



**Asia-Pacific
Economic Cooperation**

2022/CTI/SYM1/016

**Sharing Sustainable Business Best Practices,
Success Stories Among APEC Economies: Health
and Wellness and Other Products and Services -
RE:ERTH**

Submitted by: RE:TERRA



**APEC Bio-Circular-Green Symposium
Bangkok, Thailand
20 May 2022**

RE:ERTH



APEC 2022
THAILAND

RE:ERTH is an abbreviation of 'Re-encountering Earth'.

Our brand origin began close to 20 years ago,
with the discovery of an untouched treasure:
the Japanese White Turmeric.

RE:ERTH BRAND VIDEO



HISTORY

Where It All Began

Cultivated in the Kyushu region of Japan, the Japanese White Turmeric and Japanese Spring Turmeric were known simply as healing botanicals. Farmers, within their small communities, love their turmeric tea and enjoy incredible abilities of physical strength and mind for advanced ages. They are also known to be significantly healthy, with strong immunity systems, which helped them live life to the fullest.



DISCOVERY

An Untouched Treasure

While their flowers and roots were appreciated, the broad and glossy leaves (that can grow as tall as 1.5m!) were often discarded as agricultural waste.

After extensive research conducted by Professor Komai, then Head of Agriculture from Kindai University, the Japanese White Turmeric root and leaves extract and Japanese Spring Turmeric leaves extract are proven to visibly restore skin health.



Pictured right, Professor Komai with Shinji Yamasaki, CEO of RE:ERTH

OUR EXCLUSIVE JAPANESE TURMERIC

Our Japanese White Turmeric and Japanese Spring Turmeric are exclusively grown in the Kyushu region of Japan, recognized for its health boosting properties, with farming initiatives supported by the regional government. We provide equitable pay for farmers and ensure sustainable farming to preserve the land.



INVENTION

Multi-Targeted Elixir

Experience the intelligent, lightweight serum that reawakens skin with RE:ERTH's proprietary Japanese White Turmeric and Japanese Spring Turmeric extracts, leaving your face with a healthy bounce, and a lit-from-within luminosity.

The collection continues to expand to offer a minimalistic, gentle approach to skincare, with fast-absorbing products suitable for all skin types.



Japanese White Turmeric

Founded at the foot of Mount Aso, and now grown exclusively in the Kyushu region of Japan, this unique plant has been researched in partnership with Kindai University for nearly 20 years.

4 MAIN COMPONENTS

Curcumenone, Curcarabranol, 4s-Dihydrocurcumenone and Labdane-type Diterpene

BENEFITS

It has been identified to have multiple skin and health benefits, including stimulation of skin cell activity, and more applications of the plant extract are still being discovered till today.



Natural Hyaluronic Acid Protection



Stimulate Cell Production



Gives Skin A Firmer, Supple Texture



Japanese Spring Turmeric

Spring Turmeric has been used for centuries in Kampo (Japanese medicine), for both prevention and therapy of health and skin diseases, and research is still ongoing for further applications in skincare.

4 MAIN COMPONENTS

Curcumenone, Curudione,
Neocurudione and Curcumol



APPS

Amphiphilic Vitamin C from Japan

SCIENTIFIC NAME

Trisodium Ascorbyl 6-Palmitate 2-Phosphate

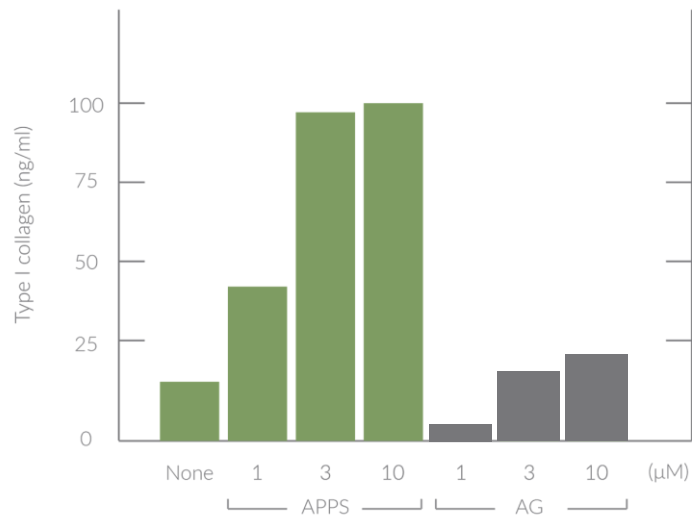
BENEFITS

- High stability from oxidation
- Released intra-dermally as ascorbic acid
- Penetrates skin due to low hydrophilicity
- Soluble both in oil and water



