

3RD GLOBAL OILS & FATS BUSINESS FORUM 2003



GREEN PALMBASED BABY PRODUCTS



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3RD GLOBAL OILS & FATS BUSINESS FORUM 2003

**GREEN PALMBASED
BABY PRODUCTS**



INTRODUCTION



In recent years the personal care industry has witnessed a rapid growth in demand for natural or naturally derived products and ingredients due to the awareness of environmental issues.



The “NATURAL” concept is essentially the use of ingredients taken only from renewable resources.



Consumers perception that natural ingredients are safer.



The “Totally Natural Concept” in formulation will be able to deliver therapeutic benefits, and applying this concept to baby products is a natural way of protecting the skin of the baby.

EMERGING MARKET FOR GREEN BABY CARE PRODUCTS

 **More than 10 Millions New Customers a year!**

 **Where is this Gold Mine?**

 **The Pacific Rim?**

 **The New European community?**

 **The Delivery Room!!**

EMERGING MARKET FOR GREEN BABY CARE PRODUCTS



On the first day of the new millennium, Malaysia alone recorded 1,290 births. What about the rest of the world



With so many bottoms to bathe, powder and protect, sales of baby and child care products should multiply faster than adults toiletry.



Generations of new parents are treating their children to imported herbal lotions, aromatherapy diaper cream, newborn massage oils and other high-end baby toiletries. They are no longer content with a US\$1.99 bottle of no-tears shampoo & off-the-shelf diaper balm without the ingredients listed.

EMERGING MARKET FOR GREEN BABY CARE PRODUCTS



The Internet is here and now it is easier for parents to shop anywhere around the world with the click of a mouse.



High-end baby products are just a tiny niche in the US\$3.5 billion kiddie grooming market.



The buying pattern represent a generation shift. Mothers in their 20s and 30s are more “cosmetics-prone” than their predecessors. They are more incline to products, including baby massage oils and aromatherapy tinctures, that purport to deliver outer, as well as inner, beauty.

EMERGING MARKET FOR GREEN BABY CARE PRODUCTS



In the United States, the growing interest in “natural” products is driving sales.



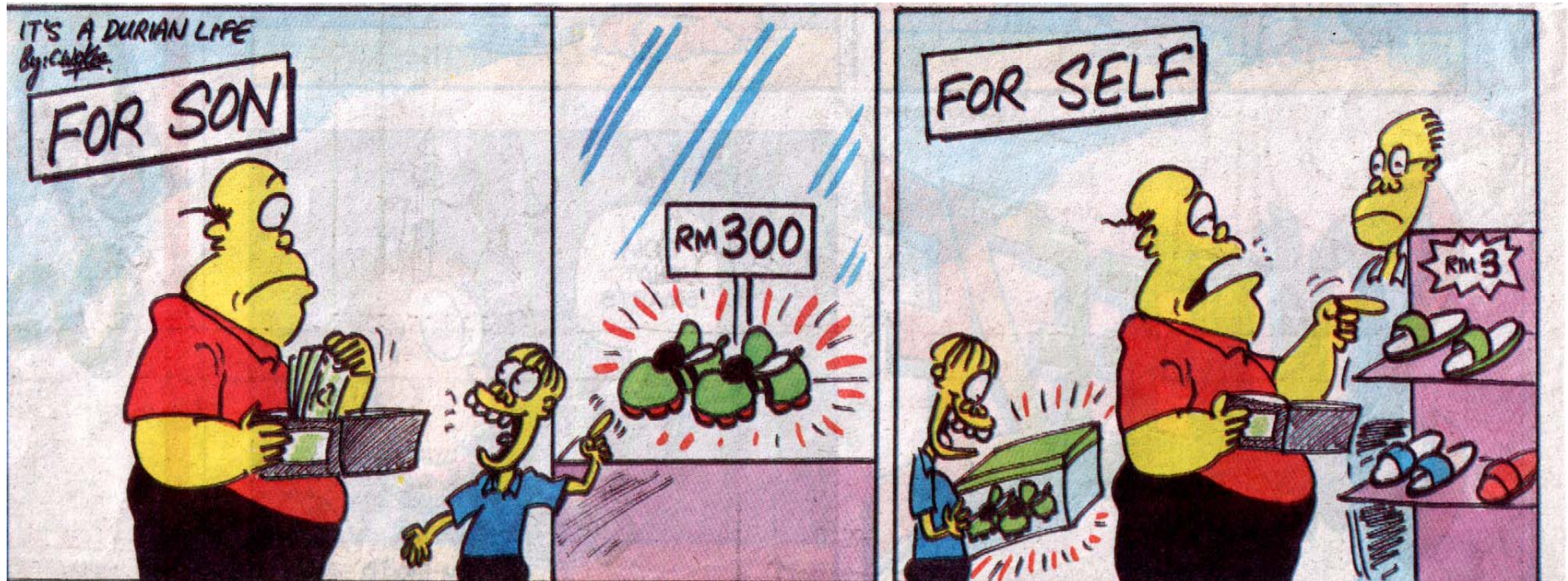
Responding to the growing demand, specialty retailer are devoting more shelf space to up-market baby products.







