

CERTIFICATE OF ANALYSIS

PRODUCT BENZOPHENONE CRYST.

BATCH NO 4418605

BEST BEFORE END DECEMBER 2022

TEST	UNIT	RESULTS
APPEARENCE COLOR ODOR OTHER GC ANALYSIS ASSAY	(% GC)	CRYSTALLINE SOLID (POWDER) WHITE TO PALE YELLOW SWEET, ROSY, SLIGHTLY HERBAL MELTING POINT: 47,7-48,5 °C PROFILE SIMILAR TO STANDARD 99.90



12 December 2018

FRAGRANCE ALLERGENS

Product name: BENZOPHENONE CRYST.

Ingredient	Total content (w/w)
Amyl cinnamic alcohol (CAS 101-85-9)	Not Detected
Amyl cinnamic aldehyde (CAS 122-40-7)	Not Detected
Anisyl alcohol (CAS 105-13-5)	Not Detected
Benzyl alcohol (CAS 100-51-6)	Not Detected
Benzyl benzoate (CAS 120-51-4)	Not Detected
Benzyl cinnamate (CAS 103-41-3)	Not Detected
Benzyl salicylate (CAS 118-58-1)	Not Detected
Cinnamic alcohol (CAS 104-54-1)	Not Detected
Cinnamic aldehyde (CAS 104-55-2)	Not Detected
Citral (CAS 5392-40-5)	Not Detected
Citronellol (CAS 106-22-9)	Not Detected
Coumarin (CAS 91-64-5)	Not Detected
Eugenol (CAS 97-53-0)	Not Detected
Farnesol (CAS 4602-84-0)	Not Detected
Geraniol (CAS 106-24-1)	Not Detected
Hexylcinnamic aldehyde (CAS 101-86-0)	Not Detected
Hydroxycitronellal (CAS 107-75-5)	Not Detected
Hydroxymethylpentylcyclohexene carboxaldehyde (Lyral) (CAS 31906-04-4)	Not Detected
Isoeugenol (CAS 97-54-1)	Not Detected
D-Limonene (CAS 5989-27-5)	Not Detected
Linalool (CAS 78-70-6)	Not Detected
2-methyl-3-(4-(1,1-dimethyl ethyl) phenyl)propanal (Lilial) (CAS 80-54-6)	Not Detected
Methyl heptine carbonate (CAS 111-12-6)	Not Detected
Gamma-methylionone (iso-alfa-Methylionone) (3-methyl-4-(2,6,6- trimethyl-2-cyclohexen-1-yl)-3-buten-2-one) (CAS 127-51-5)	Not Detected
Treemoss (Evernia furfuracea) (CAS 90028-67-4)	Not Detected
Oakmoss (Evernia prunastri)(CAS 90028-68-5)	Not Detected

Detection limit: 10 ppm

This list comprises references 45, 67 and 69 to 92 in Annex III to Regulation (EC) 1223/2009 (the Cosmetics Regulation).

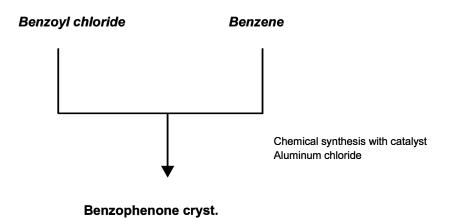
Version date: 4 October 2012



14 November 2018

Flowchart of the Production Process

Product: BENZOPHENONE CRYST.



Information provided by our supplier(s) and/or according to literature data.



Date :

12 November 2018

Confidential Fragrance Product Information Form

1. General Information

Supplier Product name: Chemical name: Type of Product:	BENZOPHENONE CRYST. METHANONE, DIPHENYL- AROMA CHEMICAL
INCI Name :	BENZOPHENONE
CAS number:	119-61-9
CAS number(alternative)	
FEMA GRAS number	2134
FDA GRAS citation:	172.515
Molecular Formula:	C13 H10 O
Molecular weight:	182
Generic Chemical class:	KETONES
Purity	> 99.5
Process description:	Chemical synthesis from raw materials of mineral and/or petrochemical origin

Country of Origin

Harmonized Tariff Code:	2914390030
Country of production:	CHINA/GERMANY

GMO Statement

This produc	t or any	of its	ingredien	ts are	derived fror	n genetically	modified	organism	(GMO)
material :	Yes		No	Χ					

BSE Statement

The proc	luct contains	materials of	specific	risk from	bovine,	ovine or	caprine	animal	species:
	No		•						•

Organic Status

This product is suitable for use in a product bearing a claim of "Organic", or "made with Organic" as defined by 7 CFR Part 205 under the U.S National Organic Program: Yes (on request) No X

This product is certified as organic according to the requirements of Regulation (EC) 834/2007: Yes (on request) \Box No **X**

This product may comply with Regulation (EC) 834/2007 in terms of (certificate on request):

compliance with the objectives, principles and plant production standards for organic production compliance with the principles and plant production standards for organic production

2. Regulatory Status of ingredient(s)

This product or all components of the product have been listed on the following inventories:

Region	Inventory	Yes	No	Inventory Number
USA	TSCA	X		
EUROPE	EINECS/ELINCS	X		204-337-6
Canada	DSL/NDSL	X		
Japan	ENCS	X		3-1258 // 4-125
Australia	AICS	X		
New Zealand	NZIoC	X		
Philippines	PICCS	X		
Korea	ECL	X		KE-02716
China	IECSC	X		
Taiwan	TCSI			



3. Hazard identification (please see our SDS)

4.<u>Transportation</u> (please see our SDS)

5.<u>CMR Substances</u> (please see our SDS)

6.<u>Animal testing</u> (the product has not been tested on animals for cosmetic purposes.)