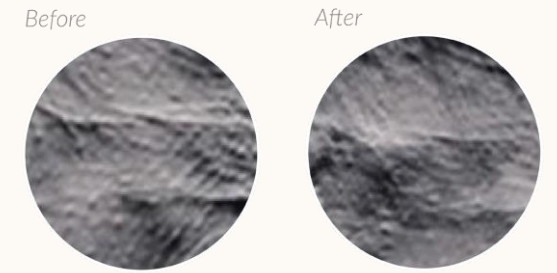
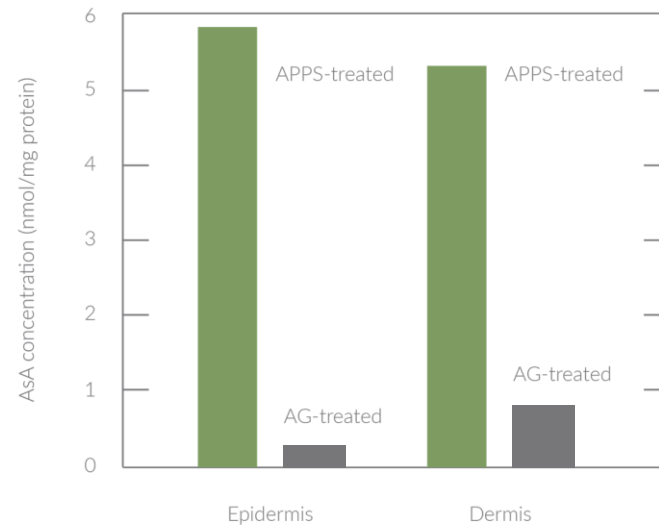
WRINKLE IMPROVEMENTS BY APPS

