SHEPROS®

Safety, Heath & Environment Product Solutions

SENSITIVE SKIN
NORMAL SKIN
AGING SKIN
OILY SKIN
DRY SKIN
ECZEMA

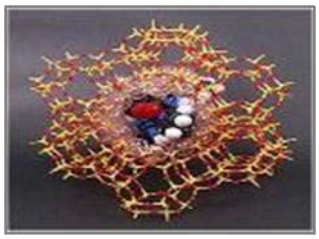
Complete Body Wash (CBW)

Shepros Sdn. Bhd.

Welcome to SHEPROS, a global provider of innovative green chemistry solutions for a greener, safer and healthier life and planet. We have been working diligently by through nanotechnology, nanobiotechnology and green chemistry to create eco-friendly products and a carbon neutral company with a zero environmental footprint.

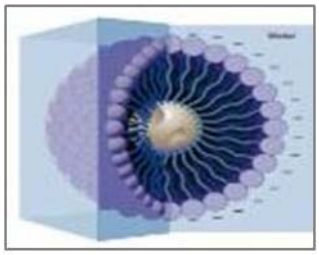
We are the market leader in supplying green products which are eco-friendly, safe, reusable, recyclable, non-toxic, non-flammable and non-caustic odor, pollution and moisture control products that do not contain petrochemical based ingredients, VOCs, CFCs, harmful or ozone depleting chemicals. All of our formulations are based on non-toxic, food based, plant and plant derivatives based ingredients.

Our Specialty Technologies



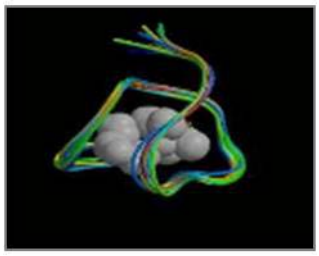
NANO PORES

Nano Pores are three-dimensional,crystalline solids, microporous and nanoporous with well- defined structures that contain aluminum, silicon, and oxygen in their regular framework; cations and water are located in the pores. This is a natural mineral and has void that can host cations, water, or other molecules.



NANO BIOTECH COLLOIDAL MISCELLES

NBCM are very fine molecules with spherical aggregate structure which remain in suspension indefinitely and are not affected by gravity when dispersed in a liquid colloid. They also undergo thermal fluctuations and Brownian motion. It works well with hard, soft, cold, hot, fresh and salt water.



COLLOIDAL SILVER

Colloidal silver is a type of colloid that consists of solid particles suspended in a liquid. The solid is very small particles of metallic silver and the liquid is water. A silver colloid then must have silver particles in suspension. Colloidal silver also contains another form of silver called ions.

GREEN CHEMISTRY

Green chemistry, also called sustainable chemistry, is a chemical philosophy encouraging the design of products and processes that reduce or eliminate the use and generation of hazardous substances. It aims to avoid problems before they happen.

Acute Toxicity Test of Nano Alpha 10

Test Method: OECD Guideline for Testing of Chemicals Method 203 Fish

Result: Not hazardous to the aquatic environment.

Pusat Teknologi Alam Sekitar dan Bioproses
Environment and Bioprocess Technology Centre
Bangunan 15, SIRIM Berhad, Shah Alam, Selangor Darul Ehsan.
Tel : 60-3-5544 6550 / 6598 Faks : 60-3-5544 6590

RESULTS SUMMARY

Company Name : Shemical International Sdn Bhd

Address : Lot 109A, Jalan Gebeng 1/6,
Kaw. Perindustrian Gebeng
26080 Kuantan, Pahang
(Attn : Mr. Ng)

Your Ref No.	
SIRIM Ref. No.	237/16/712
Job No.	J026/08
Report No.	R054/08
Date of Issue	17/03/08
No. of pages	11

Request : 96-hour Fish (Tilapia), Acute Toxicity Test of Nano Alpha 10

SAMPLE DESCRIPTION
One liquid sample coded as "Nano Alpha 10 " was received on 01 Feb 2008.

TEST METHOD
(1) *Fish acute toxicity test according to OECD Guidelines for Testing of Chemicals - Method 203 Fish, Acute Toxicity Test

RESULT:

Sample Code	Appearance	LC_{50} (96 hour) (v/v)
Nano Alpha 10	Brownish	880 mg/L (0.088%)

Note: Refer to Appendix A – R054-1/08 for details.

INFERENCE
The classification system for substances hazardous to the aquatic environment according to The Globally Harmonised System (GHS) of Classification and Labeling of Chemicals (2005) is shown below.

Toxicity Category (Acute toxicity for 96 hr LC50 for crustacea)	**Classification Limit**
Acute I	≤ 1 mg/l
Acute II	> 1 - ≤ 10 mg/l
Acute III	> 10 - ≤ 100 mg/l

Based on the criteria for the harmonized classification system for substances, the "Alpha Nano 10 " is classified as "Not hazardous to the aquatic environment" as the LC_{50} value is above 100 mg/l.
(The inferences expressed herein are outside the scope of accreditation)

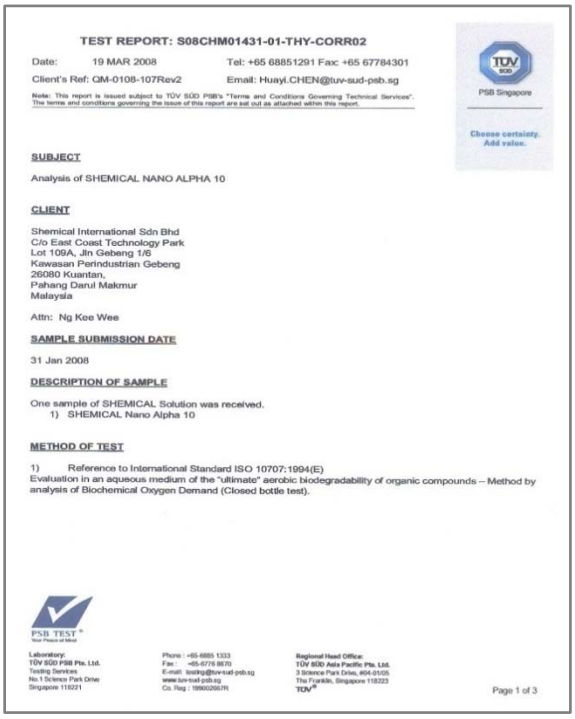
Name: **Tan Yong Nee**
Designation: **Researcher**
Fax No: **03-55446590**
Tel. No: **03-55446591**

SIRIM Berhad
(No. Syarikat 367474 - V)
1, Persiaran Dato' Menteri
Seksyen 2, Peti Surat 7035
40911 Shah Alam
MALAYSIA
Tel: 60-3-5544 6000
Hotline: 60-3-5510 3535
Faks: 60-3-5510 8095
Website: www.sirim.my

Biodegradability Test of Nano Alpha 10

Test Method: Reference to International Standard ISO 10707:1994(E)

Result: Reach 96% of degradation at day 28 and it is readily biodegradable.



