



**WORLD GREEN  
ORGANISATION**

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**世界綠色組織**

(Registered Charitable Institution)  
(註冊慈善機構)

香港九龍荔枝角青山道 483 D - E號 4樓 綠閣  
Green House, 4th Floor,  
483 D - E, Castle Peak Road,  
Lai Chi Kok, Hong Kong

電話Tel:+852 2391 1693  
傳真Fax:+852 2371 4100  
info@thewgo.org  
www.thewgo.org

## **World Green Organisation is launching Hong Kong's first ever "White List" of baby products that has higher and safer standards**

Press photos: <https://goo.gl/jA6s4H>

(Hong Kong, November 20th) According to the USEPA, there were at least 87,000 chemicals that were being used worldwide for commercial purposes. However, only a small percentage of these chemicals' toxicity is fully known. This is mainly due to the lengthy timeframe and expensive process of testing the toxicity of individual chemicals. As a result, governments worldwide can only use the limited number of chemical toxicity research results to set safety regulations for commercial products.

To save guard the consumer interests, World Green Organisation (WGO) has developed a three-defence methodology with three renowned laboratories in order to achieve higher safety standards for baby products. Based on this methodology that meets current (1) chemical analysis and (2) international ingredient standards, as well as (3) biological testing, WGO is creating a 'White List' of baby food and personal care products for consumers. This is a 3-year project that will cover different product categories, beginning with baby lotion. New findings will be announced 4 times a year. The objective of this project is to educate consumers on most up-to-date product safety standards and incentivise manufacturers, suppliers, and retailers to pursue higher standards. Please refer to Appendix I for part 1 of the 'White List'.

The three-defence methodology are used as follows. First, samples of baby lotion were collected from 7 major popular retailers in Hong Kong based on WGO's public survey to Hong Kong parents on baby products. Collected samples go through chemical analysis which measures the quantity of specific chemicals (for example, heavy metals, methanol, and free formaldehyde) within each product. The products that pass this test then go through an international ingredient check which uses government regulations from the European Union, United States, China, and Japan. Products that meet all of those standards are then tested using an effect-based biological method. The biological testing measures the level of Estrogen Equivalent (EEQ) concentration in each product. Measuring EEQ is important as increased levels of EEQ can affect the human's endocrine system and disrupt key functions of hormones. The biological tests help quantify the amount of estrogen in each product. In order to pass this test, the levels cannot surpass the acceptable levels according to the World Health Organisation. Only products that pass this methodology will go on the White List. For more information about the methodology, please refer to Appendix II.

**Survey results show that over 60% of respondents do not know what ingredients are in their baby products.**

WGO conducted questionnaires with over 200 Hong Kong parents with children under the age of 3 to identify knowledge and awareness gaps. Over 80% of respondents indicated that they worry about the safety of the baby personal care products that they purchase. However, only 22% of respondents always read the ingredients label. 61% were not sure what harmful ingredients could be found and 53% did not know the consequences of estrogenic chemicals (estrogenic chemicals increase levels of EEQ in the body) in baby personal care products. This shows that although most parents are concerned about product safety, they are not aware of the potential health risks and do not know what to be wary of.

WGO also asked 37 Hong Kong parents with children under the age of 3 to identify the impact of this 'White List'. Almost 100% of respondents stated that they would refer to the list when purchasing new baby personal care products. 76% of respondents answered that they will not buy products that are not on the 'White List'. This small sample confirms the importance of this study and the 'White List'.

According to Dr. Yu, Chief Executive Officer of WGO, "Our survey results indicated that Hong Kong parents' awareness of product safety standards are insufficient. The White List aims to empower them to make more informed decisions. We understand that, in general, all existing baby products comply with government safety regulations. However, this higher standard will incentivise manufactures to only produce products that will not harm the human body and pollute the environment".

