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Integrity Ingredients Corporation

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## Innovations Create Beauty Specialty Ingredients





## Company's Introduction

BioGenetic Technology (BGT) is a US-based, high-tech biotechnology company focusing on innovative biosynthesis, molecular structures, and computational biology for the beauty industry.

We also have excellent manufacturing capabilities of specialty functional ingredients for the cosmetic and personal industries. Our production capability is about 50,000MT/yr and reserve a large piece of land for the company's development and expansion. We offer emerging ingredients across all major beauty care categories, focusing on innovative green emulsifiers, natural surfactants, emollient esters, and humectants.

We are committed to research, science, and innovation. We set the highest ethical standards and take accountability for sustainability, social responsibility, health, and well-being. We strive for long-term business success, to improve our social, economic, and environmental accomplishments, and to solve human beauty and aging problems. We believe that our effort and success will contribute to a better and more beautiful world! We are BioGenetic Technology (BGT).





# Innovative Raw Material Natural Ceramide-Like Liquid Crystal Emulsifiers

**Exclusively Made by Bio Genetic Technology** 

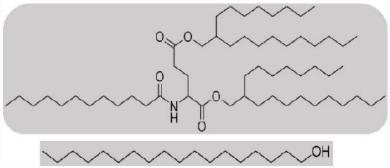
Product Trade Name: **BGT™ DOLGS** 

Product INCI Name: Dioctyldodecanol Lauryl Glutamate (and) Stearyl Alcohol

CAS Number: 82204-94-2 / 112-92-5 Appearance: White to pale yellow flakes

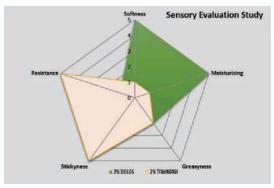
Applications: Skincare, Suncare, Babycare and Haircare

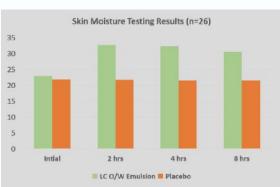
Usage Level: 1-3%



#### **Product Performance and Functionalities:**

- Our skin intercellular lipids of the stratum corneum (SC) form a lamellar structure (LS) that consists mainly of ceramides, which demonstrate significant skin barrier function. This natural ceramide-like liquid crystalline (LC) structure has a bi-continuous composition of water and amphiphilic lipids and concurrently keeps high moisturizing and water loss prevention effects.
- Because of the formation of lamellar liquid crystal emulsion by BGT™ DOLGS, it has enhanced the barrier function of the SC to strengthen the intercellular lipid matrix and further prevent skin sagging.
- Many liquid crystal systems exist with poor stability during application to the human skin because the liquid crystals surrounding the oil droplets break and disappear quickly at skin temperature. However, BGT™ DOLGS creates very stable LC O/W emulsions at temperatures higher than skin temperature and confirms their efficacy and function as bio-mimetic of the intercellular skin lipids.







## **Innovative Raw Material**

## **Green Liquid Crystal Emulsifying Emollient Ester**

**Exclusively made by Bio Genetic Technology** 

Product Trade Name: BGT™ DLG

Product INCI Name: Distearyl N-lauroyl-L-Glutamate

CAS Number: 55258-21-4 Appearance: : White Flakes

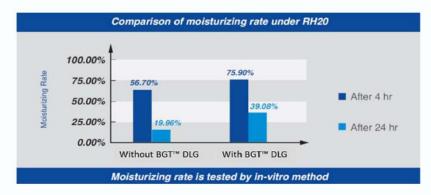
Applications: Skincare, Suncare, Babycare and Haircare

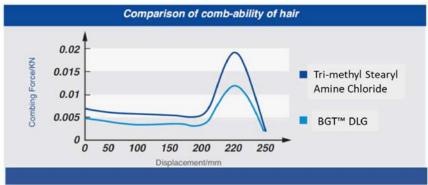
Usage Level: 1-3%

#### O II C11H23 — C – NH – CH — COOC18H37 I CH2CH2COOC18H37

#### **Product Performance and Functionalities:**

- BGT<sup>™</sup> DLG is originated from all natural raw materials; it is very mild, highly safe and all-purpose nonionic surfactant with excellent emolliency, liquid crystal emulsifying, super moisturizing, conditioning and revitalizing properties
- BGT<sup>™</sup> DLG is a multi-functional ingredient for all skincare formulations. The product not only plays an important role for emolliency such as softening skin feel and final product apparencies but also has great emulsification capability
- This product can make liquid crystal emulsion system that delivers high moisturization and water loss prevention effects; because the formation of lamellar liquid crystal emulsion, it can enhance barrier function of the SC to strengthen the intercellular lipid matrix and further prevent skin sagging
- BGT<sup>™</sup> DLG is also a good hair conditioning agent which improves the softness and luster of hair, provides better dry and wet combability, and repairs damaged hair.