TEST REPORT: S08CHM01431-01-THY-CORR02

Date: 19 MAR 2008 Tel: +65 68851291 Fax: +65 67784301

Client's Ref: QM-0108-107Rev2 Email: Huayi.CHEN@tuv-sud-psb.sg

Note: This report is issued subject to TÜV SÜD PSB's "Terms and Conditions Governing Technical Services". The terms and conditions governing the issue of this report are set out as attached within this report.

PSB Singapore

Choose certainty. Add value.

SUBJECT

Analysis of SHEMICAL NANO ALPHA 10

CLIENT

Shemical International Sdn Bhd
C/o East Coast Technology Park
Lot 109A, Jln Gebeng 1/6
Kawasan Perindustrian Gebeng
26080 Kuantan,
Pahang Darul Makmur
Malaysia

Attn: Ng Kee Wee

SAMPLE SUBMISSION DATE

31 Jan 2008

DESCRIPTION OF SAMPLE

One sample of SHEMICAL Solution was received.
1) SHEMICAL Nano Alpha 10

METHOD OF TEST

1) Reference to International Standard ISO 10707:1994(E)
Evaluation in an aqueous medium of the "ultimate" aerobic biodegradability of organic compounds – Method by analysis of Biochemical Oxygen Demand (Closed bottle test).

PSB TEST

Laboratory: TÜV SÜD PSB Pte. Ltd. Testing Services No.1 Science Park Drive Singapore 118221

Phone : +65-6885 1333 Fax : +65-6776 8670 E-mail: testing@tuv-sud-psb.sg www.tuv-sud-psb.sg Co. Reg : 199002557R

Regional Head Office: TÜV SÜD Asia Pacific Pte. Ltd. 3 Science Park Drive, #04-01/05 The Franklin, Singapore 118223

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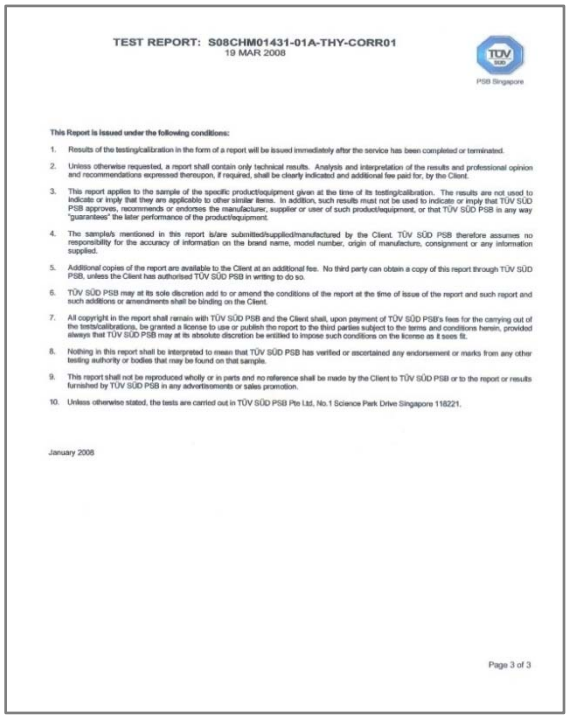

TEST REPORT: S08CHM01431-01A-THY-CORR01
19 MAR 2008

PSB Singapore

This Report is issued under the following conditions:

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2. Unless otherwise requested, a report shall contain only technical results. Analysis and interpretation of the results and professional opinion and recommendations expressed thereupon, if required, shall be clearly indicated and additional fee paid for, by the Client.
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January 2008

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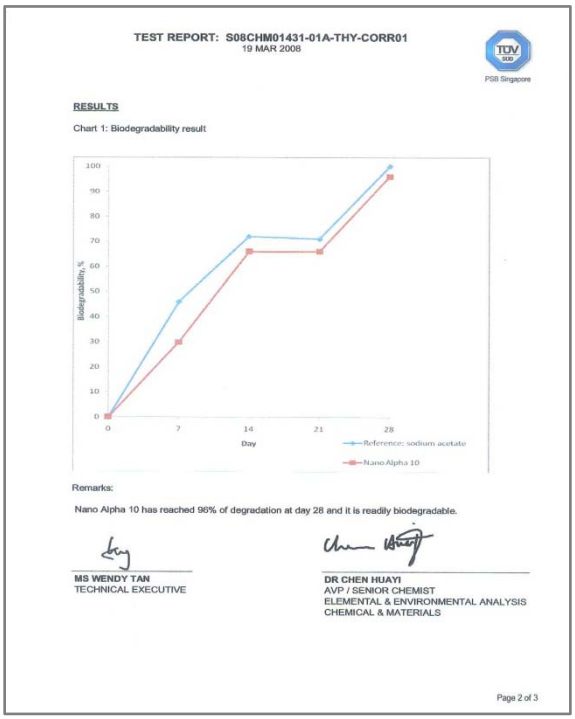


TEST REPORT: S08CHM01431-01A-THY-CORR01
19 MAR 2008

PSB Singapore

RESULTS

Chart 1: Biodegradability result

Remarks:

Nano Alpha 10 has reached 96% of degradation at day 28 and it is readily biodegradable.

MS WENDY TAN
TECHNICAL EXECUTIVE

DR CHEN HUAYI
AVP / SENIOR CHEMIST
ELEMENTAL & ENVIRONMENTAL ANALYSIS
CHEMICAL & MATERIALS

Page 2 of 3

International Standard ISO 10707:1994(E)

Evaluation in an aqueous medium of the "ultimate" aerobic biodegradability of organic compounds –

Method by analysis of

Biochemical Oxygen Demand

(Closed bottle test)

OUR TECHNOLOGY IN GREEN PRODUCTS

Nano Biotech Colloidal Micelles (NBCM)

SHEPROS combines the knowledge of nanotechnology and biotechnology in using the unique colloidal chemistry to generate a state of the art formulation that produces the innovative Nano Biotech Colloidal Micelles (NBCM). NBCM are mild but are amazingly powerful colloidal micelles made from non-toxic plant based extracts, plant derivatives and biodegradable surfactants.

NBCM are very fine molecules with spherical aggregate structure which remain in suspension indefinitely and are not affected by gravity when dispersed in a liquid colloid. It is surrounded by a cloud of tightly bound ions. The NBCM aggregates form in order to minimize the free energy of the solution. They are dynamic but equilibrium structures and able to rearrange in response to changing environmental conditions. They also undergo thermal fluctuations and Brownian motion. It works well with hard, soft, cold, hot, fresh and salt water.