Stimulation of collagen synthesis even at low concentration

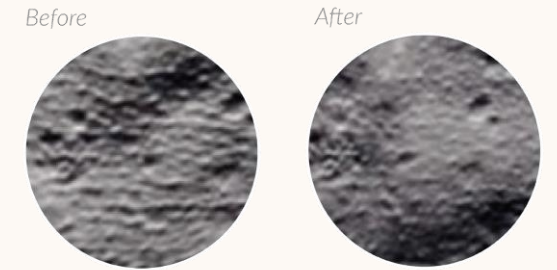


AG = Normal V-C

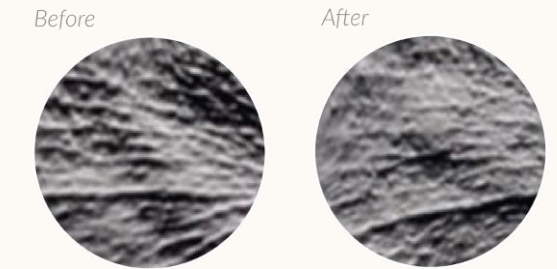
APPS concentration in skin cell



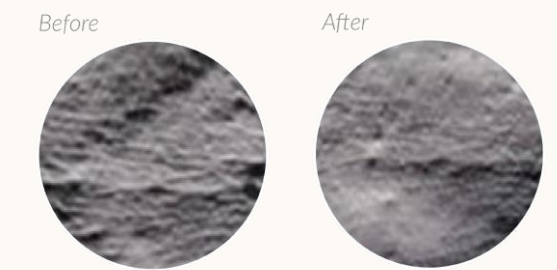
Woman (59), 77 days



Woman (43), 49 days



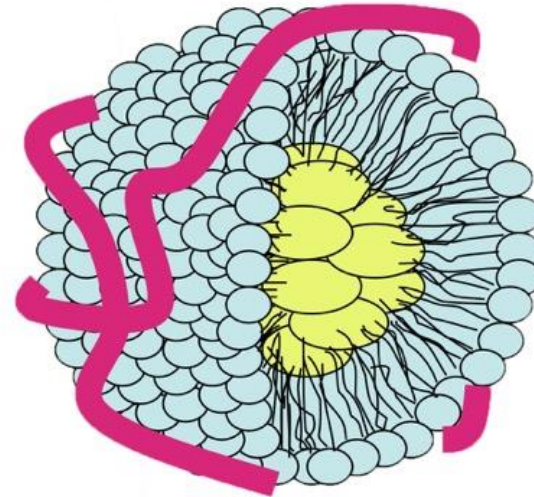
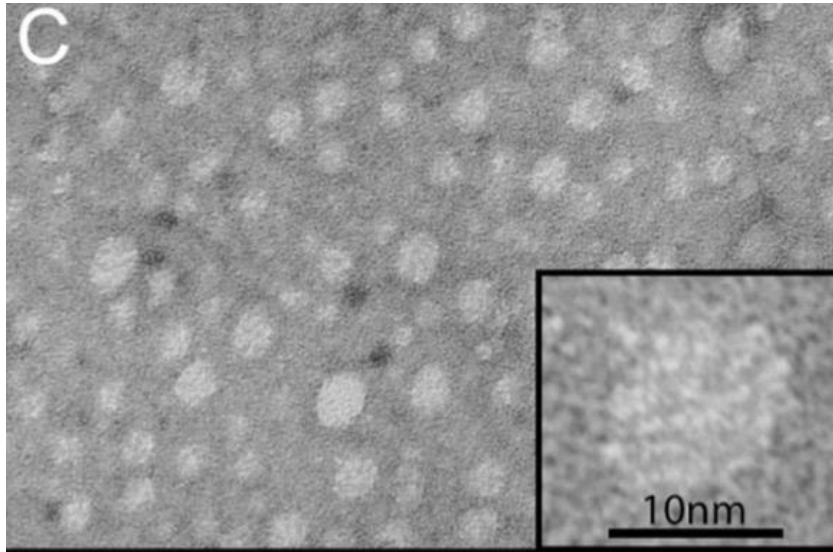
Woman (53), 42 days



Woman (?), 42 days

Lipodisq®

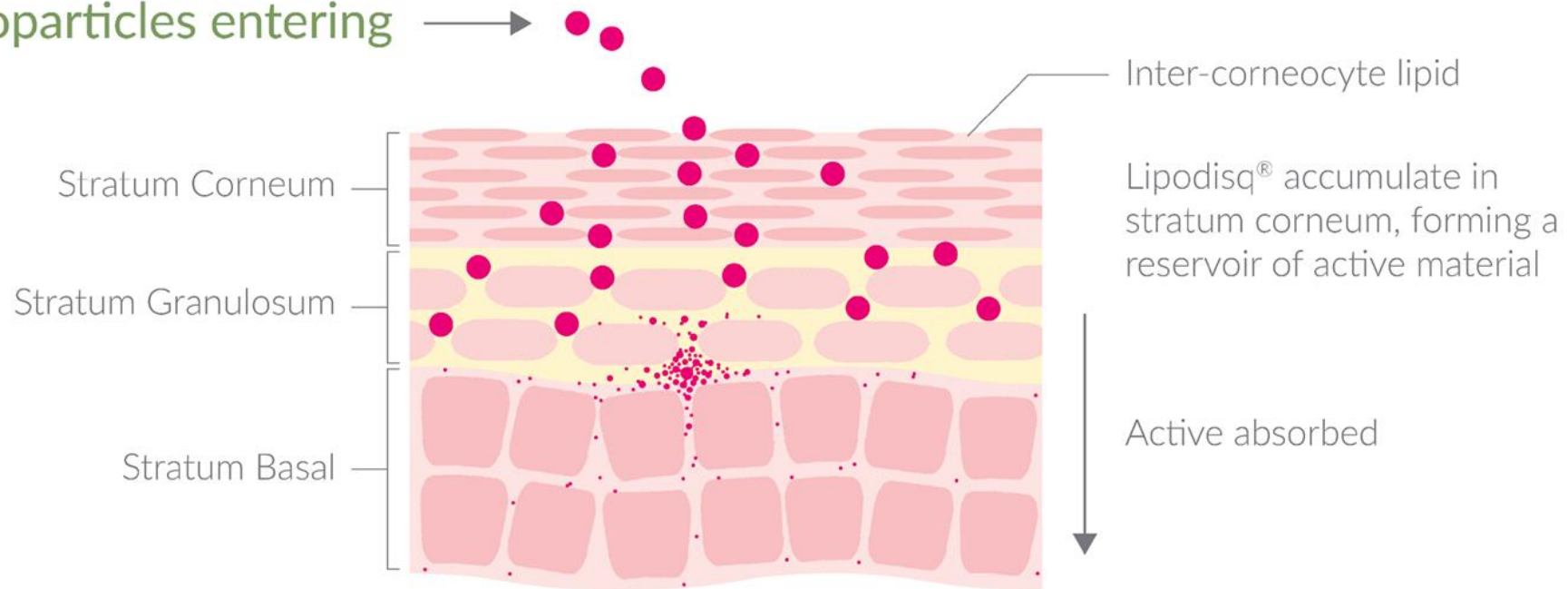
A patented, state of the art dermal delivery system, researched by Oxford University, Stockholm University, Max Plank Institute, and many others, and designed to transport actives between skin cells more than 10 times in comparison to normal liposomes, bringing actives where its most effective.



