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粧品容器 永續減碳選擇

香根企業有限公司
2023.8.15

關於我們



x



香根企業集團，1979年創立於台北，我們透過國際合作＋鏈結資源，與材料和生態專家合作，持續研發環保的塑膠替代原料，推出創新包材設計，協助品牌業者提升創新與永續包裝！

同時，我們在各國生技實驗室合作，以科學實證支持打造純淨美妝配方，期許成為美麗+健康產業品牌的最佳商開夥伴！



減塑與創新的挑戰

Scalable

材料來源的產能及供貨穩定性，必須可規模化量產

Compatible

根據包裝產品行業特性，必須相容(產品上架保存期、酸鹼、溫度等)

Feasible

各行業成本結構不相同，必須建立業者參與的動機

End-of-Life

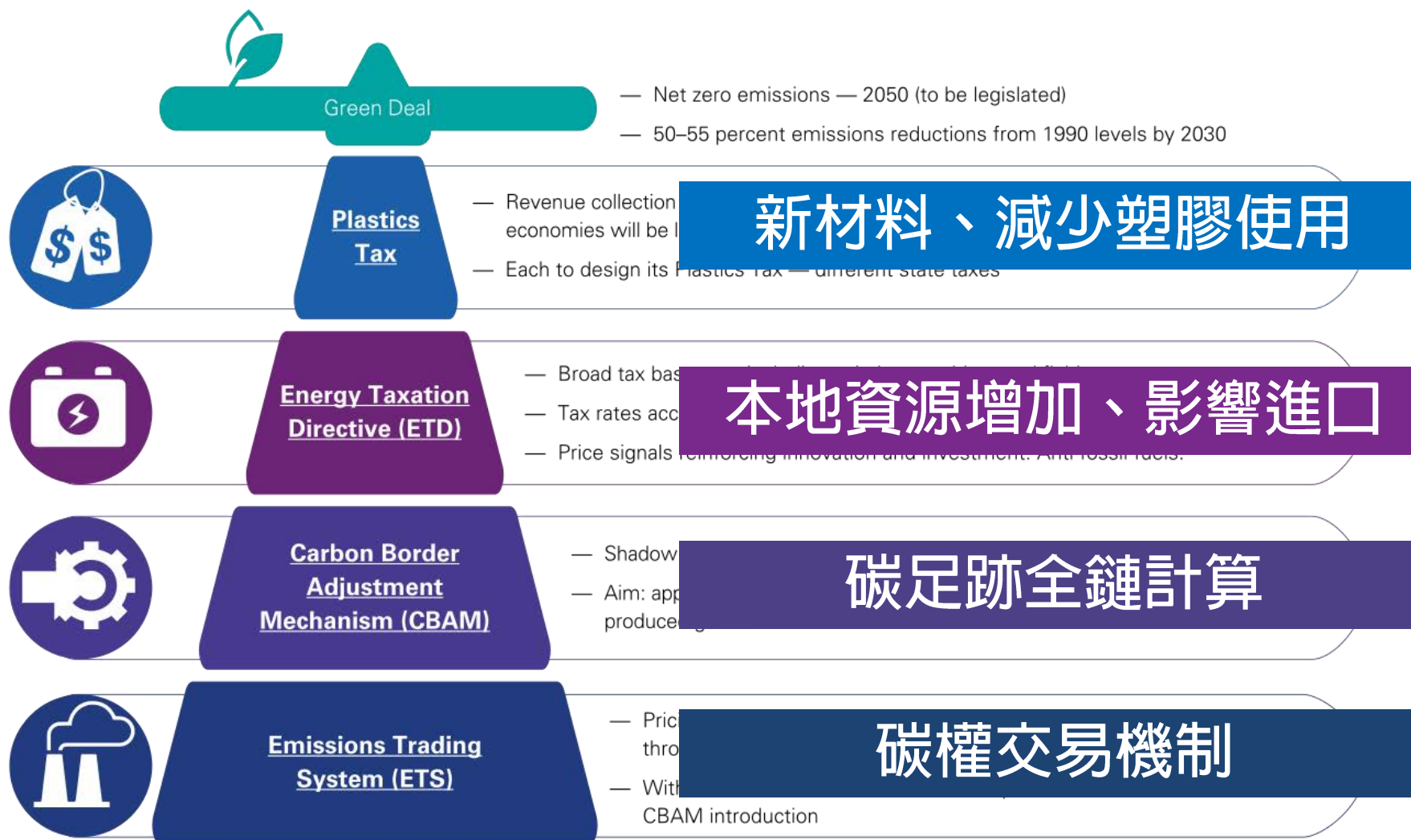
塑膠廢棄物何去何從，政府需落實多元的處理機制,配合回收獎勵



迎接全球限塑+淨碳時代



X



品牌案例 — ELC Origins



X



79 +1.24

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ELC and Origins Announce Sustainable Packaging Partnership With SABIC and ALBÉA

Origins becomes first global prestige beauty brand to utilize advanced recycled resin in tube pack format

PRESS RELEASE, OCT 14, 2020

NEW YORK—Origins, a prestige global skincare brand that delivers high-performance formulas powered by its parent company, The Estée Lauder Companies (ELC), today announced a partnership with global chemical strategic beauty packaging manufacturer Albéa to bring an advanced recycled tube package to market.



使用從消費市場流通
後回收再生塑膠
(PCR, post consumer
recycled)

品牌案例 — Une Natural Beauty