## **Multi-Functional Innovative Raw Material**

## Green Ingredient Induced by Lyotropic Liquid Crystal System as Surfactant, Emulsifier and Emollient

**Exclusively made by Bio Genetic Technology** 

Product Trade Name: BGT™ SHCG

Product INCI Name: Isostearyl Hydroxystearate (and) Cocoyl Glutamic Acid

CAS Number: 162888-05-3 / 210357-12-3

Appearance: Pale Yellow Liquid

Applications: Facial Cleansers, Body Wash, , Skincare, Baby Products & Hair Care

Usage Level: 1-3%

#### **Product Performance and Functionalities:**

In personal cleansing product technology, the thickening and stabilization of amino acid surfactant systems has always been a challenging subject of technical research. The stable lyotropic liquid crystal formed by BGT™ SHCG can provide a perfect technical solution for the thickening of amino acid surfactant systems.

- BGT<sup>™</sup> SHCG is especially suitable for preparing high-viscosity amino acid salt facial cleansing creams that are not subject to changes in ambient temperature
- The creamy cleansing product by BGT™ SHCG has good thixotropy and high-quality foams BGT™ SHCG can greatly reduce the surfactants' irritation and further provide moisturizing and repairing properties, which can make the skin feel refreshed, soft, and moisturized after washing
- Lyotropic liquid crystal system formed by BGT<sup>™</sup> SHCG can be as a carrier to carry other active components to make very stable formulations
- BGT<sup>™</sup> SHCG is also an emulsifier with great skin feel and can form a relatively stable emulsions for all skincare products

Product	%
Sorbital(70%)	15.0
Sidium Laurol Sarcosinate(30%)	50.0
Ethylhexyl Glycerol	4.0
Lauric Acid	5.2
Isostearic Acid	3.0
BGT™ SHCG	2.5
Cocamide MIPA	1.5
Water	18.8





## **Natural Amino Acid High Moisturizing Emollient Ester**

Product Trade Name: BGT™ POLG

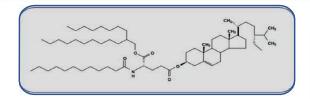
Product INCI Name: Phytosteryl / Octyldodecyl Lauryl Glutamate

CAS Number: 220465-88-3

Appearance: Colorless to Pale Yellow Liquid

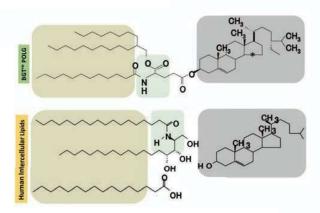
Applications: Skincare, Suncare, Foundations, Color Cosmetics and Makeup Remover

Usage Level: 0.2-3%



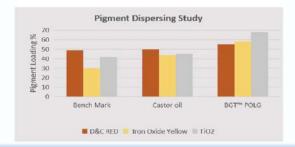
### **Product Super Structure vs. Human Lipids:**

BGT<sup>™</sup> POLG is an emollient that combines glutamic acid (an amino acid) with phytosterol (Like cholesterol but occurs in plants), forming structures that are very similar to the natural ceramide of the human skin. Therefore, it provide exceptional skin feel and remarkable moisturizing retention



#### **BGT™ POLG Performance and Functionalities:**

- BGT<sup>™</sup> POLG is a moisturizing emollient ester derived from 100% natural plants. It can form a lipid film on the skin surface, which is very similar to the lipid structure between cells in the skin
- BGT<sup>™</sup> POLG is derived from an amino-acid (glutamic acid) and phytosterol; it can form lamellar liquid crystals like the ones formed in the skin between skin cells (called lipid bilayer). The lipid bilayer is like the "mortar" between our skin cells ("the bricks") and is super important for a healthy skin barrier and keeping water in the upper layers of the skin; great water-locking capability
- BGT<sup>™</sup> POLG is more effective than lots of other emollients in promoting the recovery of damaged skin and improving rough skin conditions. It delivers exceptional skin feel in all skin care products. Similar to the structure of ceramide, it has excellent emollient properties
- Anti-inflammatory and soothing effects from phytosterols
- Excellent pigment dispersion and emulsion stability, which can effectively improve the feel of foundation and lipstick.