Electron microscope image of Lipodisq®
(x100 000)

(Birmingham University, JACS 2009)

Nanoparticles entering



- Inter-cellular interstices < 20nm
- Particle delivery systems are typically too large for efficient penetration.

MULTI-TARGETED ELIXIR

Revolutionary Formula

Real Results

85%

Experienced absorption
in 10 seconds

82%

Satisfaction rate
after 1 month

75%

Experienced smoother,
supple skin texture

68%

Noticed more
even skin tone

65%

Noticed lightened
pigmentation

64%

Saw pore size reduction

DAY 1

- ✓ Instant absorption
- ✓ Blends in clear
- ✓ Skin is soothed & comforted
- ✓ Skin is moisturized

DAY 30

- ✓ Smoother, supple skin texture
- ✓ Even skin tone
- ✓ Lightened pigmentation
- ✓ Pore size reduction

Pore Size Reduction



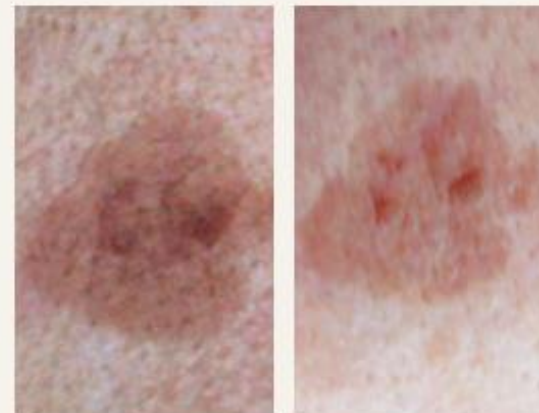
Reduced Redness



Even Skin Tone



Lightened Pigmentation



*In-vitro study conducted
on over 1,000 women,
over 30 days*

ACCOLADES

32

Beauty Awards

7

Certifications & Patents

200+

Peer-reviewed scientific journals



As Seen On

POPSUGAR.

Harpers
BAZAAR



SINGAPORE
TATLER

ST

BYRDIE

HW/
HERWORLD

DC EDIT

BEAUTY NEWS NYC

THE DAILY
BEAST

MEN'S FOLIO

THE SINGAPORE
Women's Weekly



Rejuvenating Hand Cream, RE.ERTH

S\$60

A problem many hand cream users face is that they are rarely long-lasting. Oil also remains on the surface, making our hands sticky and uncomfortable and it's frustrating when you live in a tropical climate. Re.Erth tackles this peskiness with its rejuvenating hand cream and what is so different about this product? It has retinol for anti-aging properties - hello to youthful hands!