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全包裝，含蓋、瓶、刷頭、墊片，皆由PE單一材質製成，消費者無需拆解包裝即可輕鬆回收

品牌案例 — Beiersdorf Nivea



使用林業副產品-松油(通常用於造紙業)
精煉得的石腦油以取代石化來源的塑膠

宣稱可每個容器可減少72g的二氧化碳
排放、比起一般塑膠製容器可減少60%



品牌案例 — Sheseido AquaGel Lip Palette



Sheseido於2020年10月發表Sustainable Beauty Actions

唇彩盒使用植物油精煉之可降解材料PHBH



品牌案例 — Chanel Les Eaux



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2021年新版Les Eaux de Chanel全系列之香水蓋，由90%的木屑製成，其中木頭使用FSC認證之來源。



品牌案例 — Chanel N° 1



霜蓋由90%的木屑+生質材料製成，其中木頭使用FSC認證之來源。

可替換式內杯

80%的回收玻璃

國際品牌案例 — Prada Paradoxe



Prada推出香水補充包，宣稱可減少46%塑膠、29%玻璃、67%金屬、39%紙張的用量

品牌案例 — L'Occitane



消費者可將用完之空瓶攜回重填，全球共有58間門市配有補充機台
每年節省200噸的塑膠使用



4R1S：永續包裝設計原則



X



“永續與奢華兼可得”

減廢、減塑、減碳
唯美的磨砂質感
奢華的微重手感



天然廢棄物



把農業, 漁牧業或礦業使用後的廢棄物轉為工業用途；
應用有效部位，將之純化並製作為可供生產之粒子

天然鈣蘊藏無限可能

- 碳酸鈣 CaCO_3 是一種無機礦物質，在自然界存在於石頭、蛋殼、蝸牛殼、牡蠣殼、珍珠等物質
- 每年，全球產生超過2千萬噸的殼類廢棄物，變廢為寶，更是在經濟發展與環境平衡間的絕佳解方！



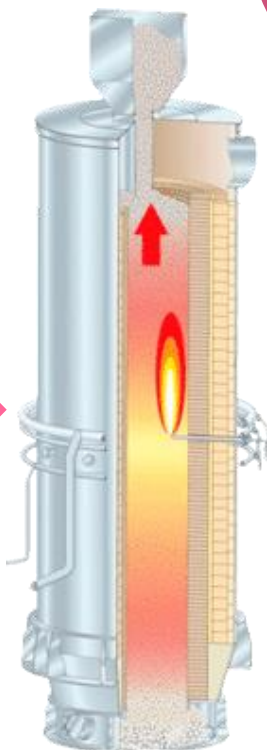
變廢為寶！



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天然碳酸鈣



煅燒



二氧化碳收集
再生使用



天然氧化鈣

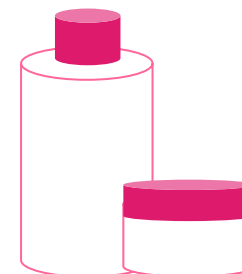


混合造粒



母粒

- 射出
- 吹塑
- 擠吹



Stoneco

- 就地取材: 太平洋海岸大白石
- 減少40-50%的塑膠使用
- 原材料通過ISO14067碳足跡認證(Cradle to Gate)
 - 與PP相比，減少71%碳排
 - 與HDPE相比，減少74.7%碳排
- 安全無毒(Reach + RoHs)