**About Us**

The World Green Organisation (WGO) is an independent non-governmental organisation concerned with environmental conservation and environmentally related livelihood and economic affairs by proposing an integrated, three-pronged solution that combines social, environmental, and economic aspects, leading to an environmental revolution. Through science-based policy research and community projects, the WGO aims to enhance the quality of the environment, promote a greener economy, and improve people's livelihoods. In particular, it will focus on the social concerns of underprivileged groups and on the creation of a green economy to help realise its vision of sustainable development. For more information, please visit <http://www.thewgo.org/>

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**For inquiries:**

CEO	<b>Dr. William Yu</b>	Assistant Marketing Communication Manager	Ms. Noel Wong
Telephone	: 2391-1693/ 9041 3527	Telephone	: 2991-9126/ 9229 4626
Email	: <a href="mailto:williamyu@thewgo.org">williamyu@thewgo.org</a>	Email	: <a href="mailto:noelwong@thewgo.org">noelwong@thewgo.org</a>

Appendix I: Part 1 of 'White List': Baby Lotion

Product		
HKD 50 – 99		
	<p>Cow Soap Baby Milk Lotion</p>	
HKD 100 – 150		
	<p>Chicco Baby Moments Body Lotion</p>	
	<p>Dr Brown's Baby Lotion</p>	
	<p>Cetaphil Baby Daily Lotion with Shea Butter</p>	
	<p>Baby's Herbal Garden Sweet Violet Baby Lotion</p>	
	<p>Suanvinex Massage Body Lotion</p>	
	<p>Marine Elements Dry Skin Management System, Body Lotion</p>	
	<p>Avado Organics Baby Naturals Moisturiser</p>	
	<p>Atopico Water Lotion</p>	

HKD 151 and above

	<p>Atorrege ATORREGE AD+ Body milk</p>		<p>Anumi Natural Soothe Me Tender Baby Lotion</p>		<p>Atopalm Skin Barrier Function</p>
	<p>Love Boo Kind &amp; Creamy Baby Lotion,</p>		<p>Bubba Blue Australia Baby Moisturiser</p>		<p>Baby Bee Baby Bee Nourishing Lotion</p>
	<p>California Baby Super sensitive, Everyday Lotion</p>		<p>CNP Laboratory Face &amp; Body Moisturizer</p>		<p>Palmer's Cocoa Butter Formula with Vitamin E, Baby Butter</p>
	<p>Mustela Stelaprotect Body milk</p>		<p>Gaia Natural Baby Pure, Nature, Organic, Skin Soothing Lotion</p>		<p>Eco Kid, Certified Organics for Kids, Potion Lotion</p>
	<p>Mambino Baby's BestDaily Essential Lotion</p>		<p>Greenicare Organic Baby Moisturizing Lotion</p>		<p>SWISSNATUR LICH Baby Dreamy Lotion</p>
	<p>Derma+care Nurturing Lotion for Baby</p>		<p>First Light Organics for Baby</p>		

## Appendix II: Methodology

Criteria: In order for products to be on the 'White List', they must pass all of the following criteria:

- 1) Biological: Products must pass Estrogenic Endocrine Disrupting Chemical (EDC) tests which analyse the way chemicals interact and affect the human body. (As mentioned before, endocrine disruptors are chemicals that negatively affect hormones in the human body and cause fatal health problems). In order to pass, products cannot exceed the amount of Estrogen Equivalent Concentration (EEQ) that is allowed. According to "Evaluations of the joint FAO/WHO expert committee on food additives (JECFA)" (2000, latest evaluation in 1999) on Estradiol-17beta, published by Food and Agriculture Organisation of the United Nations (FAO) and World Health Organisation (WHO), the acceptable daily intake (ADI) of Estradiol-17beta is 0-50 ng/kg bw<sup>i</sup>.
- 2) Chemical: Products must pass all chemical tests required for product safety. Heavy metals, methanol, and free formaldehyde levels must not pass regulations from the Safety and Technical Standards for Cosmetics, 2015 edition, China Food and Drug Administration (i) Heavy Metal Contamination - Part 1 General, Table 2 (3.4) Restricted Limit of Harmful Elements in Cosmetic Products. Baby skincare products cannot exceed the following:
  - Heavy metal
    - a. Arsenic (As)  $\leq 2\text{mg/kg(ppm)}$
    - b. Lead (Pb)  $\leq 10\text{mg/kg(ppm)}$
    - c. Mercury (Hg)  $\leq 1\text{mg/kg(ppm)}$
    - d. Cadmium (Cd)  $\leq 5\text{mg/kg(ppm)}$
  - Methanol  $\leq 2000\text{mg/kg(ppm)}$
  - Free formaldehyde  $\leq 2000\text{mg/kg(ppm)}$
- 3) Ingredient Checking: Products must not contain any chemicals that are associated with health complications, eco-toxicity, or contamination by scientific safety evaluations, or are banned by the following governmental agencies and authoritative bodies.
  - US: USFDA's 'Summary of colour additives for use in the United States in foods, drugs, cosmetics, and medical devices' and 'Prohibited & Restricted Ingredients'
  - EU: European Commission No. 1223/2009
  - China: China FDA's 'Safety and Technical Standard for Cosmetics' (2015)
  - Japan: Japan's 'Standards for Cosmetics' (2000)