EXACTLY WHAT I WAS HOPING TO FIND

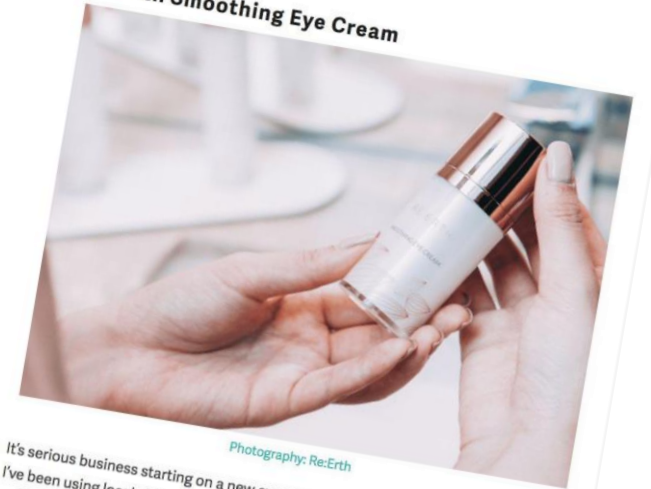
This starter kit made it extremely easy to transition with these new products. It's taken me a few years to find a product that offers the "complete package" for my aging skin. **Within the first week of use,** I noticed **improvement in the brightness, hydration and the overall feel of my skin.**

While I love each product in my starter kit, one of **my favorite** things comes from the Hydrating Gel Moisturizer. The fragrance is fresh and light and the **perfect ending to my skin regimen.**

Leah

VERIFIED BUYER

Re:Erth Smoothing Eye Cream



Photography: Re:Erth

It's serious business starting on a new eye cream so securing a good one is crucial. I've been using local skincare brand Re:Erth's smoothing eye cream for a month or so. The pluses - I love the lightweight texture. I just dab the product around the eyes and it absorbs right into the skin. My puffy under-eyes have improved too. It's probably due to the mix of water-soluble vitamin A and moisture-locking colostrum (aka mother's milk from Danish cows) that decreases fluid retention.

I also notice a slight lift around my eye contour. As for my crow's feet? They're still creeping around. I'll probably need more time to assess that. Oh, and I also found out recently that the eye cream can be used on smile lines as well. Will have to remember this step henceforth!

OUR BRAND PARTNERS

TANGS



NANA & BIRD

SOCIETY **A**

Your gateway to the best designers and brands from Asia



KRISSHOP

perk
BY KATE

iSHOP
CHANGI

LM LazMall
PRESTIGE

RE:ERTH & Sustainability





WHAT WE DO

Exclusive Ingredients:
Utilize Agricultural Waste

Recycling: Enable
Plastic Circularity

Corporate Social
Responsibility:
RE:ERTH Rice Farm



HOW WE DO IT

Close to 20 years partnership
with Kindai University

Awareness campaigns

ISCC Plus standards
(partnership with
Environmental Solutions Asia)

Support income and livelihood
of farmers in Kyushu and
Tottori Prefecture, Japan



OUR GOALS

All initiatives taken to
improve, heal, or protect our
environment brings us closer
to a healthier ecosystem!

