



WORLD GREEN
ORGANISATION

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世界綠色組織

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Press Release

For immediate Release

World Green Organisation 世界綠色組織

Survey on Phytotoxicity in Hong Kong

cum

New Baby Product 'White List': Baby Oil Press Conference

For Press Photos: <https://goo.gl/hMV6t4>

(Hong Kong • June 20th) World Green Organisation (WGO) is announcing its latest issue of baby product 'White List' for baby oil. After going through WGO's rigorous 'three-defence methodology', a total of 27 baby oil products were approved to be on the 'White List. During the research process, traces of phytotoxic substances can be found from refining natural plant mineral oils were found. These carcinogenic substances in baby oils are dangerous to humans, particularly pregnant women and babies and may cause allergies. In an earlier survey, WGO found that nearly 60% of respondents were not aware of possible phytotoxic substances that may be found in baby products. Please refer to the 'White List' to facilitate purchase decision.

Although baby oil is mainly used for moisturising baby skin, many people use it as a lubricant, massage oil, makeup remover, hair oil, wood floor polish, or detergent. However, there has been a lot of debate regarding the use of baby oil as they are typically made of mineral oil, a petroleum-based ingredient. Mineral oil can coat the skin and inhibits the skin's ability to breathe and release toxins. This is why many people have turned away from baby oils made with mineral oils and turn to natural plant-based baby oils. However, plant-based baby oils may also contain toxic substances that are harmful to the human body. WGO aims to inform the public on the potential risks of phytotoxic substances.

60% of respondents were not aware of potential phytotoxic substances that may be in baby products
Last month, WGO conducted 151 questionnaires with adults and parents over the age of 18. Approximately 60% of adults use baby oil on their children. 30% of respondents use baby oil on themselves. When they were asked whether they are aware of the potential risks and toxicity of natural oils, only 40% were aware that natural refined oil may contain toxic substances. About 60% were not fully aware of what phytotoxins were; including 40% of respondents that did not know that natural plant-based products can be toxic and 17% of respondents that do not think it is toxic.

The survey also found that when asked about the negative impact of baby oil (can pick more than one answer), 80% believed that the use of baby oil can cause the skin to be extra sensitive and 70% believed that it can clog pores. 60% of respondents were worried that the use of baby oil can cause the skin to stop releasing harmful substances. 50% believed that baby oil may contain excessive estrogen and long term usage can cause cancer or other detrimental health problems.

Infant and young children's skin is thinner and more susceptible to harm

The skin is the body's largest organ. Since the protectant layer of baby and infant skin is not fully developed and is thinner, they tend to absorb more bacteria or toxic substances.

Dr William Yu, CEO of WGO stated “Infant skin is 30% thinner than adult skin which means that it absorbs water and any liquid on the skin much more quickly. Even when products are only applied on the skin, the ingredients can probably be ingested into the blood which can cause allergies and different health hazards. This is why choosing the right product for babies are so important.”

Latest baby product ‘White List’ – Baby oil

This is why WGO commissioned three internationally accredited laboratories (including Vitargent Biotechnology Limited, ALS Hong Kong, and TÜ V Rheinland) to test product samples from seven major retailers¹. Other reports regarding product safety usually only uses ingredient screening or chemical testing to test their products. WGO’s ‘White List’ is unique in that all products must go through a ‘three defence methodology’ before being on the ‘White List’. This methodology includes biological testing, chemical analysis, and ingredient checking (please see appendix 1 for more details on the methodology) to ensure consumer safety. This three-year project aims to educate consumers on the most up-to-date product safety standards and incentivise manufacturers, suppliers, and retailers to pursue higher environmental and health standards (please see attached for the full white list).

Phytotoxins can cause skin allergies

Many baby products contain natural organic oils such as safflower (*Carthamus tinctorius*) or chamomile (*Chamomila*). If these oils are not properly filtered and distilled, large doses of these oils can cause health risks such as allergies. For example, since safflower is an emmenagogue and helps with regulating blood flow, it is inadvisable for pregnant women to use as it can cause spontaneous abortion.

