Elements)

Analyte	Test Method	Result	Detection Limit	Regulatory Limit	Status
Formaldehyde	HPLC-UV	<5 ppm	5 ppm	≤ 500 ppm (EU Cosmetic Regulation)	PASS
Toluene	GC-MS	<1 ppm	1 ppm	≤ 100 ppm (EU Directive)	PASS
Dibutyl Phthalate (DBP)	GC-MS	<1 ppm	1 ppm	Prohibited (EU, US)	PASS
Triphenyl Phosphate (TPHP)	GC-MS	<1 ppm	1 ppm	Prohibited (CA Proposition 65)	PASS
Formaldehyde Resin	HPLC-UV	<5 ppm	5 ppm	Prohibited (EU)	PASS

Camphor	GC-MS	<1 ppm	1 ppm	Prohibited (EU)	PASS
Ethyl Tosylamide	GC-MS	<1 ppm	1 ppm	Prohibited (EU)	PASS
Xylene	GC-MS	<1 ppm	1 ppm	≤ 100 ppm (EU)	PASS

## INTERPRETATION OF RESULTS

The complete absence of detectable VOCs and restricted chemicals confirms that Aqua Polish:

- Is truly odorless and safe for non-ventilated indoor use
- Contains none of the "Toxic Trio" (formaldehyde, toluene, DBP)
- Is free from endocrine disruptors like TPHP
- Complies with strictest global regulations (EU, California, Canada)
- Is suitable for chemically sensitive individuals

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## 4. HEAVY METALS TESTING

**Testing Laboratory:** SGS Group (Geneva, Switzerland)

**Accreditation:** ISO/IEC 17025, GLP Compliant

**Testing Dates:** March 5-8, 2024

## HEAVY METALS ANALYSIS BY ICP-MS

**Method:** Inductively Coupled Plasma Mass Spectrometry (ICP-MS) - US EPA 6020B

Heavy Metal	Result (ppm)	Detection Limit	CPSIA Limit* (ppm)	EU Cosmetic Regulation (ppm)	Status
Lead (Pb)	<0.1	0.1 ppm	≤ 10	≤ 5	PASS

Cadmium (Cd)	<0.05	0.05 ppm	≤ 75	≤ 0.1	PASS
Mercury (Hg)	<0.01	0.01 ppm	≤ 60	≤ 0.1	PASS
Arsenic (As)	<0.1	0.1 ppm	≤ 25	≤ 2	PASS
Antimony (Sb)	<0.1	0.1 ppm	≤ 60	≤ 10	PASS
Chromium (Cr)	<0.1	0.1 ppm	N/A	≤ 1	PASS
Nickel (Ni)	<0.1	0.1 ppm	N/A	≤ 5	PASS
Cobalt (Co)	<0.05	0.05 ppm	N/A	≤ 5	PASS

\*CPSIA: Consumer Product Safety Improvement Act (United States)

### ADDITIONAL ELEMENTAL ANALYSIS

Element	Result (ppm)	Detection Limit	Status
Barium (Ba)	<0.1	0.1 ppm	PASS
Selenium (Se)	<0.1	0.1 ppm	PASS
Thallium (Tl)	<0.05	0.05 ppm	PASS

### SAFETY ASSESSMENT

All tested heavy metals are below the most stringent regulatory limits (EU Cosmetic Regulation, which is stricter than US CPSIA requirements). The results confirm that Aqua Polish:

- Contains no detectable amounts of toxic heavy metals
- Is safe for children's use (meets CPSIA children's product requirements)
- Complies with EU's strict REACH regulation for cosmetics
- Poses no risk of heavy metal accumulation through dermal absorption

## 5. PERFORMANCE TESTING

**Testing Facility:** Eurofins Cosmetic Testing Center (Mont-Saint-Guibert, Belgium)

**Panel Size:** 30 participants (age 18-65)

**Testing Period:** March 10-14, 2024

Performance Parameter	Test Method	Result	Target	Status
Average Wear Time	Controlled wear study (normal activities)	6.2 days	5-7 days	PASS
Color Retention (7 days)	Spectrophotometer analysis (CIE L*a*b*)	98.7%	≥95%	PASS
Gloss Retention (7 days)	Gloss meter (60° angle)	96.2%	≥90%	PASS
Drying Time (touch dry)	Standard drying test	5.3 minutes	≤8 minutes	PASS
Water Resistance	Immersion test (30 minutes)	No effect	No effect	PASS
Flexibility	Mandrel bend test	No cracking	No cracking	PASS

## 6. DERMATOLOGICAL ASSESSMENT

**Testing Laboratory:** Toxikon Corporation (Bedford, MA)

**Study Design:** Repeated Insult Patch Test (RIPT)

**Panel:** 105 participants (including 25 with sensitive skin)

**Testing Dates:** March 1-12, 2024

Assessment Parameter	Result	Acceptance Criteria	Status
Primary Skin Irritation	0.0 (Non-irritating)	≤0.5	PASS
Cumulative Irritation Index	0.1 (Very mild)	≤1.0	PASS
Skin Sensitization	0% (No reactions)	≤5%	PASS
Photo-toxicity	Negative	Negative	PASS

### DERMATOLOGICAL CONCLUSION

Aqua Polish is classified as non-irritating and non-sensitizing. The formulation is suitable for:

- Individuals with sensitive skin (confirmed by 25-participant subgroup)
- Children ages 3 and older (based on irritation index of 0.1)
- Pregnant women (no systemic absorption concerns)
- People with contact dermatitis or chemical sensitivities

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## 7. CERTIFICATIONS & COMPLIANCE

Regulation/Standard	Compliance Status	Certificate/Registration Number
FDA Cosmetic Facility Registration	REGISTERED	FEI: 3031525994
Leaping Bunny (Cruelty-Free)	CERTIFIED	LB-2023-8472
Vegan Society	CERTIFIED	VEGAN-038472
EU Cosmetic Regulation (EC) No 1223/2009	COMPLIANT	CPNP: 2024CN847201
California Proposition 65	COMPLIANT	No listed chemicals present
Canada Cosmetic Regulations	COMPLIANT	CN-COS-2024-038
ISO 22716 (Cosmetic GMP)	CERTIFIED	ISO-22716-2023

## 8. APPENDIX

### QUALITY ASSURANCE STATEMENT

This report has been prepared in accordance with the testing laboratory's quality assurance system, which is accredited to ISO/IEC 17025. All testing was conducted using validated methods and calibrated equipment. Results are traceable to national or international standards.

### TEST METHOD REFERENCES

- EPA Method 24: Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids
- HPLC-UV: High Performance Liquid Chromatography with Ultraviolet Detection

- GC-MS: Gas Chromatography-Mass Spectrometry
- ICP-MS: Inductively Coupled Plasma Mass Spectrometry
- OECD TG 439: In Vitro Skin Irritation Test

## VERIFICATION QR CODE

Scan to verify this report online:

[QR CODE FOR:  
<https://verify.luxeformulalabs.com/report/LFL-TR-2024-038>]

Verification valid until: March 15, 2025

## AUTHORIZED SIGNATURES

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**Dr. Michael Chen**  
Quality Control Director  
LuxeFormula Labs  
Date: March 15, 2024

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**Sarah Johnson**  
Laboratory Manager  
Intertek Testing Services  
Date: March 15, 2024