All must benefit for something to be truly sustainable



CHATS WITH PROFESSOR KOMAI

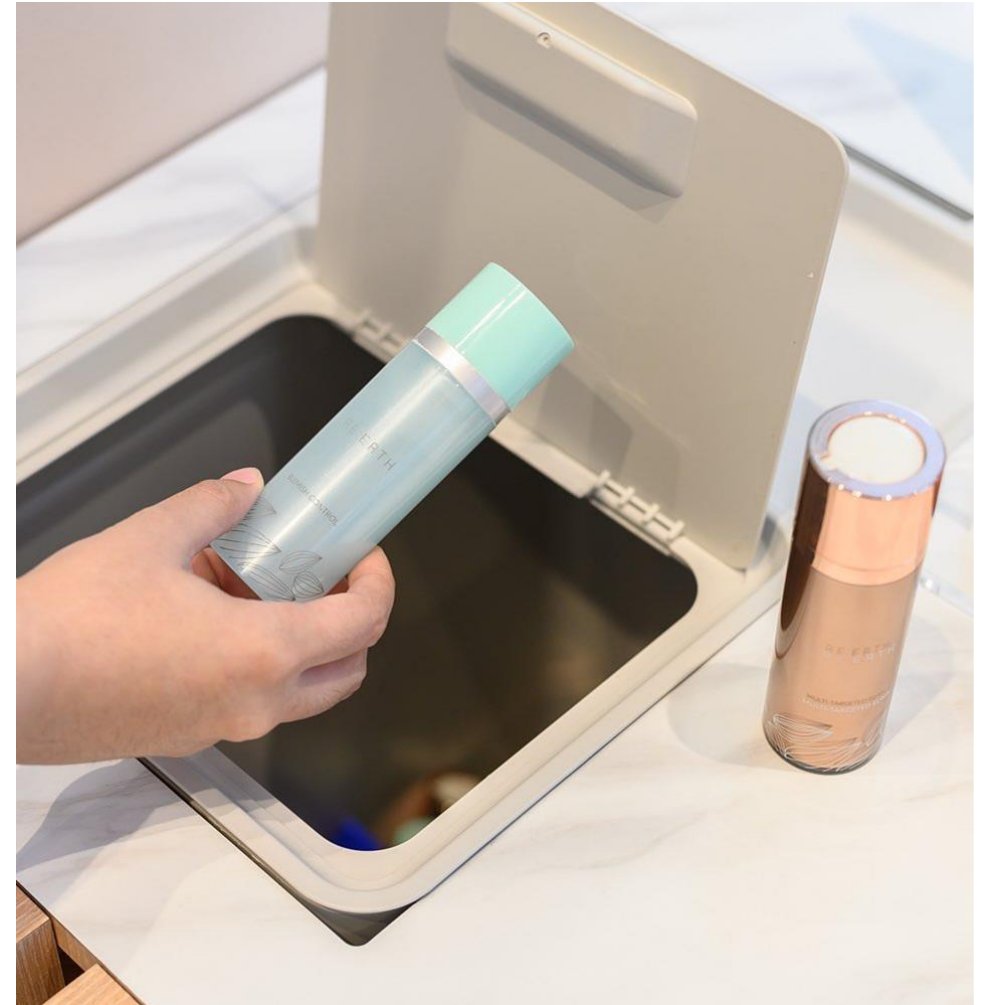
SUSTAINABILITY

RECYCLING

Giving New Life To Eco-Conscious Beauty

Many of us have a common habit to dispose of our empty skincare products rather than recycling them accordingly. Not many of us also realize that there is an additional process of cleaning, drying, and sorting these containers in order for them to be recycled.

In step with our philosophy of protecting while harnessing the prowess of nature, RE:ERTH's Sustainability Program encourages people to bring in their empty skincare packaging to be fully recycled and converted to virgin-quality recycled plastics* and non-fossil derived fuel via our partner's groundbreaking technology.



RECYCLING

Giving New Life To Eco-Conscious Beauty

**In the process of certifying our site in accordance with the International Sustainability and Carbon Certification (ISCC) Plus standards, which will be completed by the end of this year.*

ISCC Plus is a globally recognized sustainability framework that will ensure that RE:ERTH's waste plastic's oil is certified as a sustainable raw product that can be used to produce virgin-quality recycled plastics, thereby enabling plastic circularity in the industry.



TRANSFORMING THE RECYCLING VALUE CHAIN



70%

Oil yield

30%

Carbon black

Repurposed into road materials/syngas

+Percentages at lab prototype scale

BENEFITS

Landfill diversion

Enhanced plastic circularity

Increased supply of sustainable fuel

Avoidance of virgin crude oil

Plastics Suitable for Chemical Recycling



If plastic has no resin number, flexible or soft plastics (regardless of colour) are acceptable.



Plastic can also be multi-layered (e.g. paper lining on the top, as seen in bubble envelopes)

Examples of Suitable Plastics



Traditional Recycling Methods



Each bottle has easily 5-6 different types of plastics



Customers need to dismantle and wash used bottles



Dry used bottles and place into blue recycling bins



Lack of transparency where used bottles go

RE:ERTH's Recycling Initiative



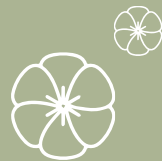
NO dismantling or washing required



Customer drops off bottles at RE:ERTH Recycling Locations



Done locally, reducing carbon costs, and will be converted to non-fossil derived fuel



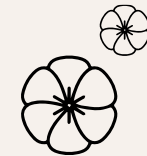
Customer gains rewards on reerth.com

HOW TO PARTICIPATE



Drop off empty plastic bottles at RE:ERTH Recycling Locations

- ✓ All brands accepted, no washing or dismantling required,
- ✓ Other personal care products such as body care, hair shampoo, and hand sanitizers, can be sent along to our sustainability partner.



