

BRAND INTRODUCTION

 **ATONQ₂**



BRAND PHILOSOPHY



Healthier

Helps build up essential barriers for stronger skin



Safer

Contains only EWG green ingredients



Gentler

Gentle formula leaving no discomfort

Healthier skin for delightful days



Researches and develops safe products applying its own technologies for babies and the whole family.

The first journey to healthy skin and a life skincare brand for all ages



OXYGEN & OXYGEN BETA FORMULA (HQB-II)

- Oxygen helps blood circulation and supports skin health
- **O2 LAB+ (Oxygen water by OXYGEN BETA FORMULA (HQB-II))** is the key technology ATONO2 has developed to compose 120ppm of oxygen water in the most effective method



Synopsis

OBJECTIVE: The perceived health and physiologic functioning of skin depends on adequate oxygen availability. Economical and easily used therapeutic approaches to increase skin oxygenation could improve the subjective appearance of the skin as well as support the management of some cutaneous conditions related to chronic hypoxic ischaemia (e.g. ulcerative wounds). We have tested the hypothesis that the O₂ partial pressure of skin (PskO₂) increases during immersion in water enriched with high levels of dissolved oxygen.

METHODS: A commercially available device was used to produce water containing 45 to 65 mg L⁻¹ of dissolved O₂. Young adults (YA; n = 7), older adults (OA; n = 13) and older adults with diabetes (OAD; n = 11) completed different experiments that required them to immerse their feet in tap water (<2 mg L⁻¹ of O₂; control) or O₂-enriched water (O₂-H₂O; experimental) for 30 min. Transcutaneous oximetry was used to measure PskO₂ for 20 min pre- and post-immersion.

RESULTS: Pre-immersion mean (standard deviation) PskO₂ on the plantar surface of the big toe was 75 (10), 67 (10) and 65 (10) mmHg in YA, OA and OAD, respectively. Post-immersion PskO₂ was 244 (25), 193 (28) and 205 (28) mmHg for the same groups. We also show that post-immersion PskO₂ varies by location and with advancing age.

CONCLUSION: Water is an effective vehicle for transporting dissolved O₂ across the skin surface and could be used as a basis for development of economical therapeutic approaches that improve skin oxygen tension to support skin health and function.

MÉTHODES: Un dispositif disponible dans le commerce a été utilisé pour produire de l'eau contenant 45 à 65 mg L⁻¹ d'O₂ dissous. Les adultes jeunes (YA, n = 7), âgés (OA; n = 13) et les personnes âgées atteintes de diabète (OAD, n = 11) ont répondu à différentes expériences qui les obligent à plonger leurs pieds dans de l'eau du robinet (<2 mg L⁻¹ d'O₂; le contrôle) ou eau enrichie en O₂ (H₂O-O₂; expérimental) pendant 30 min. L'oxymétrie transcutanée a été utilisée pour mesurer PskO₂ pendant 20 min pré- et post-immersion.

RÉSULTATS: La PskO₂ pré-immersion moyenne (écart type) sur la surface plantaire du gros orteil était de 75 (10), 67 (10) et 65 (10) mmHg dans YA, OA et OAD respectivement. La PskO₂ post-immersion était de 244 (25) 193 (28) et 205 (28) mmHg pour les mêmes groupes. Nous montrons également que la PskO₂ post-immersion varie selon l'emplacement et avec l'âge.

CONCLUSION: L'eau est un moyen efficace pour le transport de O₂ dissous sur la surface de la peau et pourrait être utilisée comme base pour le développement d'approches thérapeutiques économiques qui améliorent la pression d'oxygène de la peau pour favoriser la santé et la fonction de la peau.

Introduction

The epidermis does not have an independent blood supply even though all cell layers except the keratinized outer-most stratum corneum consume oxygen (O₂). Epidermal O₂ to support metabolic function is supplied by O₂ diffusion from the underlying dermal capillary bed or by way of direct O₂ absorption across the stratum corneum from air in contact with the skin surface [1, 2]. Elevated skin oxygen levels are associated with a subjective sense of

Oxygen absorption by skin exposed to oxygen supersaturated water

Stacey A. Reading and Maggie Yeomans

Abstract: The present study tests the hypothesis that skin on the plantar surface of the foot absorbs oxygen (O₂) when immersed in water that has a high dissolved O₂ content. Healthy male and female subjects (24.2 ± 1.4 years) soaked each foot in tap water (1.7 ± 0.1 mg O₂ L⁻¹; 30.7 ± 0.3 °C) or O₂-infused water (50.2 ± 1.7 mg O₂ L⁻¹; 32.1 ± 0.5 °C) for up to 30 min in 50 different experiments. Transcutaneous oximetry and near infrared spectroscopy were used to evaluate changes in skin PO₂, oxygenated haemoglobin, and cytochrome oxidase *aas* that resulted from treatment. Compared with the tap water condition, tissue oxygenation index was 3.5% ± 1.3% higher in feet treated for 30 min with O₂-infused water. This effect persisted after treatment, as skin PO₂ was higher in feet treated with O₂-infused water at 2 min (237 ± 9 vs. 112 ± 5 mm HG) and 15 min (131 ± 1 vs. 87 ± 4 mm HG) post-treatment. When blood flow to the foot was occluded for 5 min, feet resting in O₂-infused water maintained a 3-fold higher O₂ consumption rate than feet treated with tap water (9.1 ± 1.4 vs. 3.0 ± 1.0 μL·100 g⁻¹·min⁻¹). We estimate that skin absorbs 4.5 mL of O₂·m⁻²·min⁻¹ from O₂-infused water. Thus, skin absorbs appreciable amounts of O₂ from O₂-infused water. This finding may prove useful and assist development of treatments targeting skin diseases with ischemic origin.