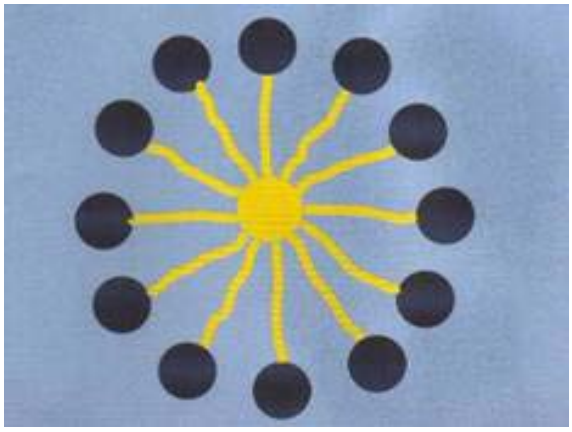


Illustration of Nano Biotech Colloidal Micelles.

The hydrophobic poles attract to each other forming interior micelles cluster and the hydrophilic poles form a powerful outer surface.

NBCM in colloidal chemistry can be explained as a sub-division of physical chemistry comprising of the phenomena characteristic of matter when one or more of its dimension lie in the range between 1 nanometer and 100 nanometer. In this nature of science, the dimension of NBCM is more important than the nature of the material. In the size range of nanometer, the surface area of NBCM is much greater than its volume that unusual phenomena of colloidal micelles will occur as following:

a. They do not settle out of the suspension of gravity.

b. They will be small enough to pass through the unreachable exterior areas of the plants.

c. They will move in at least one dimension randomly.

d. They have the velocity that will move endlessly without stopping.

e. They will have tremendous wetting capacity.

g. They will reduce the surface tension in water or water solutions.

h. They will have sterilizing effect by disrupting the DNA or RNA of the virus, prokaryotic cell of bacteria, and eukaryotic cell of algae, protozoa and fungi.

NBCM Aspects of Disinfectants

Cell Structure and Function related to Disinfectants

All cells have plasma membranes, genetic material (DNA) and cytoplasm. There are two general types of cells which prokaryotic cell and eukaryotic cell. It is therefore important to know the differences between prokaryotic and eukaryotic cells. By understanding the structures and functions of the cells will enable us to control and destroy disease causing bacteria without harming our own cells.

I. **Prokaryotic cell structure**

a. Glycocalyx

It is a gelatinous sticky substance at the outer layer of the cell that protects the cell from drying out. It helps the cell to stick to the surface of the proper environment for growth. It also provides protection against phagocytosis.

b. Outer Membrane

It is composed of bilayer membrane normally found in gram negative bacteria. The inner layer is composed of phospholipids that channel proteins called porins. Porins are small pores or channels that allowed molecules to diffuse in through the outer membrane. The outer layer is composed of lipopolysaccharide (LPS) which is a union of lipid with sugar. LPS is partly hydrophobic and hydrophilic. It is mainly used as protection from toxic compounds such as antibiotics which are too large to go through the porins.

c. Cell Wall

This structure is only found in eubacteria. The main component is peptidoglycan which is composed of long chains of polysaccharides (glycan) crosslinked by short proteins (peptides). When it is linked together it will create a single rigid molecule structure like a chain link fence. The cell wall is very porous and does not regulate the transport of substances into the cell. Its function is to hold the cell shape and withstanding the turgor pressure. Turgor pressure is the internal pressure in the cell's content.

d. Cell Membrane

The major functions of the membrane are to contain cytoplasm and to control the passage of the substances into and out of the cell. It contains of membrane lipids and membrane proteins.

Membrane lipid is composed of a phospholipid bilayer which is hydrophobic fatty acid tails and hydrophilic phosphate heads.

Membrane proteins are composed of integral proteins and peripheral proteins. Integral proteins are involved in transport and peripheral proteins are involved in electron transport chain and/or photosynthesis.

e. Cytoplasm

It is a matrix that composed of water (90%) and proteins. It contains the nucleoid, ribosomes and endopores.

i. Nucleoid

It is a mass of DNA and not surrounded by a membrane.

ii. Ribosomes

It is the site of protein synthesis. Prokaryotic ribosomes are smaller than eukaryotic ribosomes.

iii. Endospores

It is hardy non resting structures that some bacteria especially G(+), produce through the process of sporugation.

TYPICAL PROKARYOTIC CELL

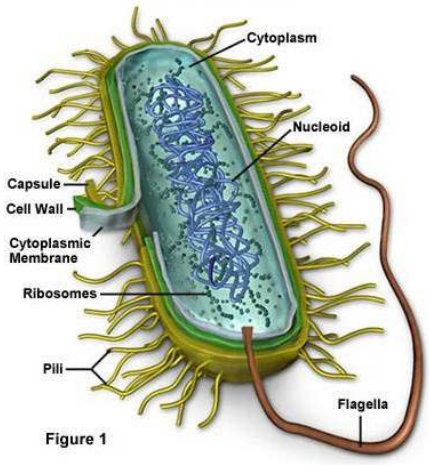


Figure 1

Prokaryotes are organism without cell nucleus or indeed a membrane bound organelles where in most cases unicellular (in rare cases, multicellular). Prokaryotes are divided into two groups which are Bacteria and Archaea (originally Eubacteria and Archaeabacteria) because of their significant genetic differences between the two. All prokaryotic cells have a cell wall with its primary component being peptidoglycan and about 10 to 100 times smaller than eukaryotic cells.

II. Eukaryotic Cell Structure

a. Cell Wall

Eukaryotic cell walls are mainly composed of various polysaccharides, but not the peptidoglycan seen in the walls of prokaryotic cell walls.

Animal cells – no cell walls

Plant cells – made of cellulose

Fungi – made of cellulose only or combination with chitin

Algae – made of cellulose

Protozoans – no cell wall

b. Glycocalyx

A glycocalyx may exist outside the plasma membrane. It composed of carbohydrate chains from glycoproteins in cell membrane.

c. Plasma Membrane

The difference between the prokaryotes and eukaryotes are that proteins involved in electron transport chain and photosynthesis are not found in cell membrane but are found in cytoplasmic organelles, and cell membrane contains cholestrol.

d. Cytoskeleton

It is not found in prokaryotes and contains a network of filamentous and tubules structures. It acts to anchor organelles, functions in cytplasmic streaming and in movement of organelles within the cytosol, enables contraction of cell, move the cell membrane during endocytosis and amoeboid action, and provides the basic shape of the cell.

e. Nucleus

It is surrounded by double membrane with nuclear pores. It contains chromosomes which is a genetic material composed of DNA and in linear form. It's function is to exert a continuing influence over the import and export of substances through the envelope, and isolates the DNA in eukaryotic cells.

f. Ribosomes

Its structure is not membrane bound and is made up of RNA and protein. It is the sites of protein synthesis.

g. Endoplasmic Reticulum (E.R.)