Our children are worth it.”

EMERGING MARKET FOR GREEN BABY CARE PRODUCTS

 Asian parents are spending more on their Children.



GREEN CONCEPT BEGINS AT BASE INGREDIENTS

-  **How to Develop Greener Baby Care Products that Consumers will Buy?**
-  **Traditionally, most of the active base ingredients used in cosmetics & toiletries are manufactured from synthetic or petrochemical origin.**
-  **Recently, preference has turned to products free from petrochemicals and animal extracts.**
-  **Is this achievable?**

GREEN CONCEPT BEGINS AT BASE INGREDIENTS



Petrochemicals?



Benzene ring structure from petroleum is very stable which will not allow petrochemical based products to be readily biodegradable.



Tallow Oleochemicals (Animal) ?



Animal Source oleo can be contaminated with disease like prions from BSE (madcow) or Hand, Mouth and Foot (HMF) disease.





Coconut Oleochemicals?



The possibility of contamination during the open drying process is present. This caused the germination of the mould growth bacteria called Aspergillus and Pichia that release Aflatoxins which is Carcinogenic.

GREEN CONCEPT BEGINS AT BASE INGREDIENTS

Palmbased Oleochemicals?

-  Extraction of palm oil and palm kernel oil is a continuous process right from the harvested oil palm fruits to the finish products. This process eliminate contamination and make it safe for consumption.
-  Palmbased oleochemicals is of vegetable origin, thus it is renewable & is non-extinct. Besides, it is koser and halal and does not offend any religious gorups.

Palmbased Oleochemical Industry in Malaysia came to light more than 20 years ago.

-  MPOB (PORIM & AOTC) has world-class facilities for R&D on Palmbased Products and all the findings were well-documented.

DIAGRAM 1











GREEN PALMBASED OLEOCHEMICALS V PETROCHEMICALS	
PALMBASED OLEOCHEMICALS	PETROCHEMICALS
 Renewable, replenishable.	 Non-renewable, exhaustible.
 Biodegradable, environmentally friendly.	 Not readily biodegradable.
 Free from Polycyclic Aromatic Hydrocarbons.	 PAH may be found as contaminants.
 Processes require less energy cost & capital.	 Processes require high energy & capital.
 Possible to modify certain characteristics of palm for specific applications through biotechnology.	 Not possible. Petroleum deposits had been formed in the earth millions of years ago.