CERA-O™: OXYGEN BETA FORMULA (HQB-II) with CERAMIDE NP

The effective technologies applied to the essential ingredient

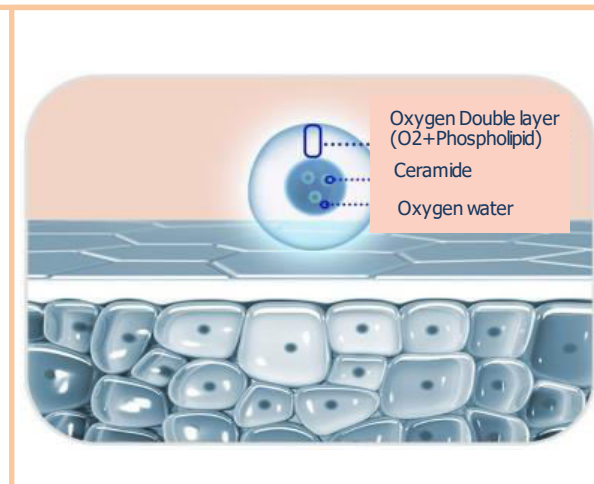
- Mineral water based Oxygen Beta Formula and Dual oxygen layer tech. for instant absorption of the key ingredients
- Deeply moisturizes and nourishes delicate skin
- Long lasting hydration leaving no sticky after-feel (*up to 48 hrs. for the cream)
- Instantly soothes irritated or stressed skin
- Skin irritation test completed , fragrance free



Concentrated oxygen water from Jeju Island



Ceramide for skin protection

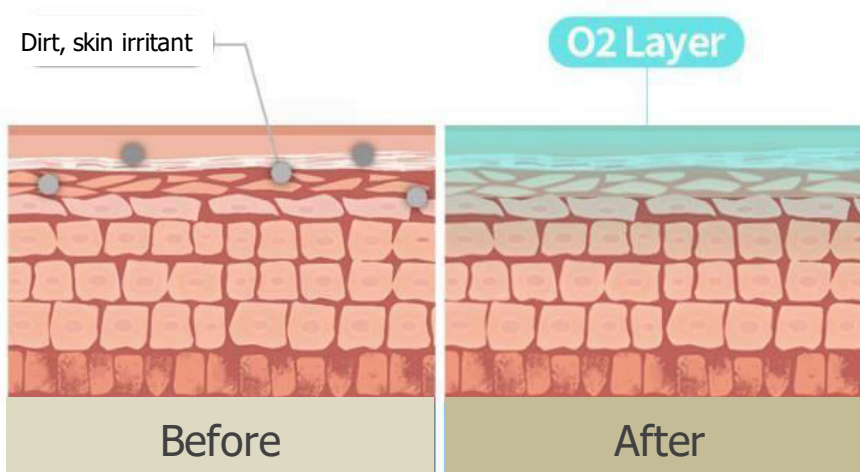
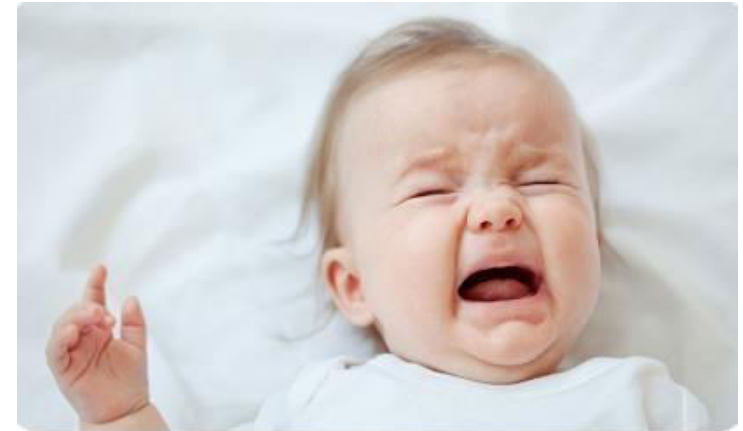


OXYGEN BETA FORMULA (HQB-II) Technology

SYNERGY OF OXYGEN & CERAMIDE NP

The most important treatment to make a good skincare routine

- Strongly Recommended for,
 - ✓ Needs a balance between moisture and oil
 - ✓ Irritated skin
 - ✓ Extremely sensitive skin
 - ✓ Dehydrated skin



• ECO CERT



• Skin Irritation test



• EWG as of Mar. 2021



• R&D Certifications