ER traverses the cytoplasm of eukaryotic cells. Its function is as a transport system which is in two forms: smooth endoplasmic reticulum (SER) and rough endoplasmic reticulum (RER). SER with no ribosomes attached is the main site for lipid synthesis. RER with ribosomes attached functions in the initial modification of proteins.

h. Golgi Body

It has the structure of 4 to 8 flattened membrane bound sacs loosely stacked on top of one another surrounded by vesicles. This is the place of final modification of protein and lipids.

i. Vesicles

It is a membrane bound sacs that could be pinched off pieces of golgi body, E.R., or cell membrane.

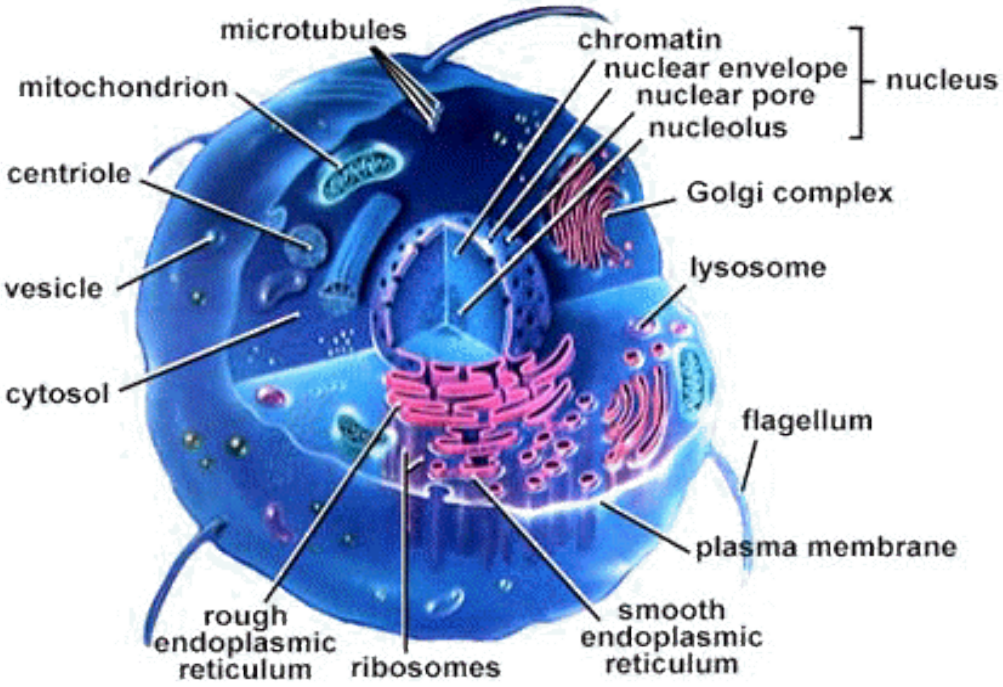
j. Mitochondrion

It has the structure of oval shaped and double membrane. Its function is to break down energy containing organic molecules and repackage the energy into smaller units (ATP) that can be used by the cells.

k. Centriole

It is a paired cylindrical structure called microtubules and microfilaments. It organizes a microtubule network called spindle fibers which are responsible for moving the chromosomes around in the cell during division.

TYPICAL EUKARYOTIC CELL



Eukaryotes have cells having membranes bound nucleus and membrane bound organelles. Besides the nuclear membrane, eukaryotes have numerous other internal membranes that compartmentalize cellular functions. Eukaryotic cells include fungi, algae, protozoa, plants, insects and animals. Eukaryotes are usually larger and more complex than prokaryotes.

How do NBCM destroy bacteria?

A cell wall protects bacteria cell from the effects of osmotic pressure. NBCM destroy the peptidogylan layer of the bacteria cell walls, but not to human beings and animals which do not have cell wall. In the absence of unstable formed peptidogylan, growing bacteria cells will be weaken and destroy through to the following exposures:

1. **Inhibition of cell wall synthesis**

   Generally, a bacterium is in a hypotonic solution and water tries to move in to the bacterium from a higher water concentration to the lower water concentration. When the cells are less resistant to the effect of osmotic pressure; the underlying cytoplasmic membrane bulges through the weakened portions of cell wall as water moves into the cell, and eventually the lyses.

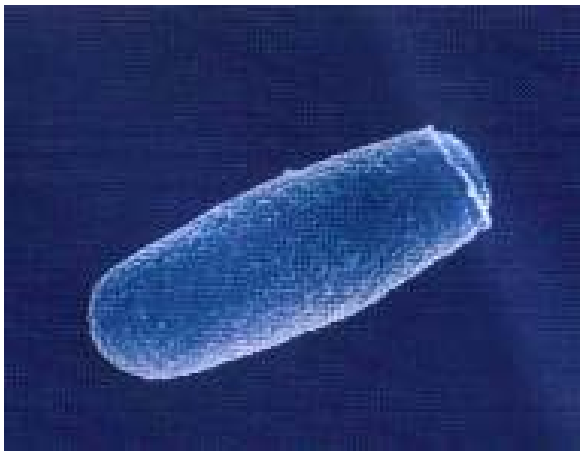
2. **Inhibition of metabolic pathways**

   A damaged cell wall will affect all the chemical reactions in metabolism of the bacterium. The unstable metabolic pathways will result in unstable enzyme activity, temperature and pH in the cell.

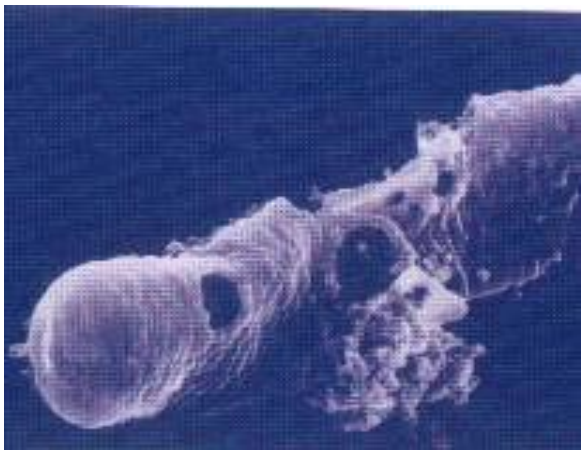
3. **Disruption of cytoplasmic membranes**

   The disruption of cytoplasmic membranes will severely damage the cytoplasm which is composed with primary 90% of water and proteins. The contents of cytoplasm such as nucleoid and ribosomes will be destroyed.

NBCM Aspects of Disinfectants in Bacteria



A scanning electron micrograph of bacteria cell before the inhibition of cell wall synthesis; inhibition of protein synthesis; and disruption of cytoplasmic membrane.



A scanning electron micrograph of bacteria cell bursts from osmotic pressure due to the integrity of peptidoglycan is not maintained. This is due to the followings:

- *Inhibition of cell wall synthesis where bacteria cell walls are destroyed, but not to animals which lack cell walls.*
- *Inhibition of metabolic pathways.*
- *Disruption of Cytoplasmic membranes.*

How do NBCM work in Cleaning and Degreasing?