Safflower can affect reproductive organs and even cause abortions

Refined safflower is often used in baby oil. The National Center for Biotechnology Information evaluated the effects of safflower on mice and found that safflower can change testes structure and lead to spermatogenesis failure. Even though there is not clear evidence of the exact effect of safflower in human reproductive activity, it is still important to be precautionous.

Safflower does not only affects males. There are also hazardous side effects for women. Safflower has been used in traditional Chinese medicine as an abortion drug. If used in large doses for a long time, safflower oil can cause dizziness, fever, rashes, or diarrhoea.

Chamomile can also cause allergies

Chamomile is often used to soothe pain. However, it can also pose as a health risk and cause allergies. There was a report this April in Hong Kong regarding a woman who bought floral water made from distilled chamomile. After using it, her hand and face turned red and caused a burning sensation. When she notified the manufacturers, they only told her to dilute the product when using it. She had to take eight steroid injections and was hospitalised for three whole days before recovering.

Although it is not possible to determine the exact cause of the above scenario, there are several possible reasons. Chamomile contain coumarin compounds. When coumarin compounds such as psoralen is applied to the skin, significant photosensitivity results. The skin becomes quite sensitive to light and can cause burns and inflammation. The large molecular structure of coumarin means that a longer distillation time is needed. If the oil is distilled too quickly and not carefully, users can face chronic skin conditions such as vitiligo or psoriasis.

¹ The seven retailers include City’ Super, Eugene, Mannings Baby, ParknShop, Watsons Baby, Wellcome, and Yata.

Products containing the aforementioned ingredients do not guarantee that a product is toxic. Instead, WGO would urge manufacturers to be careful and mindful of the distillation and production process so as to eliminate the toxicity of the plants and avoid harm to consumers.

Natural herbal fragrances can also be allergens

Baby oil is most commonly not only made with plant-based mineral oils but also perfumes. In 2011, the International Fragrance Association (IFRA) published a list of 2,947 materials that have been reported as used in fragrance compounds. Some of these perfumes not only causes skin allergies such as dermatitis or urticarial, but may also cause the trachea to be sensitive which may result in asthma or migraines. In the United States alone, a study found that up to 75% (about 9 million people) of asthma patients' condition was induced by perfume.

Many product do not explicitly state perfume ingredients. Most of the time, it only says 'perfume or fragrance' on the ingredients list. The most common perfumes used in baby oil are limonene, linalool, benzyl salicylate, and citronellol linalool. The EU regulations only requires companies to include the four aforementioned perfumes in the ingredient list if they are at a concentration of more than 0.001%. The 2010 'Select' magazine by the Hong Kong Consumer Council stated that linalool and citronella can lead to skin allergies and skin conditions.

Limonene and linalool are often used as fragrances for household cleaners. Last year, Britain's 'Daily Mail' reported that high concentrations of limonene in the air can become formaldehyde which is a carcinogen that burns the eyes, irritates the skin, and causes coughs and nausea. If a large dosage is inhaled or absorbed in the body, it can lead to nose or throat cancers. The process in which limonene is converted into formaldehyde is difficult to measure and keep track. This means that there is currently no relevant testing standard to avoid this situation. Users can only be careful and take this into consideration when purchasing products with these fragrances.

Linalool is a volatile oil and can be found in plant roots, stems, leaves, flowers, and fruits. It is also used as a substitute for camphor in many products for children with G6PD deficiency (Glucose-6-phosphate dehydrogenase deficiency, also known as favism). However, research has found that large dosages of this can seriously affect the respiratory system and lead to mental consequences such as depression. Of course, circumstances depend on individual's skin type and condition.

According to the ingredient list, out of the 27 baby oils on the 'White List', four products contained chamomile. One product had safflower, one product had both chamomile and safflower, and ten products contained 'perfume/fragrance' as an ingredient. _ of the 27 products were made from mineral oils. The rest were made using natural, plant-based oils.

About Us

The World Green Organisation (WGO) is an independent non-governmental organisation concerned with environmental conservation and environmentally related livelihood and economic affairs. 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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