

Formulation and Field Validation of an Aerosol-Based Dual-Action Spray for Head Lice, Dandruff, and Hair Loss Prevention

Contributing to
SDG 3: Healthier
Lives, Stronger
Communities



**Commonwealth
Chemistry**
Federation of Chemical Sciences Societies

RESULT / OUTCOME

- High efficacy against headlice .
- Enhanced scalp condition correlated with decreased breakage and improved hair retention.
- Users reported reduced flakes and itch after repeated use.
- Positive customer testimonials.

IMPACT & ALIGNMENT WITH SDG3

- Reduces school absenteeism linked to lice outbreaks.
- Affordable solution for low-resource communities.
- Safer than pesticide-based products.
- Supports innovation in accessible healthcare & hygiene.

FUTURE DIRECTIONS

- Expand R&D to wider populations and diverse settings
- Advance patent process (currently pending in the US)
- Explore international collaborations in scalp health & aerosol innovation

FORMULATION APPROACH

- Aerosol vehicle: fast-acting, alcohol-based, non-toxic.
- Active blend: natural & cosmetic-grade compounds (no pesticides)
- Safety focus: suitable for children & household use.
- Packaging: pressurized spray for quick, uniform delivery.

FIELD VALIDATION / DATA

User trials in Nigeria showed:

- Fast action: lice immobilized in minutes ⌚
- Lower recurrence: nit inhibition
- Better scalp health: lice + dandruff improved
- Relief: reduced shedding & itch
- Users: positive real-world feedback

IMPACT / DISCUSSION

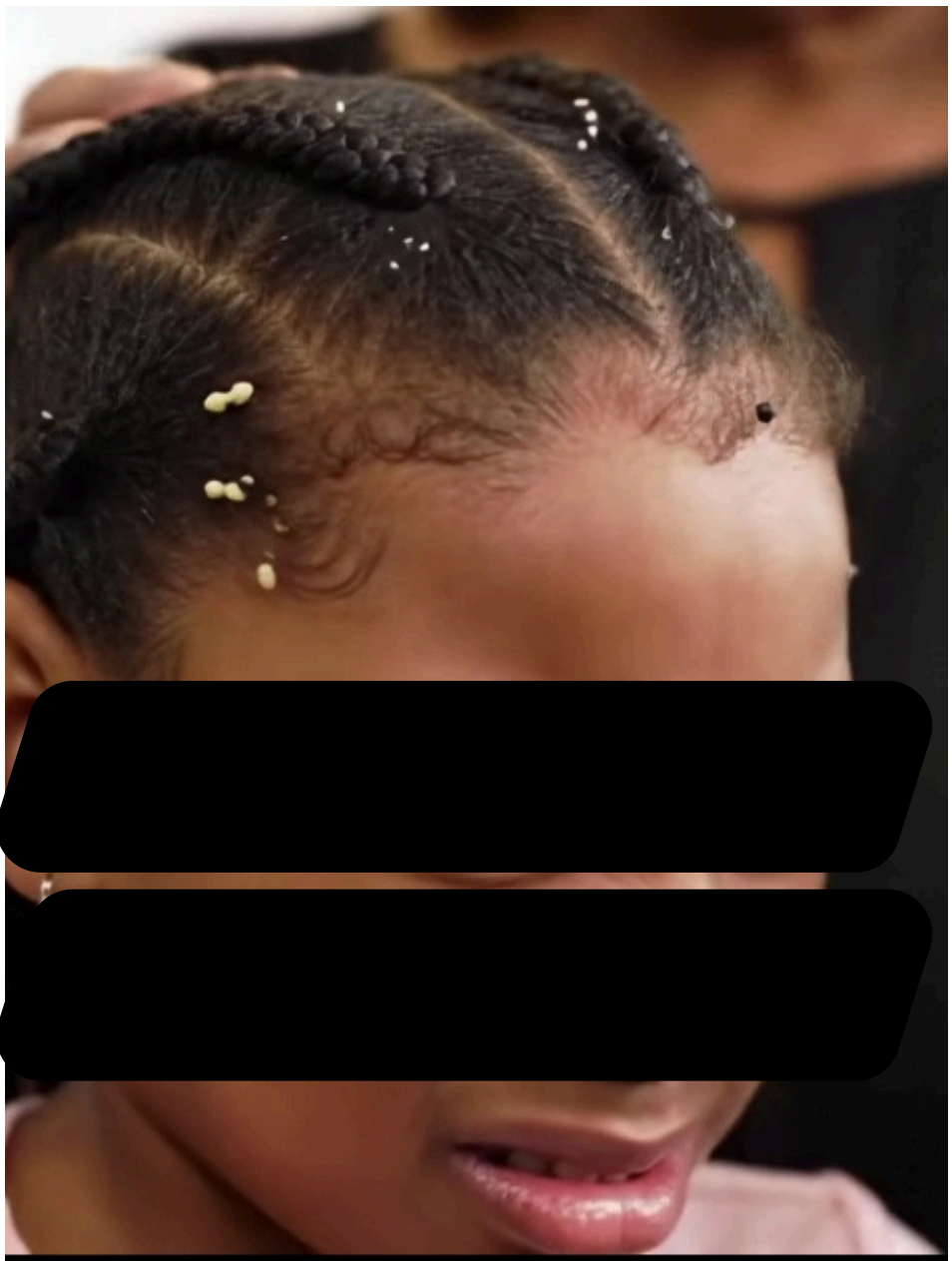
- Dual-action spray addresses both lice and dandruff safely
- Practical for children, schools, and households.