These criteria are measured by:

- 1) EDC activity is evaluated by quantification of Estrogen Equivalent (EEQ) concentration in the product. This test is provided by Vitargent using their patented transgenic medaka eleutheroembryos assay. Sample extracts are obtained upon pre-treatment protocol and then exposed to estrogenic EDC-

sensitive medaka eleutheroembryos for 24 hours. When estrogenic EDCs are detected, livers of the fish eleutheroembryos give off a green fluorescence light. The intensity of the light will be quantified and compared to the 17beta-estradiol dose response curve to calculate EEQ.

- 2) Chemical testing used several different testing methods. To test for heavy metals, the microwave digestion method (which increases both the speed of thermal decomposition and solubility of heavy metals in solution so that the heavy metals can be quantified) and Inductively Coupled Argon Plasma Mass Spectrometry (which detects metals and non-metal and quantifies them by ionising the sample and separating the ions) was used. Methanol analysis uses gas chromatography – flame ionisation detector (FC-FID) which measures the concentration of methanol in a gas stream. To test for free formaldehyde, an ultraviolet spectrophotometry (UV-VIS) which measures the attenuation of a beam of light after it passes through a sample due to absorption of a specific molecule, in this case – free formaldehyde was used.
- 3) Ingredient check uses the international guidelines and cross reference ingredients in the baby personal care products to make sure that they do not contain any banned ingredients.

**Partners and Collaborators:** Below are the official partner laboratories that are helping WGO conduct the biological, chemical, and ingredient checking tests.

**WGO (project lead):** The World Green Organisation (WGO) is an independent non-governmental organisation concerned with environmental conservation and environmentally related livelihood and economic affairs by proposing an integrated, three-pronged solution that combines social, environmental, and economic aspects, leading to an environmental revolution. Through science-based policy research and community projects, the WGO aims to enhance the quality of the environment, promote a greener economy, and improve people's livelihoods. In particular, it focuses on the social concerns of underprivileged groups and on the creation of a green economy, to help realise its vision of sustainable development.

**VITARGENT (biological testing provider):** Vitargent (International) Biotechnology Limited, established in October 2010, is an innovative bio-testing service provider with international award-winning transgenic medaka eleutheroembryo based Estrogen Equivalent Test as an alternative to animal testing. Vitargent's vision is to combine scientific expertise with social responsibility to improve consumer product safety and protect environment – “Smarter Testing, Safer Choices, Better World!” The company has served various internationally renowned cosmetics groups, food conglomerates, testing labs, universities and government bodies worldwide.

**ALS HONG KONG (chemical testing provider):** Australian Laboratory Services (ALS) is the world's largest and most diversified analytical testing service provider. ALS delivers projects and services through four main operating divisions: Minerals (Geochemistry, Metallurgy, Mine Site and inspection), Life Sciences (Environmental,

Food and Pharmaceutical, Animal Health and Electronics), Energy (Coal, Oil and Gas) and Industrial (Asset Care and Tribology). ALS is the global benchmark for quality and integrity, and we have built our reputation on quality, client service, innovation, and technical excellence. ALS Hong Kong's commitment to systemisation and standardisation allows our people to focus on what is important.

TÜV Rheinland (chemical testing provider): The TÜV Rheinland is a leading provider of technical services worldwide. Since our foundation in 1872, we have been providing safe and sustainable solutions for the challenges arising from the interaction between man, the environment and technology. As an independent, neutral and professional organisation, we are committed to working towards a future that can fulfil the needs of both mankind and the environment in the long-term.

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<sup>i</sup> <http://apps.who.int/food-additives-contaminants-jecfa-database/chemical.aspx?chemID=1835>