DIAGRAM 2

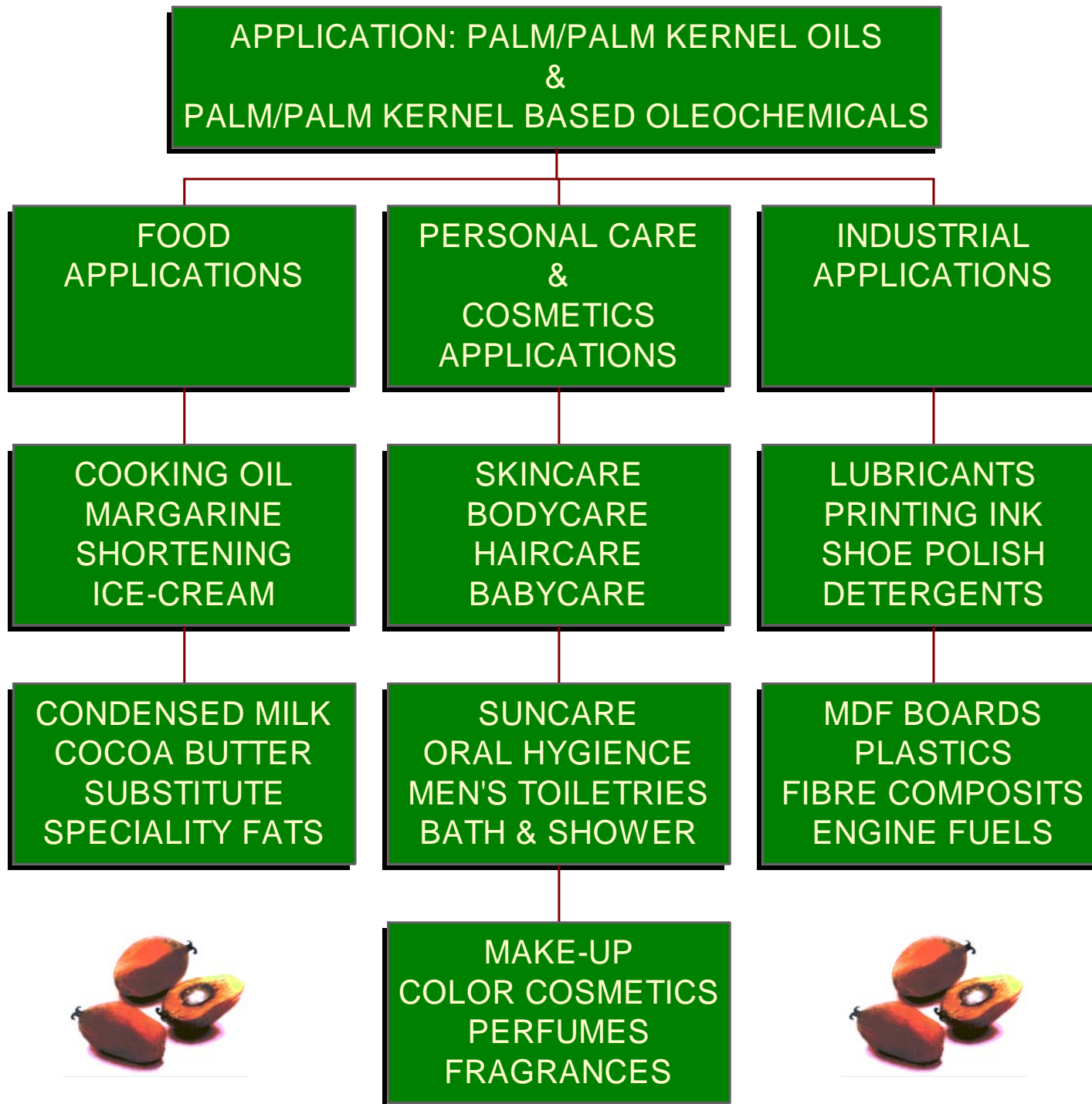
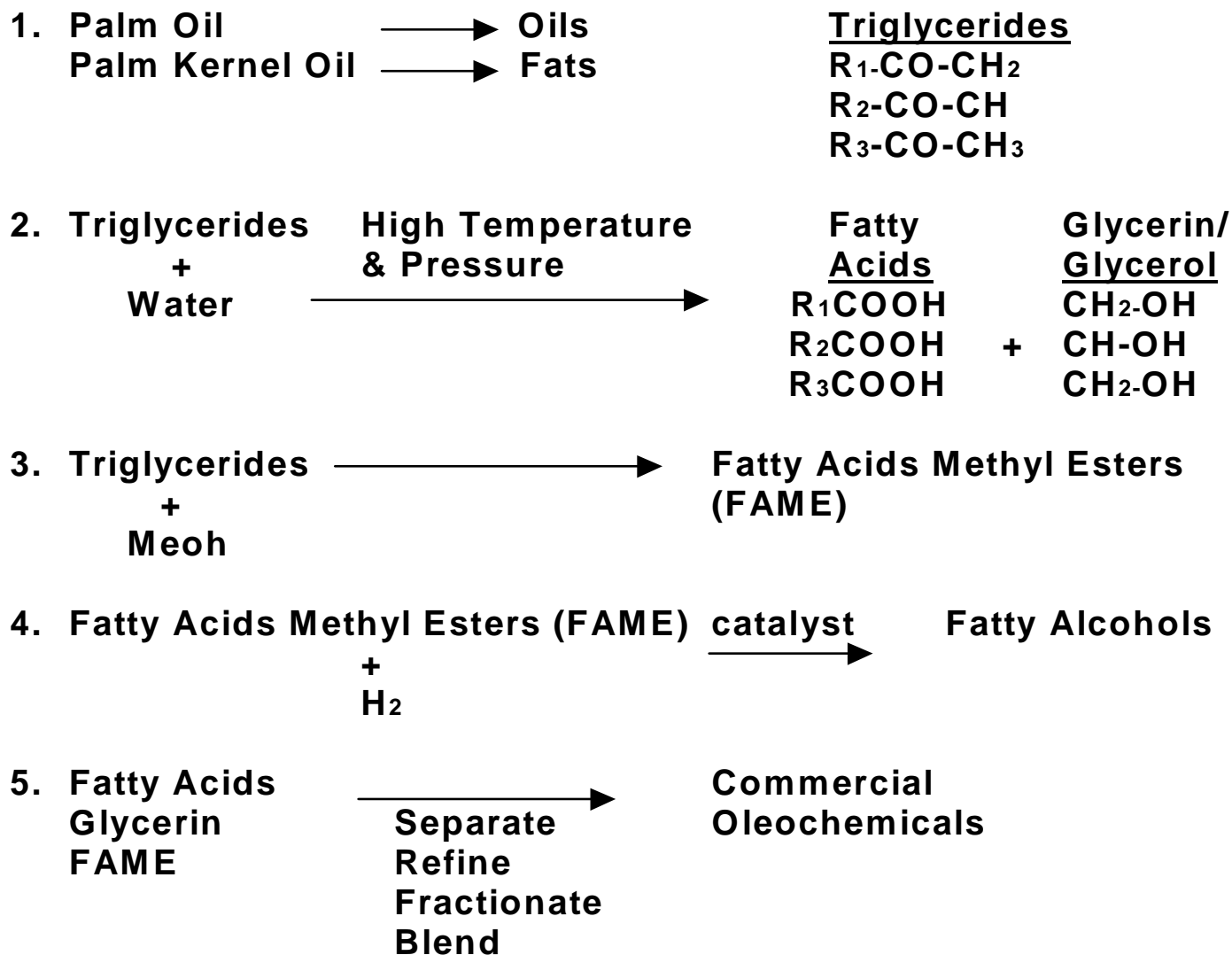