NBCM cleaning are different from traditional cleaning technology which use the molecular attraction of cationic (positive ions) and anionic (negative ions). NBCM do not have any ionic groups and do not react with hard water ions. They have hydrophilic poles and hydrophobic poles. In a colloidal solution, if the amount of NBCM is increased, there will come to a point where they can no longer accumulate at the surface. The NBCM molecules will find other ways of shielding their hydrophobic tails from water. The NBCM molecules will aggregate into a cluster in which the tails point inwards. The head groups will form a water soluble shell in the outer surface.

When NBCM are in contact with oil (hydrocarbon) molecules, the center of NBCM bonds to a similar hydrophobic oil (hydrocarbon). They surround and separate (emulsify) oil (hydrocarbon) molecules from each other and/or the surface to which they cling. Once the oil (hydrocarbon) is surrounded and separated through the disruption in the attraction to the other oil (hydrocarbon) molecules and/or to the surface, the oil (hydrocarbon) can be uplifted from the surface and rinsed or wiped away easily.

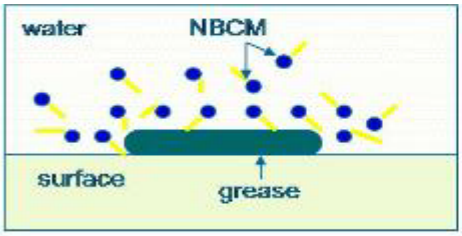


Figure 1.

NBCM attack the particle of grease.

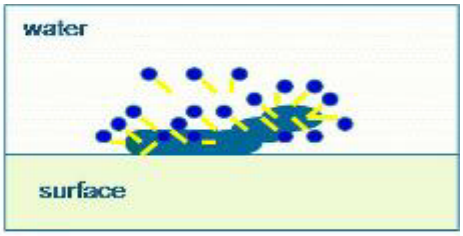


Figure 2.

NBCM surround the particle of grease.

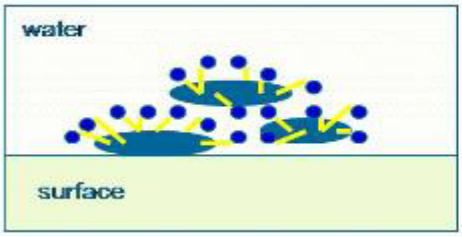


Figure 3.

NBCM break the particle of grease.

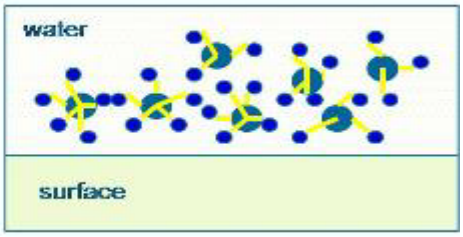
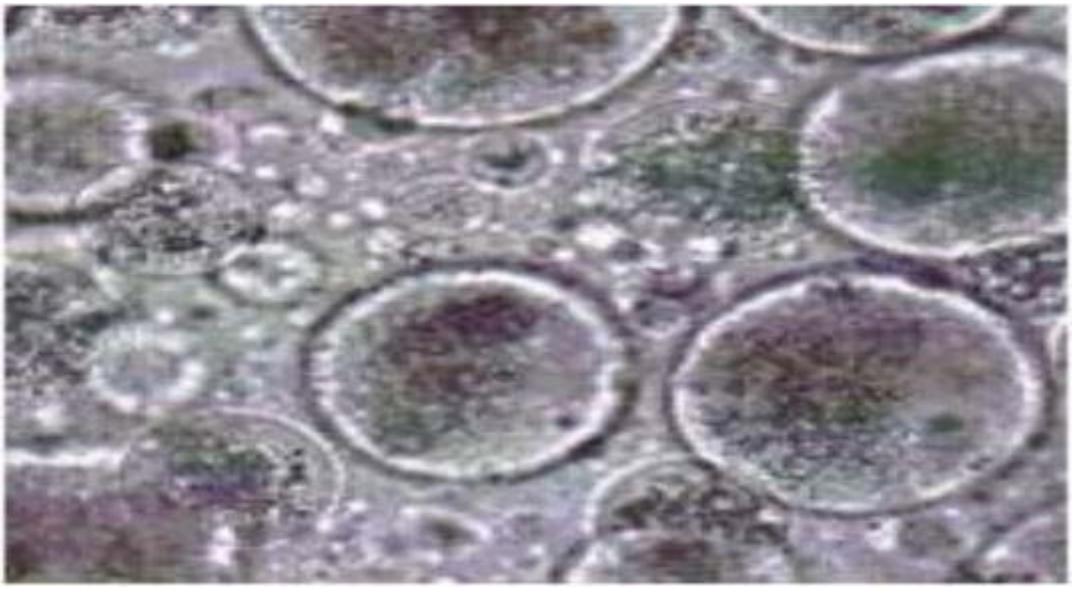


Figure 4.

The particles of grease come off to the surface & remain suspended in the water.



Optical microscopy image of nano and micro emulsions of oil and NBCM cleaner after rinsing with water.

How do NBCM clean your skin without skin irritation in skin related products?

Our Skin Structure

Skin layers are the layers that cover up our body. The skin is divided into two main layers, the epidermis at the surface and the dermis beneath. Below the dermis is the layer called the hypodermis which is not strictly part of the skin.

Epidermis

The epidermis is the top layer of the skin and is made up of dead cells. As our skin renews itself, the dead cell gradually pushed outwards towards the surface. After a time, the cytoplasm becomes full of granules and the cells die and converted into keratinised layer at the surface of the epidermis. The keratin is a tough fibrous protein and waterproof protects our body from infection, dehydration, sun, wind and rain. 95% of the epidermis is working to create new cells, the balance of 5% are composed of melanocytes which produce Melanin. Melanin is the substance that gives our skin the color and Langerhan (dendritic) cells, which work with the immune system to help fight off disease.

- Melanocytes

  These cells produce a dark pigment called melanin which contributes to skin color and provides UV protection.

- Langerhan (Dendritic) cells

  These cells are involved in the epidermal immune system. They engulf foreign material that invades the epidermis and migrate out of the skin to stimulate immune response.

- Basal cells

  Small cells found at the bottom of the epidermis.

Dermis

The dermis consists mostly of connective tissue and is thicker than the epidermis. It has blood vessels which provide blood to upper epidermis layer. It cannot be reached by lotions and creams of such beauty products which only work onto epidermis. This layer produces collagen, elastin and reticulin. It is this layer that stays elastic or gets saggy which cause wrinkles or firmness of the skin. Its function is to keep foreign substances out of your body system.

- Blood vessels

  These are tiny pipes through which blood circulates. The blood vessels supply the skin with fresh blood, which contains nutrients and oxygen, and carry away waste products.

- Meissner's corpusles

  These touch receptors are especially effective in detecting light touch and soft, fleeting movements.

- Pacinian corpuscles

  These are the receptors of deep pressure and vibration.