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Winner of
LUXEPACK
in green

Statement TW2200548CFP, continued

SGS

The GHG emission of each product is described as below:

Product Name	Masterbatch		
Declared Unit	per Kilograms (including Packaging)		
Life cycle GHG emissions			
Declared Unit emissions (Unit: kilograms of CO ₂ e)			
Life Cycle Stage	Material	Manufacture	Total
Masterbatch	0.507	0.065	0.57

SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the controls in place to mitigate these risks. Our examination included assessment and a test of evidence relevant to the amounts and disclosures in relation to the reported life cycle GHG emissions of the product.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a reasonable level of assurance that the life cycle GHG emissions per Masterbatch are fairly stated.

We conducted our verification with regard to the GHG assertion of Formosa Plastics Tainan Plant, which included assessment of the company GHG information system, monitoring and reporting protocol. This assessment included the collection of evidence that support the reported data and verification of whether the provisions of the protocol reference were consistently and appropriately applied.

In SGS's opinion, the presented GHG assertion:

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO 14067:2018 in relation to GHG quantification, monitoring and reporting.

Confidentiality

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

減碳為全球永續指標!

溫室氣體排放量 (單位:公斤/二氧化碳當量)
GHG emissions (Unit: Kg of Co2e)

生命週期階段 Life Cycle Stage	原料 Material	製造 Manufacture	總和 Total
粒子 Masterbatch	0.507	0.065	0.57

比較:常用塑膠之碳挑 (單位:公斤/二氧化碳當量)
資料來源: 環保署網站截至2022/12/31

PP	2.01	-71.64%
HDPE	2.25	-74.67%
LDPE	1.9	-70%

GEX



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- 含高濃度 (>70%)蛋殼原料，適合添加於減塑用途、可搭配再生塑膠PCR
- 原材料具備SGS Eco Product認證
- 與PP+PE混料相比，減少64%碳排
- 安全無毒，無重金屬、塑化劑、高關注有害物質等



天然生物鈣來源，
亦有營養、抗菌、
遠紅外線等附加價值



GEX



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구분	번호	투입물 명칭	단위	량	CO2 배출계수	CO2 배출량 (kg CO2)	비고
(Classification)	(No.)	(Name of Input)	(Unit)	(Quantity)	(CO2 emission coefficient)	(CO2 emissions)	(Remarks)
투입물	1	Calcium Carbonate (From Egg Shell)	kg	8.11E+01	1.63E-01	1.32E+01	문심자루 (shells 100%)
	2	Polyethylene	kg	1.76E+01	1.88E+00	3.29E+01	저밀도 고밀도 폴리에틸렌 (high density polyethylene for injection)
	3	Polypropylene	kg	2.15E+02	1.47E+00	3.16E+02	호모 폴리프로필렌 (homopolypropylene)
	4	전력	kWh	6.12E+01	1.95E-01	1.20E+01	환경부 전력 DB (Ministry of Environment Power DB)
구분	번호	투입물 명칭	단위	량	CO2 배출계수	CO2 배출량 (kg CO2)	비고
(Classification)	(No.)	(Name of Input)	(Unit)	(Quantity)	(CO2 emission coefficient)	(CO2 emissions)	(Remarks)
산출물	1	GEX Pellet	kg	1.00E+00	-	-	제품 (Product)
	2	스크랩 (Scrap)	kg	3.40E+02	1.88E-02	6.39E+00	혼합재플라스틱재활용 (Mixed waste plastic recycling)
	3	Waste (Defective Residues)	kg	3.12E+03	2.35E+00	7.33E+03	혼합재플라스틱소각 (Incineration of mixed waste plastic)

탄소배출량 (CO2 Emissions)	PE+PP	(PE X P1) + PP	감축효과 (Emission Reduction)
	2.23E+00	8.10E-01	1.42E+00 64%