7. Fragrance Specific Information

EU fragrance Allergens

Allergens certificate available on request.

IFRA Certificate

IFRA certificate available on request.

Regulation (EC) 1223/2009 on Cosmetics Products

Substance(s) which are mentioned in the Annexes to the EU Cosmetics Regulation (other than preservatives, dyes, UV filters, fragrance allergens): None present **X**

Name	CAS-No.	Annex/Ref.	Percentage

Other fragrance materials, restricted by major customers

Halogenated and Nitromusk substances:	Nor	ne present 🛛 🗙
Name of Halogenated / Nitromusk	CAS-No.	Percentage
Musk Ketone	81-14-1	
Musk Xylol	81-15-2	
Rosalin	90-17-5	

Polycyclic musk compounds	None present 🗙			
Name of Polycyclic musk	CAS-No.	Percentage		
Celestolide® (Crysolide® , ADBI)	13171-00-1			
Galaxolide® (Abbalide®, HHCB)	1222-05-5			
Phantolide® (AHDI)	15323-35-0			
Tonalide® (Fixolide®, AHTN)	21145-77-7			
Traseolide® (ATII)	68140-48-7			

Macrocyclic musk compounds	None present 🗙				
Name of Macrocyclic Musk	CAS-No.	Percentage			



Additives and solvents

Added solvents	None p	resent 🗙	Antioxida	nts/Stabilizers №	None present 🛛 🗙
Ingredient name		Percentag	e Ingredien	t name	Percentage
Benzyl benzoate			BHA		
Diethyl phthalate			BHT		
Dipropyleneglycol			Tocophero	ว่	
Ethanol					
Ethyl diglycol					
Hercolyn					
Isopropyl myristate					
Propyleneglycol					
Triacetin					
Triethyl citrate					

Residual solvents	None present	Preservatives	None present 🛛 🗙
Ingredient name	Percentage	Ingredient name	Percentage
Benzene	< 10 ppm	Methyl benzoate	
Toluene		Ethyl benzoate	
Hexane		Butyl benzoate	
Ethanol		Isobutyl benzoate	
Methanol	approx. 260 ppm	Benzyl alcohol	

Emulsifiers	Non	e present 🛛 🗙	UV filters	No	one present 🛛 🗙
Ingredient name		Percentage	Ingredient name		Percentage

Colors & dyes	None prese	ent 🗙		
Ingredient name			Color Index Number	Percentage

8. Volatile Organic Chemicals according to Swiss VOC-legislation (dated 12.11.1997/ 9.2.1999)

Percentage 0

9. Nanomaterials

This product contains nanomaterials as defined in Regulation (EC) 1223/2009 on Cosmetic Products and Recommendation 2011/696/EU on the definition of nanomaterial.

Yes No X



10. <u>California Proposition 65</u> None present

Information available on request.

Name	CAS-No.	Percentage
		Percentage 100,000

11. CITES - Convention on International Trade in Endangered Species

The product is listed in the Appendice to the CITES convention.

X The product is exempt from CITES requirements.

12. Supplier Guarantee

The information contained herein is to the best of our knowledge reliable at the below-mentioned date. It has been compiled from the currently existing information in our files received from our suppliers and/or the data obtained from the analysis made in our laboratory. It is provided for your guidance only. It is the ultimate responsibility of our customers to ensure the suitability of the product for their particular purpose by further testing if need be. This document cancels and replaces all previously issued documents for this product.

Version 4 Revised 13/06/16



12 December 2018

G.M.O. CERTIFICATE

Product : BENZOPHENONE CRYST.

To our knowledge from the currently existing information in our files received from our suppliers, we certify that the above-mentioned product

- does not contain,
- does not consist of,
- is not derived from, and
- is not produced with the aid of

genetically modified organisms (GMO) or derivative ingredients. Therefore, it is exempt from the requirements of the EU Regulations 1829/2003/EC and 1830/2003/EC.