- Free nerve endings

  These are responsible for the sensitivity towards pains, temperature changes and itchiness.

- Nerve Fibers

  These are responsible to forward information to the brain.

- Sweat glands

  These are sweat producing structures consisting of a single tube, a coiled body and a superficial duct. They are involved in thermo regulation by cooling the skin by sweating.

- Sebaceous glands (oil glands)

  Sebaceous glands or oil glands are small, sacculated organs that secrete sebum. This oily substance is a natural moisturiser which conditions the hair and skin. It also keeps our skin soft, pliable and waterproofing.

- Hair Follicles

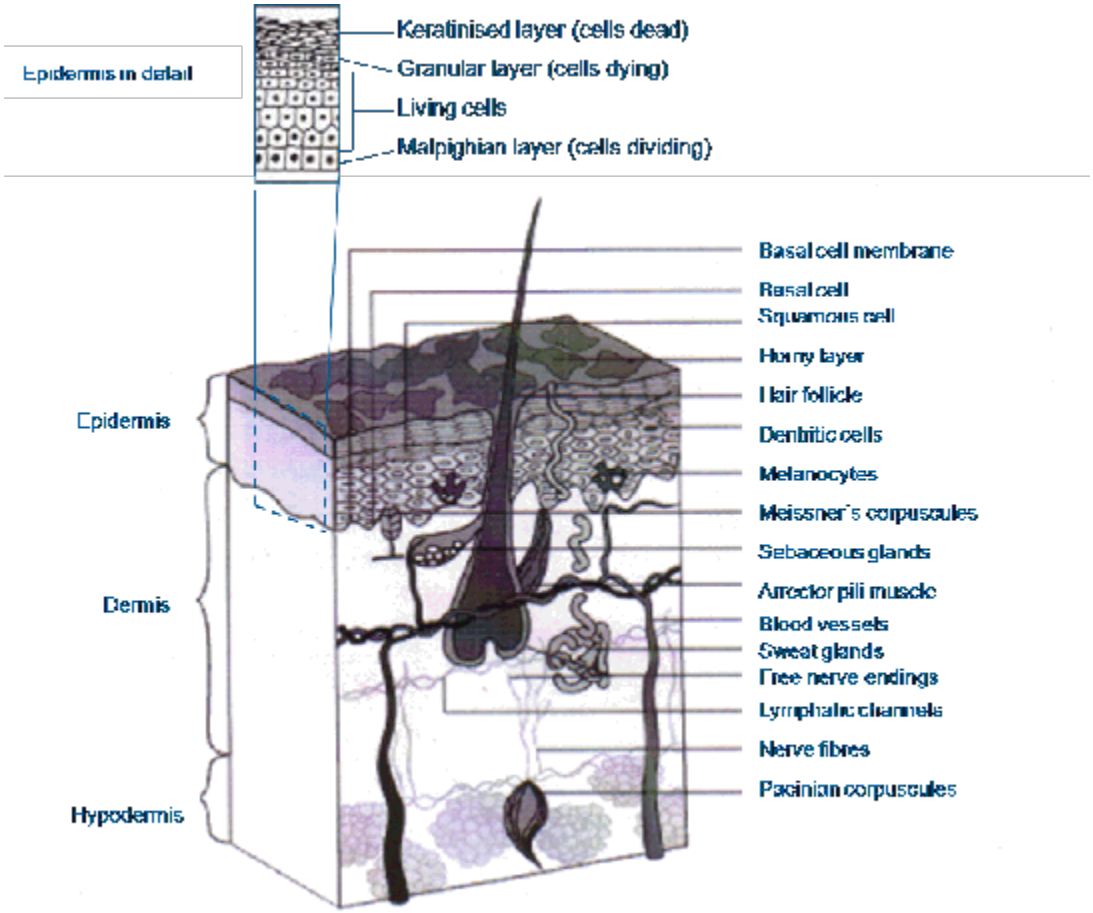
  They are downward grows into the dermis of epidermal tissue and produce hair. They are found all over the body except on the palms of the hands, soles of the feet and lips. When the body gets cold, the hair stands upright with the help of the arrector pili muscle, closing up the skin's pores and keeping the warmth in.

- Arrector pili muscle

  This small muscle is attached to the base of the follicle. When it is stimulated by cold or fright, it pulls the hair follicle up, causing it to stand upright.

Hypodermis layer

Hypodermis layer or subcutaneous layer below the dermis consists of loose connective tissue and much fat. It acts as a protective cushion and helps to insulate the body by monitoring heat gain and heat loss. Not all authors consider this layer a part of the skin, but it definitely has a strong impact by the way skin look.



The structure of the skin.

The state of art formulations of Nano Biotech Colloidal Micelles has made it possible to innovate a combination safety, health and environment friendly ingredients to create green chemical products to replace CHEMICAL products which are mainly made of petroleum based ingredients. Below are some of the reasons why SHEPROS' products clean our skin without skin irritation:

1. **Nano Biotech Colloidal Micelles (NBCM)**

   Our technology uses NBCM to uplift the oils and contaminants and break it to small molecules by using nano web and micro web to surround the molecules of the oils and contaminants which emerge as nano and micro emulsions that can be flushed off with water easily.

   This amazing organic colloidal micelles system with a combination of mild plant based surfactants work in conjunction with a remarkable gentle organic complex. It creates a three factor system, which removes the exhausted cellular exudates (sweat discharge), byproduct of cellular metabolism, and sebaceous fluids (oil discharge) to eliminate the environment that harbors bacteria invaders and toxins, and thereby restore skin into healthy state.

2. **Mild and environment friendly ingredients**

   Shepros' skin related products are made of mild, non-toxic, non-foaming, biodegradable and environmental friendly ingredients from plant extracts, plant derivatives and organic biodegradable surfactants.

   All the ingredients of SHEPROS do not contained corrosive ingredients such as acids, petroleum distillates, halogenated hydrocarbons, chemical thickening agents, nitrates, phosphates, aliphatic and aromatic petroleum based solvents, polyethylene glycol and petroleum distillates.

3. **NBCM don't irritate skin**

   The skin is protected by dead cells made of tough fibrous protein on the top layer of the epidermis which are waterproofing. NBCM can't penetrate but only able to clean oils and contaminants on the surface of the epidermis.

   The sebaceous glands or oil glands of the skin that produce sebum, an oily substance which is a natural moisturizer to condition the hair, keep our skin soft and pliable, and waterproofing. NBCM can go for deep cleansing of excessive production sebum of the sebaceous glands only on the epidermis level only. It will reduce the clogging of skin pores which are related to acne and hair loss problems. Therefore, NBCM will not hurt or affect skin on the dermis level.

Hypodermis layer or subcutaneous layer below the dermis consists of loose connective tissue and much fat. One of its functions is to act as a protective cushion. NBCM can't penetrate and break both fat and molecule.