C 2.2. GEX 제조공정 (시나리오) < Scenario

구분	번호	투입물 명칭	단위	량	CO2 배출계수	CO2 배출량 (kg CO2)	비고
(Classification)	(No.)	(Name of Input)	(Unit)	(Quantity)	(CO2 emission coefficient)	(CO2 emissions)	(Remarks)
투입물	1	Calcium Carbonate (From Egg Shell)	kg	0.00E+00	1.63E-01	0.00E+00	
	2	Polyethylene	kg	1.01E+00	1.88E+00	1.89E+00	
	3	Polypropylene	kg	2.15E+02	1.47E+00	3.16E+02	
	4	전력 (Electric power)	kWh	6.12E+01	1.95E-01	1.20E+01	
구분	번호	투입물 명칭	단위	량	CO2 배출계수	CO2 배출량 (kg CO2)	비고
(Classification)	(No.)	(Name of Input)	(Unit)	(Quantity)	(CO2 emission coefficient)	(CO2 emissions)	(Remarks)
산출물	1	GEX Pellet	kg	1.00E+00	-	-	제품 (Product)
	2	스크랩 (Scrap)	kg	3.40E+02	1.88E-02	6.39E+00	혼합재플라스틱재활용 (Mixed waste plastic recycling)
	3	Waste (Defective Residues)	kg	3.12E+03	2.35E+00	7.33E+03	혼합재플라스틱소각 (Incineration of mixed waste plastic)

溫室氣體排放量 (單位:公斤/二氧化碳當量)
GHG emissions (Unit: Kg of Co2e)

PE+PP	GEX粒子	減碳	
2.23E+00 (2.23)	8.1E-01 (0.81)	1.42E+00 (1.42)	64%

C-1-2 제품 제조단계 (Product manufacturing stage)

구분 (Classification)	번호 (No.)	투입물 명칭 (Name of Input)	단위 (Unit)	량 (Quantity)	CO2 배출계수 (CO2 emission coefficient)	CO2 배출량 (kg CO2)	비고 (Remarks)
투입물 (input)	1	탄산칼슘 (From Oyster Shell)	kg	3.00E+01	1.63E+01	1.38E+01	문蛤자리 (Iheon Jaha)
	2	Polyethylene	kg	1.70E+01	1.70E+00	1.00E+01	사출용 고밀도 폴리에틸렌 (High density polyethylene for injection)
	3	Polypropylene	kg	2.35E+02	1.47E+00	1.40E+01	주조용 폴리프로필렌 (Injection polypropylene)
	4	전력 (Electric Power)	kWh	6.12E+01	4.95E+01	3.03E+01	환경부 전력 DB (Ministry of Environment, Power DB)
구분 (Classification)	번호 (No.)	투입물 명칭 (Name of Input)	단위 (Unit)	량 (Quantity)	CO2 배출계수 (CO2 emission coefficient)	CO2 배출량 (kg CO2)	비고 (Remarks)
산출물 (Output)	1	GMX Pellet	kg	1.00E+00	-	-	제품 (Product)
	2	스랩 (Scrap)	kg	0.00E+00	-	0.00E+00	
						7.60E-01	

	PE+PP	GMX+PE+PP	탄소배출량 (CO2 emissions)	감축률 (Emission Reduction)
	2.00E+00	7.60E-01	1.24E+00	62%

C-1-2 GMX 제조공정 (시나리오) Scenario

구분 (Classification)	번호 (No.)	투입물 명칭 (Name of Input)	단위 (Unit)	량 (Quantity)	CO2 배출계수 (CO2 emission coefficient)	CO2 배출량 (kg CO2)	비고 (Remarks)
투입물 (input)	1	탄산칼슘 (From Oyster Shell)	kg	0.00E+00	1.63E+01	0.00E+00	
	2	Polyethylene	kg	0.76E+01	1.70E+00	1.60E+00	
	3	Polypropylene	kg	2.35E+02	1.47E+00	3.40E+01	
	4	전력 (Electric Power)	kWh	6.12E+01	4.95E+01	3.03E+01	
구분 (Classification)	번호 (No.)	투입물 명칭 (Name of Input)	단위 (Unit)	량 (Quantity)	CO2 배출계수 (CO2 emission coefficient)	CO2 배출량 (kg CO2)	비고 (Remarks)
산출물 (Output)	1	GMX Pellet	kg	1.00E+00	-	-	제품 (Product)
	2	스랩 (Scrap)	kg	0.00E+00	-	0.00E+00	
						2.00E+00	