## **Natural Amino Acid Surfactant for Rinse-off Products**

Product Trade Name: BGT™ YS-30

Product INCI Name: INCI name: Sodium Cocoyl Alaninate

CAS Number: 90170-45-9

Property: Colorless to Pale Yellow Liquid

Applications: Hair Care, Facial Cleansers, Baby Wash Products

Recommend Dosage: 5-30%

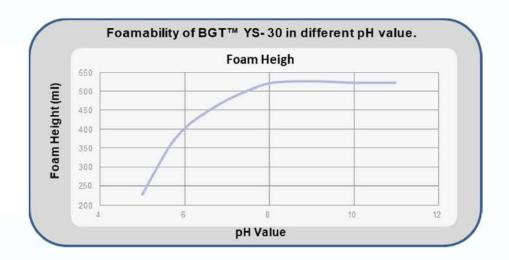
Chemical Structure:



#### **Product Performance and Functionalities:**

BGT<sup>™</sup> YS-30 is an anionic mild surfactant made from L-alanine and plant-derived fatty acids. Under weak acid to alkaline conditions, BGT<sup>™</sup> YS-30 has high foaming power, strong resistance to hard water. Smooth and moist after washing, suitable for shampoo and cleanser.

- Sodium cocoyl glycinate is an amino acid-derived cleansing and skin-softening ingredient that is considered safe and non-irritating to skin as used in cosmetic and personal care products
- BGT<sup>™</sup> YS-30 has a wide range of applications in rinse-off products because of its good foamability in a wide pH range
- This sulfate-free natural surfactant exhibits extremely mild and non-irritation, it can be used baby shampoos as well as facial cleansing products
- BGT<sup>TM</sup> YS-30 can reduce irritation when combining with traditional surfactants, such as sodium lauryl sulfate and sodium lauryl ether sulfate
- When BGT™ YS-30 used in shampoos, it can enhance the appearance and sensory feel of hair by improving hair body, suppleness, and sheen, especially for damaged hair
- It demonstrates strong cleansing power and easy to be wash- off





## Natural, Mild and Safe Ingredients for Rinse-off Products

Product Trade Name: **BGT™ LS-30** 

Product INCI Name: Sodium Lauryl Sarcosinate

CAS Number: 137-16-6

Property: Colorless to Pale Yellow Liquid Applications: Facial Cleansers, Body Wash, Baby Products & Hair Care

Usage Level: 5-30%

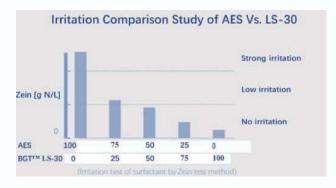
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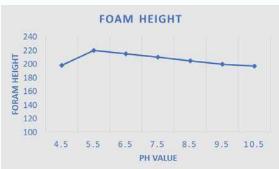


#### **Product Performance and Functionalities:**

BGT™ LS-30 is a plant-derived biodegradable water-soluble amino acid surfactant with an extremely mild nature. It is most often used in face and body cleansers and shampoos, but sometimes also used in leave-on products with the following attributes:

- It has a wide range of applications because of its good foamability in a wide pH range
- It can reduce irritation when combining with traditional surfactants, such as sodium lauryl sulfate and sodium lauryl ether sulfate.
- Because sulfate-free, BGT™ LS-30 is widely used in shampoos and can enhance the appearance and sensory feel of hair by improving hair body, suppleness, and sheen, especially for damaged hair
- This ingredient is non-irritating and non-sensitizing when applied to human skin.
- Most surfactants have poor resistance to hard water. The results show that sodium lauroyl sarcosinate has good resistance to hard water, good foam stability, and is less affected by hard water than other types of surfactants.







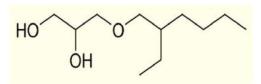
## **Functional Specialty Emollient Esters / Humectants**

Product Trade Name: **BGT™ EHG** Product INCl Name:

Ethylhexylglycerin CAS Number: 70445-33-9 Appearance: Clear Colorless Liquid Applications:

All PC and cosmetic products

Usage Level: 0.5-1%



#### **Product Performance and Functionalities:**

- BGT™ EHG is a multi-functional ingredient, not only an emollient which delivers good spreadability but also, it is widely used antiseptic synergist with a moisturizing effect; and can give the formula a soft and non-sticky skin feel
- It can improve the broad spectrum of many traditional preservatives (such as phenoxyethanol). It's an
  excellent substitute for parabens
- BGT<sup>™</sup> EHG reduces the surface tension of microbial cell walls and reduces the activity of bacteria to further make the antimicrobial system more effective and in the meantime it also soft and moisturizing skin.

Product Trade Name: **BGT™ DM** INCI Name: Diisostearyl Malate CAS Number: 67763-18-2

Appearance: Colorless to Pale Yellow LiquidApplications: Color

Cosmetics and Skincare

#### **Product Performance and Functionalities:**

BGT™ DM is a very effective pigment dispersant and binder which has the excellent ability for preventing from sweating of lipsticks and foundations. It can also be used as a substitute for castor oil and is recommended for creams, milk lotions, lipsticks, lip glosses, eye shadows, etc.