DIAGRAM 3 : BASIC PALMBASED OLEOCHEMICAL MATERIALS



GREEN CONCEPT BEGINS AT BASE INGREDIENTS



The main first level oleochemical products are:



Glycerine,



Fatty Acids,



Fatty Acid Methyl Esters, &



Fatty Alcohols.



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DIAGRAM 4 : USES OF GLYCERINE/GLYCEROL (SWEET WATER)

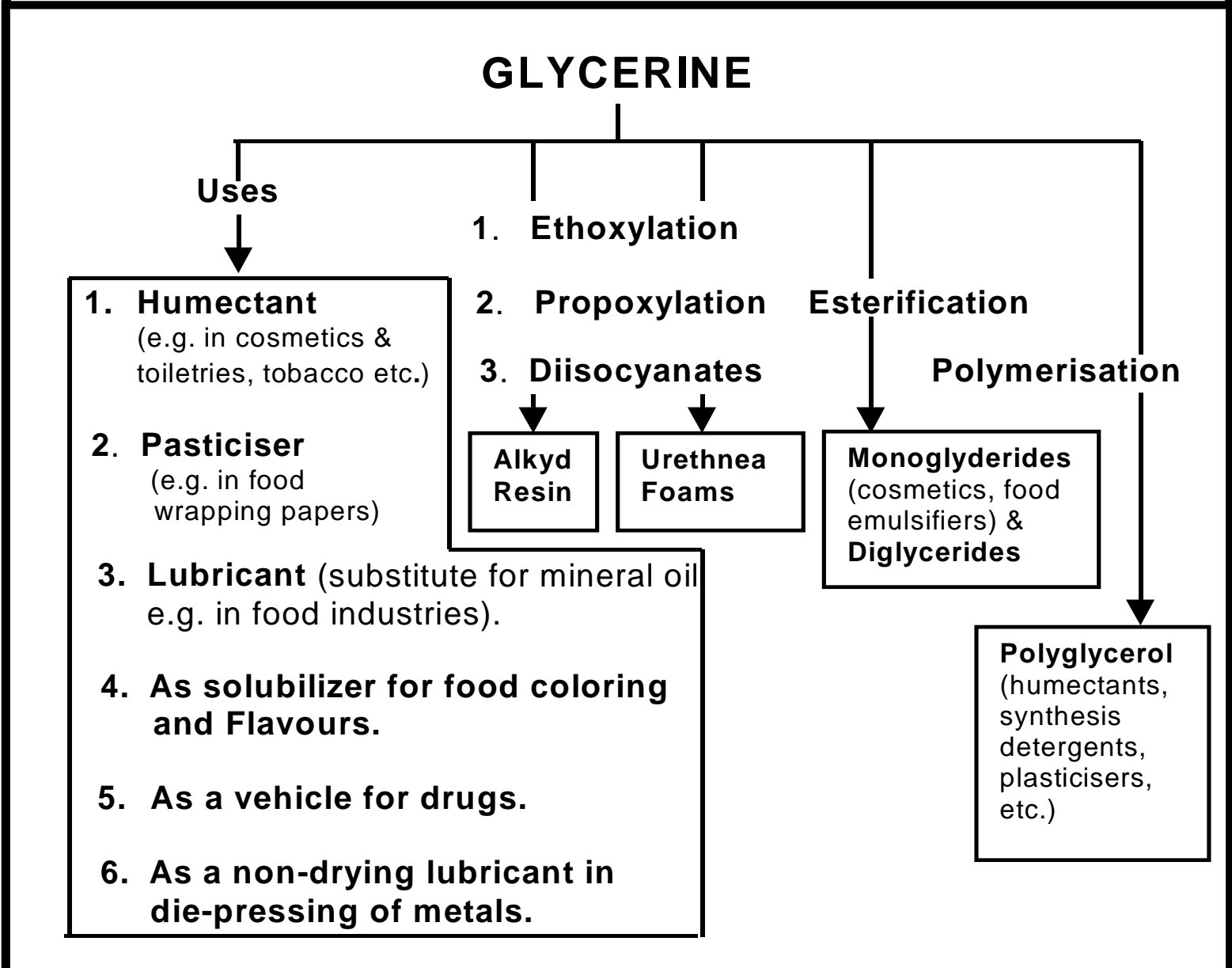




DIAGRAM 5:

FATTY ACIDS

Neutralization

Ethoxylation

Esterification

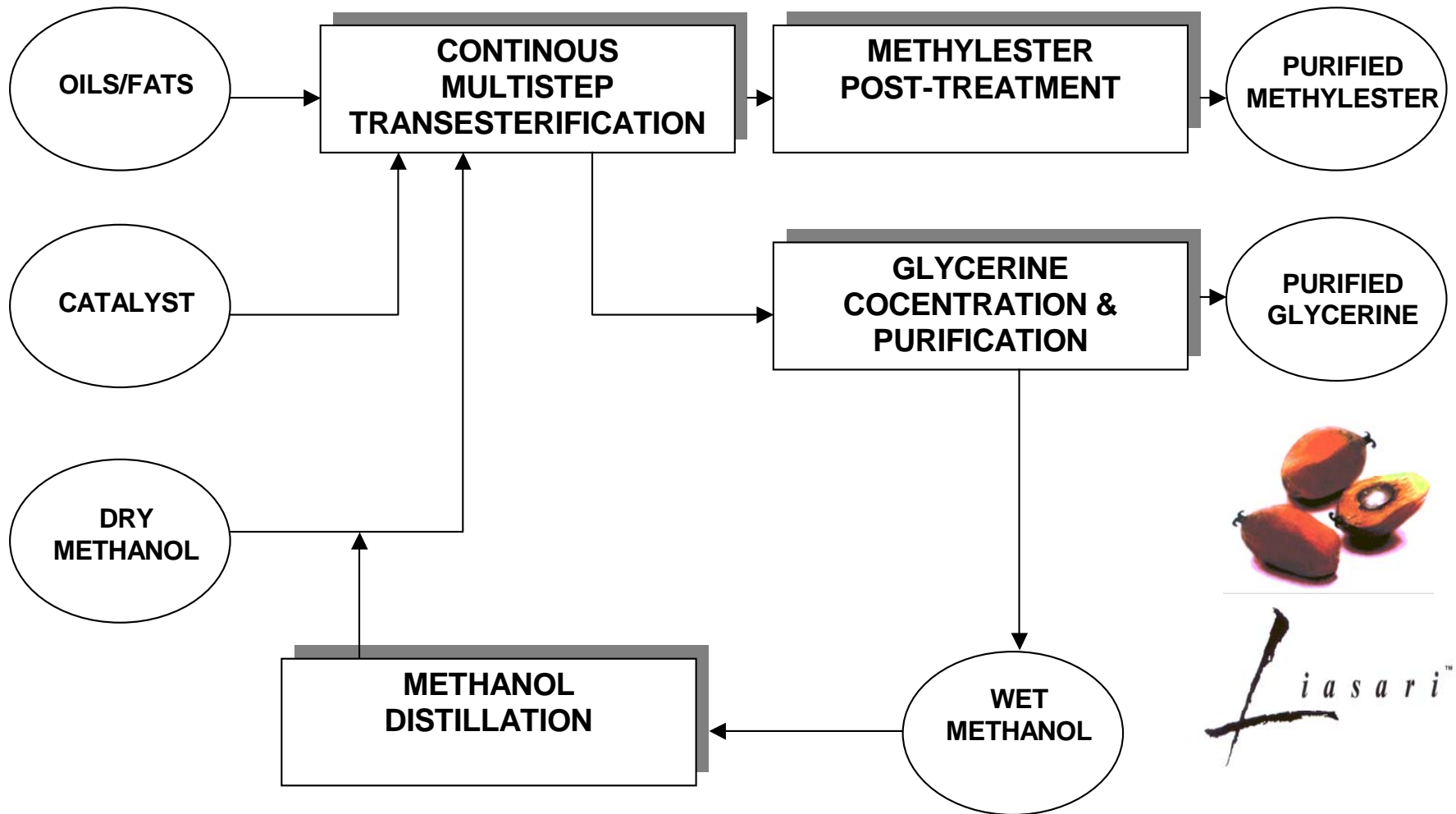
Fatty acid ethoxylates(extremely mild detergents and emulsifiers - used in food and cosmetics)