溫室氣體排放量 (單位:公斤/二氧化碳當量)
GHG emissions (Unit: Kg of Co2e)

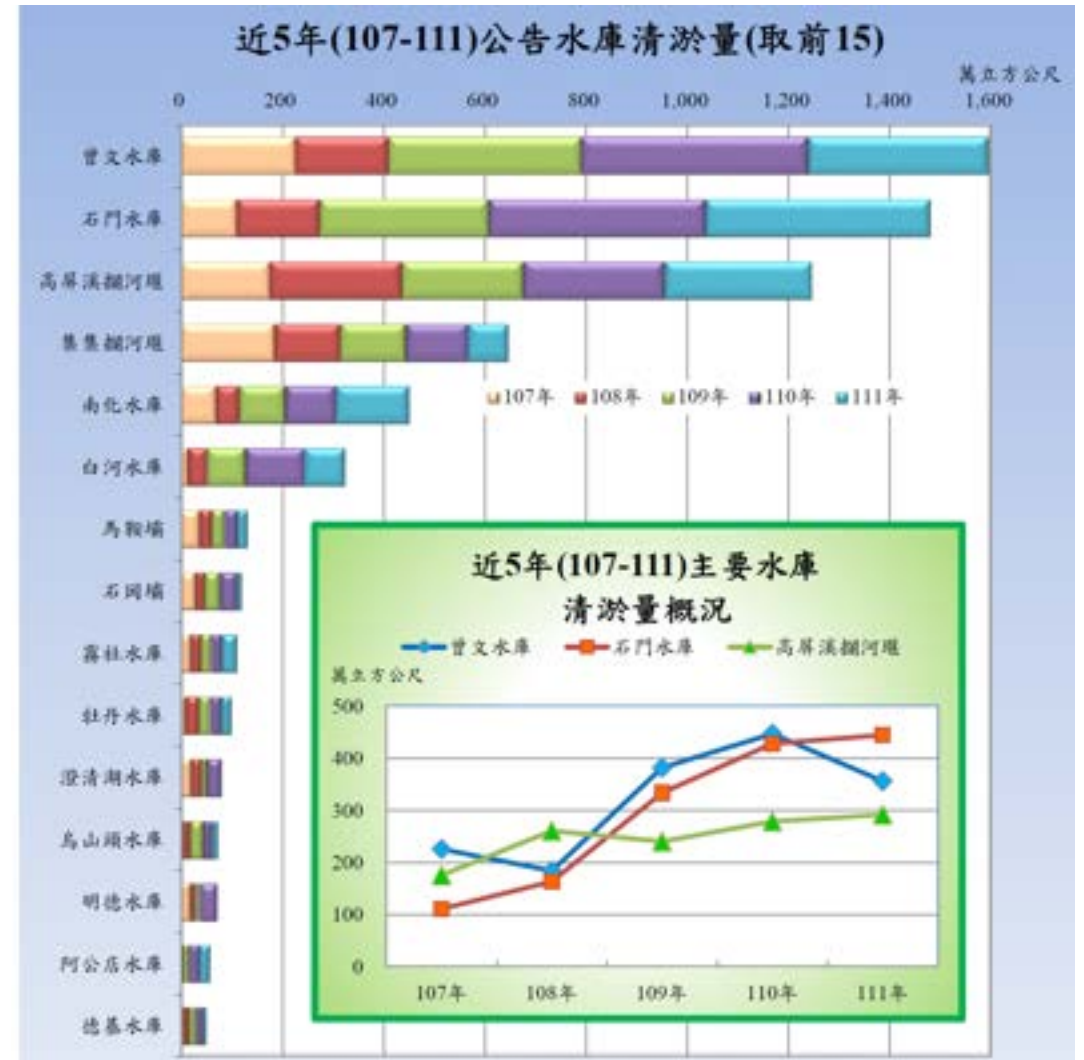
PE+PP	混貝殼粒子	減碳	
2.00E+00 (2)	7.6E-01 (0.76)	1.24E+00 (1.24)	62%