INTRODUCTION

- Head lice, dandruff, and hair loss are common scalp concerns.
- Scratching can cause wounds and infections; fungal irritation weakens follicles, leading to shedding.
- Conventional treatments often use harsh chemicals.
- This project introduces a safe, child-friendly, and affordable aerosol spray, offering an effective solution accessible to low-income households.

AIM / OBJECTIVE

- Eliminates head lice.
- Prevents nit hatching (breaks the lice cycle).
- Improves scalp health (dandruff & infection-linked hair loss).
- Offers a non-toxic, safe, and easy-to-use household solution.



Acknowledgements / Disclosures

- Independent project with community validation.
- Patent pending in the US.*

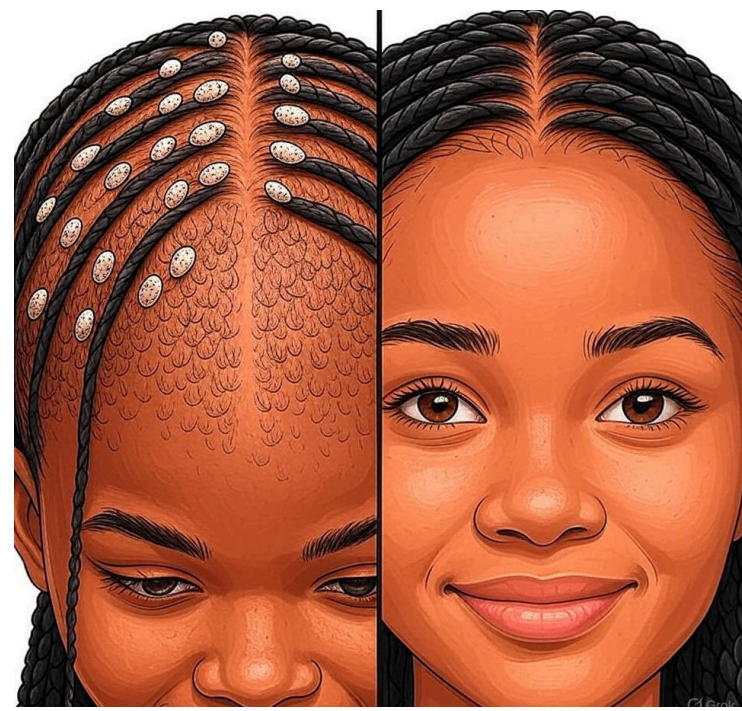


Prototype
aerosol based dual action spray
(lice, dandruff, scalp health)



Currently available locally (pilot distribution).

BEFORE/AFTER



Before/After user outcome
illustration

Effective against lice
and nits