1. **Monoglycerides**
(natural preservative)
2. **Diglycerides** (Cosmetics)
3. **Fatty acid esters**
(Cosmetics Oils)

1. **Toilet soaps** (sodium soaps)
2. **Liquid soaps** (potassium soap)
3. **Calcium soaps** (for animal feed as a source of calcium and fat)
4. **Lithium soap** (component of heavy duty lubricants)
5. **Other metallic soaps** – for mould release agents, lubricants

DIAGRAM 6

CONTINUOUS METHYLESTER PRODUCTION

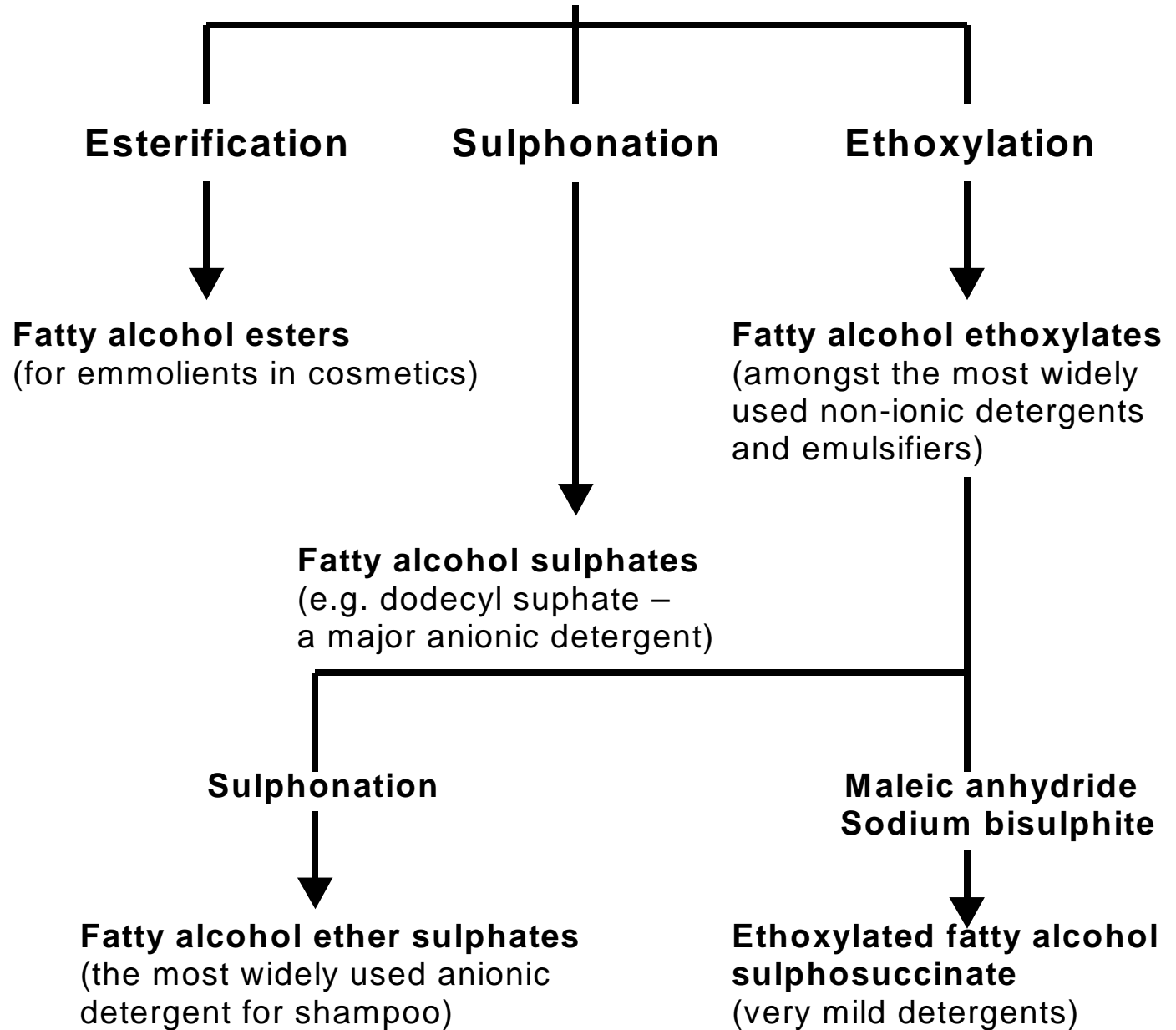














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DIAGRAM 7











FATTY ALCOHOLS



FUNCTIONS OF PALM/PALM KERNEL BASED OLEOCHEMICALS AS GREEN COSMETICS INGREDIENTS

PRODUCT FUNCTION	APPLICATION BENEFITS
 COSMETIC EMOLLIENT	 Makes the skin soft & supple through lubricating the stratum corneum.
 MOISTURIZER/HUMECTANT	 Provides moisturizing action to the skin.
 SURFACTANT	 Has cleansing property, facilitates removal of oil/dirt particles from the skin or hair.
 EMULSIFIER	 Prevents separation of water and oil phases in skincare emulsion products.
 MINERAL OIL REPLACER	 Palm oil derivatives - vegetable oleochemicals is biodegradable and can replace mineral oil which non-biodegradable and derived from petroleum.

FUNCTIONS OF PALM/PALM KERNEL BASED OLEOCHEMICALS AS GREEN COSMETICS INGREDIENTS

PRODUCT FUNCTION	APPLICATION BENEFITS
 VISCOSITY MODIFIER	 Influences the viscosity of the finished product (e.g. cosmetics lotion).
 SOLVENT CARRIER	 Vitamins can be incorporated using suitable solvents for certain benefits.
 CONDITIONING AGENT	 Conditions the hair in a shampoo.
 REFATTING AGENT	 Restores the natural oil on our body, which has been removed through body shampoo/shower gel.
 ANTI-OXIDANTS (Vitamin A and Vitamin Es)	 Functions as anti-oxidants & sunscreen activities & also as natural preservatives.


GREEN CONCEPT BEGINS WITH THE BASE INGREDIENTS




Palmbased ingredients are able to replace most of the necessary cosmetic ingredients, thus, opening new horizon for the formulation of new Green & Safe baby products.



Making a jar of baby skin lotion is rather like baking.



The base ingredients are the building blocks of a Green formulation.