Complete Body Wash (CBW)

Airborne Pollutants Harm Skin

Every day your skin is bombarded by airborne pollutants and it's even worse when you go outside!!

Indoor Air Quality (IAQ) can be affected by microbial contaminants (mold, bacteria), gases (including carbon monoxide, radon, volatile organic compounds), particulates or any mass or energy stressor that can induce adverse health conditions. Indoor air is becoming an increasingly more concerning health hazard than outdoor air.

There's no need to mention how contaminated the air outside can be, especially if you live in the city or suburbs.

If you work or live in the city, every day your skin comes in contact with harmful airborne pollutants which clog your pores, stopping your skin from functioning properly. When this happens free radical damage occurs, also outbreaks of pimples and blackheads.

Even regional and rural areas have airborne pollution problems.

Pollution Causes Skin Problems!!

Environmental pollutants are a major cause of clogged pores and free radical damage. Proper hygiene helps to solve these beauty problems.

The Importance of Taking Bath Daily

The simple acts of showering, shampooing, using deodorant and brushing your hair all add up to good hygiene practices. While these acts are simple and should be a part of everyone's daily routine, some overlook taking care of their hygiene needs, putting themselves at risk of illness, infection, poor health and social avoidance.

Significance

Practice good personal hygiene every day, because going without regular hand-washing and showers means that you'll accumulate germs, dirt and body odor. Simply taking a shower and washing your hair at least once a day gives you the opportunity to wash away sweat, dirt and germs.

Health Implications

Allowing yourself to skip any good hygienic practices for more than a day puts you at increased risk of illness. If you visit the bathroom and don't wash your hands with soap and water afterward, then start preparing food, you potentially expose others to preventable illnesses. If you skip showers and you have a cut that gets dirty, you run the risk of infection. Cultivating good personal hygiene, showering and washing your hands frequently can help reduce the incidence of illness.

Considerations

Neglecting daily cleanliness practices leads to the accumulation of bacteria and sweat in various areas of your body. When your feet sweat, this moisture combines with the bacteria on the soles of your feet and between your toes. You notice the result in objectionable foot odor. Washing your feet, including between your toes, with antibacterial soap helps kill bacteria and reduce odor. Use an antibacterial soap and wash your body daily. As with your feet, perspiration mixes with bacteria in your groin area and under your arms, causing body odor.

Attractiveness

Showering, shampooing and using deodorant every day helps increase your personal attractiveness quotient. When you're clean--and you smell clean--other people find it easier to be close to you. When you take care of your hygiene needs every day, you find it easier to think well of yourself. You feel good physically, which helps you view yourself in a positive light.

Professional Life

The employee who goes to work without shampooing his hair and showering presents a poor self-image. When his co-workers have to be in the same cubicle or office with him, they may rush through the business they have to take care of in order to escape any odor and return to fresher air. If the employee continues to neglect his personal hygiene and begins to develop infections, his attendance at work suffers.

Introducing Complete Body Wash (CBW)

Every day your skin is bombarded with pollution!

CBW removes the pollution by deeply cleansing, purifying and detoxifying your skin, unclogging and refining your pores and eliminating free radicals. Using CBW from head to toes improves your complexion and maintains a healthy skin condition.

CBW – Deep Cleaning, Disinfecting, Moisturizing and Protective Benefits

CBW benefits your skin in many ways, it:

- deeply cleanses
- detoxifies toxic matter
- removes heavy metals and free radicals
- exfoliates
- calms redness and acid skin conditions
- protects skin from pollution
- clears and prevents pimples
- clears and prevents blackheads
- smoothen whiteheads
- keeps your skin healthy and functioning properly
- reduces inflammation of the skin that causes scaliness, itching and rashes

- comes with antimicrobial effect
- assists in healing skin wounds
- improves skin elasticity
- protects skin against irritation
- helps promote skin regeneration in skin that is bruised and swollen

CBW – Body detoxify

Bathing with CBW keeps your skin glowing with health and vitality. There is another benefit, too. CBW not only beautifies your skin, it also helps your body detoxify heavy metals and other environmental pollutants which bombard your skin every day.

CBW - Face Care

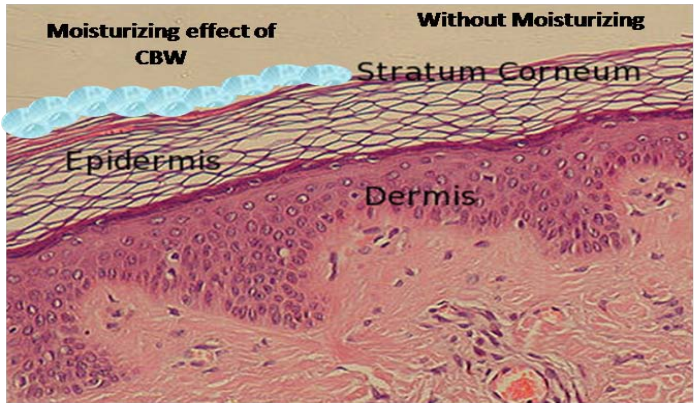
CBW deeply cleanses, detoxifies, exfoliates and protects your skin from harmful pollutants, keeping it healthy and functioning properly.

CBW has anti-ageing properties. Ageing of the skin is partly caused by a build-up of toxic matter which causes production of free radicals. CBW effectively removes these toxins and existing free radicals to keep your skin functioning at a healthy level.

CBW Protects Skin

CBW's ability to absorb, store and neutralize heavy metals and other toxic matter gives it many skin care benefits:

- protects your skin from airborne pollutants
- removes harmful chemicals found in make up
- removes existing free radicals then inhibits their formation
- clears blackheads by unclogging and refining pores
- clears and prevents pimples and treats acne
- prevents and treats dry skin, protects sensitive skin, improves skin tone and texture, and masks imperfections. It helps to absorb moisture from the air and holds water in the outermost layer of skin. It acts as a temporary barrier to slow down the evaporation of water and has the additional benefit of drawing atmospheric moisture into the skin over the course of the day.



CBW for Various Skin Types

Preservation of Normal Skin

CBW is superb to prevent the skin from becoming too dry or too oily. It gives a natural moisture balance, which is light and non-greasy feel.

Treating Dry Skin

For treating skin dryness, cleaning with CBW moisturizes the dry skin without using oil-based moisturizers that contain ingredients such as antioxidants, grape seed oil, dimethicone and petrolatum-based products. CBW acts as a temporary barrier to slow down the evaporation of water. It is long lasting and more effective in preventing water evaporation.

Moisturizing Oily skin

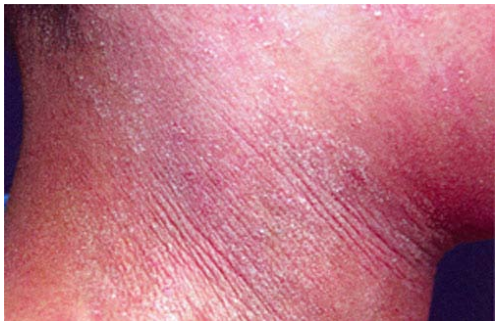
In oily skin, CBW is useful after activities causing skin dryness, such as other skin care products and washing. CBW is specially formulated to noncomedogenic and has less risk of comedo formation.