Sludge

- 減塑
- 減廢
- 迷人的重量感

Sludge

- 全台共計95座水庫，受到極端氣候的影響，需要進行水庫清理
- 其中僅34座在水庫清淤計畫範圍
107年清淤量972.78萬m³
111年清淤量1563.97萬m³(+60.77%)



Sludge



x



- 將水庫淤泥有效加值應用為環保替代新材料，減塑80%
- 迷人的重量感, 可替代合金類產品
- 安全無毒，無重金屬、塑化劑、高關注有害物質等，可食品接觸



X-Strawdinary™



- 減廢
- 護林
- 防潮防蟲

X-Strawdinary™

- 減廢 - 95%農廢桔桿製成
- 負碳 - 減少41.45kg碳排
- 護林安全 - 不砍樹、無甲醛或VOC等有毒物質
- 國際通用 - 符合ISPM15免煙燻



x



X-Strawdinary™



x



Changing our world

Supporting company & Organization:



signify

TSMT



量/體積 : 0.025 m³
減少碳排 : -41.45 kg
平均減碳 : 1.6588ton/m³

Eco Refill System



奢華 + 科技 + 有趣 + 環保

Eco Refill System

- 鼓勵消費者回店
- 一同響應分裝環保
- 智能分裝機台
- 操作不經手
- 乾淨衛生又吸眼球



x



Innerbottle®

- 實現 — 完全回收
- 零浪費
- 革命性的結構



Innerbottle®



x



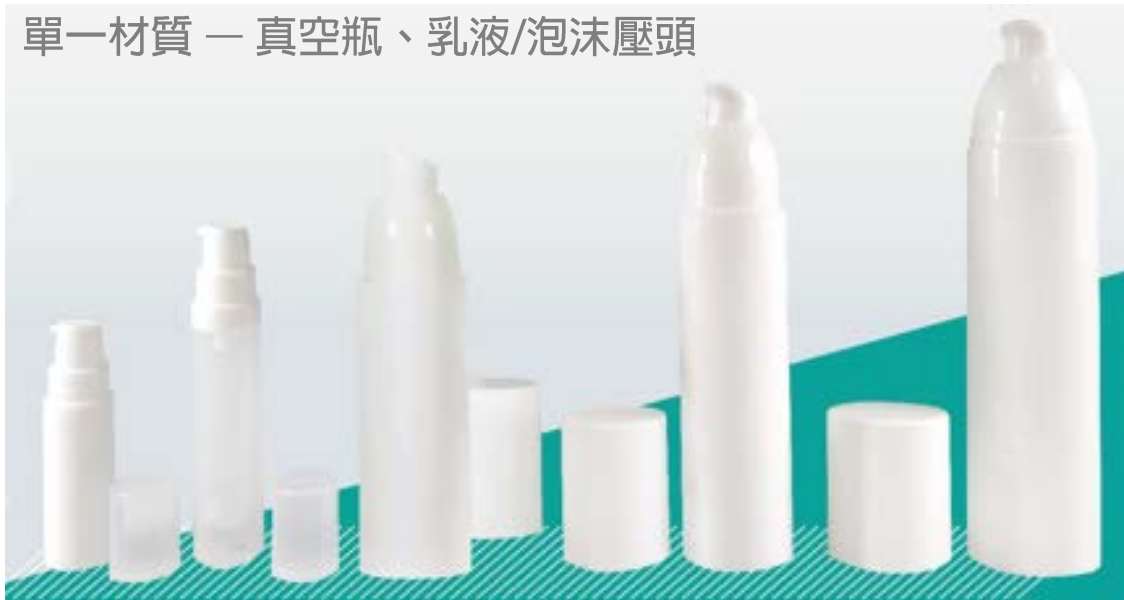
- 全球首創可拆分回收的真空瓶
- 外瓶不接觸內料, 回收更友善
- 可客製外瓶身, 提升品牌差異化
- 外瓶身就地取材, 減少運輸碳排



reddot award 2019
winner



單一材質 — 真空瓶、乳液/泡沫壓頭



PCR 再生塑膠瓶



PCR 再生塑膠瓶



x



單一材質-全塑滴管



可替換式- 無水美容棒專用包材

單一材質+可替換口紅殼





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國際美妝品牌的幕後推手

謝謝!