Just as flour, eggs and water can be combined in various ways to make many different cakes, so it is with the Palmbased Core Ingredients such as surfactant, glycerin, emollients and water that can be made into many different types of baby care products.

THE BABY SKIN



They are the following:



Continual fission of the basal layer cells and pushing of the new-formed cell into the upper epidermal layers;





Contrary keratinization of the flat cell fragments, that reach the upper horn layer in 26-28 days after the cell fission;



Peeling of the keratoid laminae of the upper horn skin layer.

THE BABY SKIN

 The baby's cell systems and the fragments of all skin layers are the object of cosmetologic effects.

 This forming is connected with the simultaneous realization of three processes, which are usually in the state of dynamic balance.

 Example, the Nutrient Value of Palmbased Baby Lotion.

 Able to deliver Mild Cosmetologic effects.

PROCESS OF INFLAMMATION

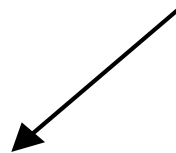


Different Stress Factors:

- 🍌 Air pollution
- 🍌 UV irradiation
- 🍌 Injuries
- 🍌 Sweats/Urines
- 🍌 Micro-organisms
- 🍌 Chemicals in everyday products



🍌 Cell Damage Creating....



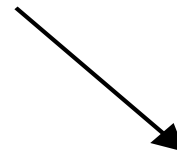
REDNESS



PAIN











IRRITATION











BLISTERS

FUNCTION OF PALMBASED INGREDIENTS IN PURE-PALM BABY LOTION

 Palmbased Glycerine (C3)	-	Humectant
 Caprylic/ Capric Triglycerides) (C3-C8&C10)	-	Emollient, Moisturiser, Lubricant, Solubiliser & Carrier
 Glyceryl Laurate (C3-C12)	-	Lipid Enhancer, Emulsifier & Antibacterial
 Glyceryl Oleate (C3-C18)	-	Emollient, Lubricant, Lipid Enhancer & Emulsifier
 Myristyl Myristate (C14)	-	Emollient, Skin Conditioner & Stabiliser
 IsoPropyl Palmitate (C3-C16)	-	Emollient, Lubricant & Solubilizer
 Butyl Stearate (C4-C16)	-	Emollient, Lubricant & Skin Conditioner
 Octyl Stearate (C8-C18)	-	Emollient, Moisturiser, Lubricant & Skin Conditioner
 Cetyl Alcohol (Hexadecanol) (C16)	-	Emollient, Skin Conditioner, Thickener, Emulsifier & Solubiliser
 Stearyl Alcohol (Octadecanol) (C18)	-	Emollient, Skin Conditioner, Thickener, Emulsifier & Solubiliser.
 Stearic acid (C16)	-	Emollient, Thickener & Emulsifier
 Oleic acid	-	Emollient , Emulsifier