Rewards in the form of RE:ERTH Reward Garden Petals

- ✓ Incentive process for every plastic facial skincare empty recycled.

AS FEATURED ON...

ELLE

ELLE Beauty Feature



SAVING PLASTIC

A PARTNERSHIP BETWEEN TWO LOCAL BRANDS SPARKED AN ENVIRONMENT-SAVING PROCESS THAT'S GROUNDBREAKINGLY SIMPLE

BY CHELSEA TANG PHOTOGRAPH BY KATHERINE ANO STYLING BY GREGORY WOO

Here's the lowdown on recycling beauty products: It's so damn inconvenient. Anyone who's ever put their intention to recycle beauty empties into practice will know that saving the earth isn't as simple as simply dumping used-up jars and tubs into the blue bin.

What's making recycling difficult is the mixed-material packaging that beauty products come in.

The bulk of it are made of plastic containers (on average, bottles are made with about five plastics), mixed in with metals, and sometimes glass. To recycle these plastic bottles, you'll have to first clean them out, then separate the plastic from the non-plastic. It's a treacherously painstaking process (having tried to recycle my own stash of empties for years, I'd know) — there's the removing of springs from pumps, the faking out of mirrors from makeup palettes, etc.

So, you really can't blame a girl for craving convenience. Beauty recycling is indeed hard work... till the recently-found solace in Toh Ziling, chief operating officer of local clean skincare brand Re:erth. She came to me like a fairy godmother — all wide-eyed — when she revealed, in an intimate

meeting, that the brand had partnered with local recycling company Environmental Solutions to make beauty recycling less painful than it is currently.

"We're going to turn plastic into fuel," she says, showing me a picture of black liquid-filled containers. "The best part is, consumers won't have to manually dismantle and clean their [skincare] bottles anymore with this process. We already don't have much time in a day," Toh chuckles.

I shifted my gaze over to Leon Trauzzi, head of marketing at said Environmental Solutions. The company has been in business since 1999, and is in the metal recycling business (of turning metal waste into metal concentrates for resale, an alternative to mining). For the first time in more than 20 years, they're branching out into plastic — with a process called waste plastic pyrolysis, which turns plastic into "fossil-free diesel".

"It's called Project Freedom, which essentially means freedom from plastic," Trauzzi says. "We're the first, locally, to develop this self-sustaining model for the pyrolysis process that turns plastic into reusable resources."

Here's how it works. All kinds of waste plastic (not just beauty) will be fed into the reactor, and heated up to about 400-500 degree Celsius without oxygen, using urban waste wood — like unwanted and discarded crates, boxes, planks — as a fire starter. The plastic will then break down into three main components: pyrolysis oil (aka diesel), synthetic gas, and carbon black.

"Plastic will become diesel, and everything that doesn't burn (paper, springs) will become carbon black," Trauzzi explains. "Synthetic gas that's produced is inevitable, it's a part of plastic. It's very combustible though, so it's being channelled back to the reactor as the follow-up thermal energy source," he explains. Remnant organic waste (such as bits of leftover cream) will be burnt off. Both the pyrolysis oil and carbon black will have to be refined before commercial use, but Trauzzi is positive that there are demands for these resources. Cue staccato claps.

It sounds too good to be true, but in this case, it isn't. "We know how inconvenient takes the initiative away from recycling, so we're making it easier for consumers," Toh says. "You just need to do the least now, that's saving your empty bottles and passing them on to us." In the spirit of mindful recycling, Re:erth will be collecting skincare bottles from all brands at their Design Orchard booth, to be recycled of Environmental Solutions.