Slow down Aging skin

Taking bath with CBW keeps aging skin soft and well hydrated against wrinkles. CBW is not oil-based that contain petrolatum as the base, along with antioxidants or alpha hydroxy acids.

Sensitive skin

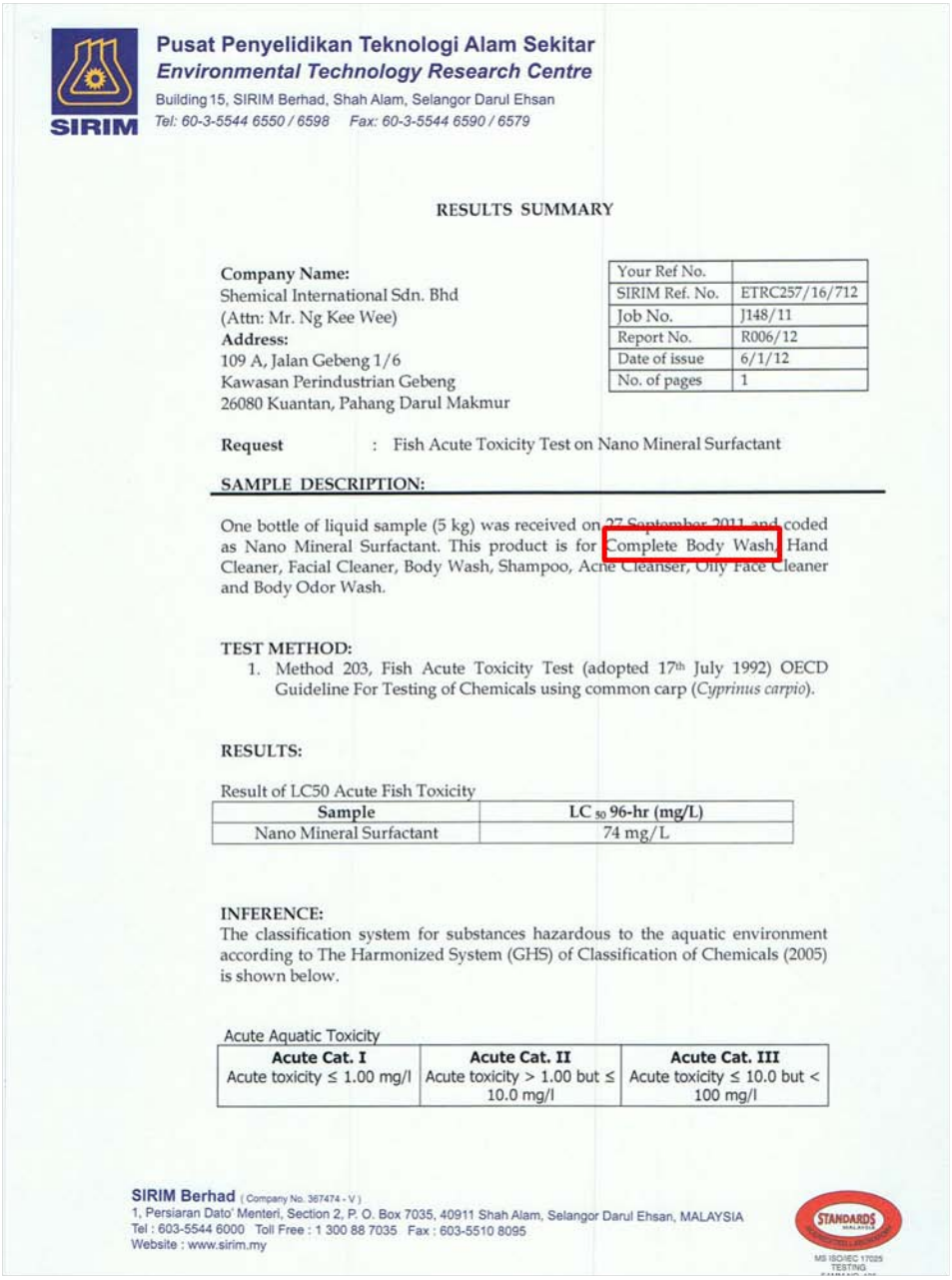
On sensitive skin (which otherwise is susceptible to skin irritations, redness, itching or rashes), CBW is preferable compared with other shower gels or soaps that contain potential allergens such as fragrances or dyes, as well as irritants such as acids.



Eczema

Bathing with CBW will clean, disinfect, moisturize and protect our skin from skin diseases.

Complete Body Wash (CBW) is Non-Toxic to Fish



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Environmental Technology Research Centre
Building 15, SIRIM Berhad, Shah Alam, Selangor Darul Ehsan
Tel: 60-3-5544 6550 / 6598 Fax: 60-3-5544 6590 / 6579

SIRIM

RESULTS SUMMARY

Company Name:
Shemical International Sdn. Bhd
(Attn: Mr. Ng Kee Wee)
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109 A, Jalan Gebeng 1/6
Kawasan Perindustrian Gebeng
26080 Kuantan, Pahang Darul Makmur

Your Ref No.	
SIRIM Ref. No.	ETRC257/16/712
Job No.	J148/11
Report No.	R006/12
Date of issue	6/1/12
No. of pages	1

Request : Fish Acute Toxicity Test on Nano Mineral Surfactant

SAMPLE DESCRIPTION:

One bottle of liquid sample (5 kg) was received on 27 September 2011 and coded as Nano Mineral Surfactant. This product is for Complete Body Wash, Hand Cleaner, Facial Cleaner, Body Wash, Shampoo, Acne Cleanser, Oily Face Cleaner and Body Odor Wash.

TEST METHOD:

1. Method 203, Fish Acute Toxicity Test (adopted 17th July 1992) OECD Guideline For Testing of Chemicals using common carp (*Cyprinus carpio*).

RESULTS:

Result of LC50 Acute Fish Toxicity

Sample	LC_{50} 96-hr (mg/L)
Nano Mineral Surfactant	74 mg/L

INFERENCE:

The classification system for substances hazardous to the aquatic environment according to The Harmonized System (GHS) of Classification of Chemicals (2005) is shown below.

Acute Aquatic Toxicity

Acute Cat. I	Acute Cat. II	Acute Cat. III
Acute toxicity ≤ 1.00 mg/l	Acute toxicity > 1.00 but ≤ 10.0 mg/l	Acute toxicity ≤ 10.0 but < 100 mg/l

SIRIM Berhad (Company No. 367474 - V)
1, Persiaran Dato' Menteri, Section 2, P. O. Box 7035, 40911 Shah Alam, Selangor Darul Ehsan, MALAYSIA
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