CTFA NAMES OF PALMBASED INGREDIENTS IN PURE-PALM BABY LOTION

 Palm Based *Medium Chain Triglyceride	Caprylic/ capric Triglycerides)
 Palm Based *Fatty ester	IsoPropyl Palmitate, Gleceyl oleate
 Palm Based *Myristic acid myristyl ester	Myristyl Myristate
 Palm Based *Fatty acid	Stearic acid, Oleic acid
 Palm Based *Fatty alcohol	Stearyl alcohol (Hexadecanol) Cetyl alcohol (Octadecanol)
 Palm Based Glycerol / Glycerine	Glycerin
 Palm (<i>Eliaes gueneesis</i>)Oil	Palm (<i>Eliaes gueneesis</i>)Oil
 Palm Based Vitamin / Antioxidants	Tocopherols & Tocotrienols (Vitamin E) Carotenoids (Pro-vitamin A)
Olfactory factor	Perfume
Chelating agent /Stabilizer	Disodium EDTA
Netralizing agent	Sodium Hydroxide
Preservative	Methyl paraben & Propyl Paraben

PRESERVATIVE-FREE



**Why Consumers prefer “Preservative-free”
Baby Care Products?**



Manufacturers today are acting to consumers demand for developing and promoting “preservative-free” food products.







This spillover to the toiletry and skincare industry with health-conscious consumers concerned by the use of high levels of preservatives, that is toxic & may damage the fine balance of beneficial bacteria present.



The natural conventional preservatives present in natural formulation is viewed as a compromise of the product’s natural image.

PALMBASED NATURAL PRESERVATIVES

-  Palmbased Anti-oxidants such as Ascorbyl Palmitate, Vitamin A palmitate, Beta-carotenes, Tocopherols and Tocotrienols (vit. E) are valuable stabilizers in cosmetics formulation that increases shelf life.
-  Caprylic Acid (C8) together with Ethanolamine function as a mould inhibitor.
-  Lauryl(C12) Monoglycerides in the form of Monolaurin has anti-bacterial, anti-viral and anti-fungal properties.
-  Liasari's Hurdle Technology is a new direction of reducing the level of preservatives in a green and healthy formulation.

GREEN CONCEPT PREVENT CRUELTY TO ANIMALS



Not only should Natural Baby Care Products not be tested on animals, and logically, they should not depend on animal sources for ingredients.



A Challenge for Manufacturers seeking entry to Natural Products Market have to redesign with ingredients that comply to EU Ecolabel.



“No Animal Testing” on Labels must be Clear whether it refers to the Finished Product or to the Ingredients (or both).

GREEN CONCEPT



Palmbased Oleochemicals Intermediates offers the cosmetics and toiletries industry, a new direction in processing Green and Healthy personal care products.



The chemistry of fats or triglycerides and their derivatives has been well studied and documented and it does not contain any toxic substances and it is compatible to humans.



The manufacturing process is environmental friendly. The product is biodegradable and is made from recyclable materials.

GREEN PALMBASED CONCEPT

 By using Raw Ingredients that have this Long History of Safe and Effective use, we can be assured of the Safety of the Products.

 Perhaps this is the Most Amazing Discovery by LIASARI, is Over 4,000 years.

CONCLUSION



Cosmetics and Nature are often seen as a contradiction. Actually they are inseparable.



Modern science has brought precision & distinction, instead of complexity.



Unforeseeable achievements are the result of the discovery of numerous new compounds derived from palm oil and palm kernel oil that offers the industry to explore and to capitalize on new usages, like formulating Green & Safe Baby Care products.

CONCLUSION



At Liasari, we are advocating healthy and safe products to educate the average citizens to forcefully respond to the deterioration of the Environment. We have to inculcate these good practices at the early age of our future generations.



Committed to this concept, we produced a range of baby products that is all natural.



**“PURE–PALM BABY”,
the Green Palmbased Baby Product.**



Liasari[™]

Thank-You



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