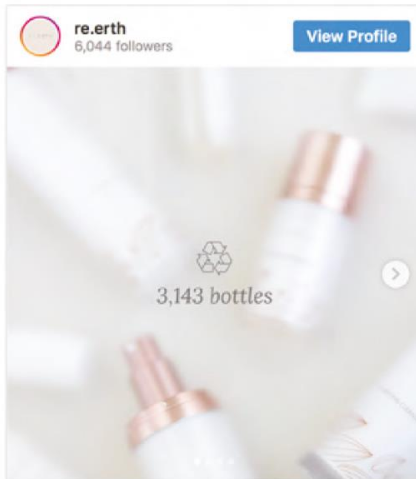
So, for those who have yet to start beauty recycling, there's no reason not to get started now. Trauzzi says it best: "Waste is always treasure." 🌱

VOGUE

BEAUTY

Unboxed: Unloading beauty's packaging problem and the efforts to step up sustainability

BY DANA KOH
12 AUGUST 2021



Seeking to bridge this gap is nature-powered beauty brand, Re:erth, which boasts a Sustainability Corner at Design Orchard. Here, beauty lovers can drop off their empty skincare products from any brand to be fully recycled and converted to non-fossil-derived fuel via Environmental Solutions' groundbreaking technology. This partnership programme has reaped multiple benefits since its launch in 2020, including "landfill diversion, using pyrolysis to recycle plastics instead of incinerating them; enhanced plastic circularity, by turning waste plastic into NewOil, which can be turned into a recycled chemical feedstock to create virgin quality plastics; and increasing the supply of sustainable fuel, for NewOil can be turned into a source of fuel for the transport industry", states Re:erth's COO, Ziling Toh. At lab prototype scale, Toh says that the brand's "empties gave 70 per cent oil yield, which means that 10kg of empties will give us approximately seven kilograms of oil. The rest of the waste plastics become carbon black which has some recycling value—like being repurposed into road materials—or syngas, a thermal energy source that goes back to power the pyrolysis machine".

life



Rewards from beauty brands for your bottles

In 2019, Forbes reported that the global beauty industry produces 120 billion units of packaging annually, making it one of the top contributors to plastic waste.

No wonder, then, that beauty brands are introducing refillable packaging and recycling initiatives. Here are some places you can shop a little more guilt-free.

Design Orchard recently rolled out a campaign to encourage sustainable shopping. Amanda Choi finds out how retailers are going green. C263

Under Re:erth's programme, the containers do not need to be cleaned or dried before recycling — a first in the beauty scene.

Since the programme's launch, Re:erth has collected more than 8,000 plastic skincare bottles, among a total pool of personal-care plastics weighing 350kg.

Chief operating officer Toh Ziling estimates that at lab prototype scale, Re:erth empty containers gave 70 per cent oil yield, meaning 10kg of the containers created about 7kg of oil.

"Conventional recycling requires cleaning and drying of these containers in order to be recycled, which are added challenges for consumers," she says.

Under Re:erth's programme, the containers do not need to be cleaned or dried before recycling.

"We wanted to know exactly where the waste would end up. ESA's chemical recycling process turns waste plastic into reusable resources. Done locally, it reduces carbon costs, is easy and convenient for consumers, and gives packaging waste a new lease of life."

“

Since the program's launch, RE:ERTH has collected more than 8,000 plastic skincare bottles, among a total pool of personal-care plastics weighing 350kg.

CORPORATE SOCIAL RESPONSIBILITY

RE:ERTH Rice Farm

It is our love for nature, community, and groundbreaking science, that began our journey in creating quality and sustainable essentials for your skin health.

In 2021, we embarked on a new corporate social responsibility initiative, to support small, independent rice farmers in Japan. The seedlings have been growing well since June 2021 in Tottori Prefecture, and we are excited to be on this growth journey with our customers, and to be able to contribute back to the local community and environment.



Benefits

COMMUNITY

- ☺ Stability of rice farmers' income and improvement of livelihood
- ✓ Support small, independent, highly skilled farmers
- 👥 Sharing the farming experience for others to learn more

ENVIRONMENT

- 🌿 Contributes to 400kg reduction of carbon dioxide emissions



Meticulously Cultivated

Our Cultivation Manager, Mr. Keiji Fujiwara, has 14 years of farming experience and is a three-times winner of the prestigious Hinokawa Rice Contest (hotly contested yearly, participated by over 300 local rice producers!)

PROFESSOR KOMAI ON FUTURE RESEARCH



CHATS WITH PROFESSOR KOMAI

FUTURE RESEARCH

RE:ERTH



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Thank You!