This document is electronically generated and therefore it is not signed



IFRA CONFORMITY CERTIFICATE

To our knowledge from the currently existing information in our files received from our suppliers and/or the data obtained from the analysis made in our laboratory, we certify that the following product:

BENZOPHENONE CRYST

is not restricted by the Standards of the International Fragrance Association (IFRA 48th Amendment / published June 2015), provided it is used at the following maximum concentration levels in the finished product⁽¹⁾:

Class 1	Not restricted ⁽²⁾	Class 6	Not restricted ⁽²⁾
Class 2	Not restricted	Class 7A	Not restricted
Class 3A	Not restricted	Class 7B	Not restricted
Class 3B	Not restricted	Class 8A	Not restricted
Class 3C	Not restricted	Class 8B	Not restricted
Class 3D	Not restricted	Class 9A	Not restricted
Class 4A	Not restricted	Class 9B	Not restricted
Class 4B	Not restricted	Class 9C	Not restricted
Class 4C	Not restricted	Class 10A	Not restricted
Class 4D	Not restricted	Class 10B	Not restricted
Class 5	Not restricted	Class 11	Not restricted

(1) the concentration of a fragrance ingredient should not exceed the usual concentration of the fragrance compound in the finished product.

(2) IFRA would recommend that any material used to impart perfume or flavour in products intended for human ingestion should consist of ingredients that are in compliance with appropriate regulations for foods and food flavourings in the countries of planned distribution and, where these are lacking, with the recommendations laid down in the Code of Practice of IOFI (International Organisation of the Flavour Industry).

Please note this certificate does not include food status conformity check. A separate document, wich may be available depending on the product, is needed for such purpose.

Contains no substances restricted by IFRA standards and bears no IFRA specification.

It may contain the following substance, for which a prohibition standard exists:

BENZENE

< 0,0001%

Note: the level of benzene has to be kept as low as practicable and should never exceed 1 ppm in the fragrance compound

The IFRA Standards regarding use restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.

It is the ultimate responsibility of our customer to ensure the safety of the final product (containing this fragrance ingredient) by further testing if need be.

Version Date: 28 September 2016



BENZOPHENONE CRYST.

Revision date: 05-08-2016 Version: 3.0/CLP/EN

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1. Identification of the substance/mixture

Trade name:	BENZOPHENONE CRYST.
Substance name:	BENZOPHENONE
CAS Number:	119-61-9
CE Number:	204-337-6
REACH Registration number:	01-2119488052-40

1.2. Relevant identified uses of the substance or mixture and uses advised against

Raw material for the manufacture of fragrances and/or flavourings.

1.3. Details of the supplier of	of the safety data sheet
Company: Address:	Madar Corporation Limited 19 - 20 Sandleheath Industrial Estate, Fordingbridge, SP6 1PA
Telephone:	01425 655 555
E-mail:	technical@madarcorporation.co.uk
1.4. Emergency telephone r	umber
	01425 655 555

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Specific target organ toxicity following repeated exposure - Category 2 - H373 Hazardous to the aquatic environment, long-term (chronic) - Category 2 - H411

2.2. Label Elements

Hazard pictograms:



Signal Word: Warning

Hazard statements:

H373 – May cause damage to organs through prolonged or repeated exposure. H411 – Toxic to aquatic life with long lasting effects.

Precautionary statements:

P260 – Do not breathe dust/fume/gas/mist/vapours/spray.

- P273 Avoid release to the environment.
- P314 Get medical advice/attention if you feel unwell.
- P391 Collect spillage.

P501 – Dispose of contents/container according to local legislation.

2.3. Other hazards

No Information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Chemical name: CAS number: EC number:

BENZOPHENONE 119-61-9 204-337-6



BENZOPHENONE CRYST.

CAS No

204-337-6

EC No 119-61-9

Revision date: 05-08-2016 Version: 3.0/CLP/EN

Hazardous constituents:

 Chemical Name
 % (w/w)

 BENZOPHENONE
 ≥50

Classification according to Regulation 1272/2008

STOT RE 2 - H373 Aquatic Chronic 2 - H411

See the full text of the hazard statements in section 16.

3.2. Mixtures

Not applicable.

SECTION 4. FIRST-AID MEASURES

4.1. Description of necessary first aid measures

Ingestion:	Rinse mouth with water. Obtain medical advice. Keep at rest. Do not induce vomiting.
Eye contact:	In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes and seek medical advice.
Inhalation:	Remove person to fresh air and keep at rest.
	Seek immediate medical advice.
Skin contact:	Take off immediately all contaminated clothing.
	Thoroughly wash affected skin with soap and water.
	Seek medical attention if symptoms persist.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed No information available.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Water spray, carbon dioxide, dry chemical powder or appropriate foam. For safety reasons do not use full water jet.

5.2. Special hazards arising from the substance or mixture

Known or Anticipated Hazardous Products of Combustion: Emits toxic fumes under fire conditions.

5.3. Advice for firefighters

High temperatures can lead to high pressures inside closed containers. Avoid inhalation of vapors that are created. Use appropriate respiratory protection. Do not allow spillage of fire to be poured into drains or watercourses. Wear self-contained breathing apparatus and protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate surronding areas. Ensure adequate ventilation. Keep unnecessary and unprotected personnel from entering. Do not breathe vapor/spray. Avoid contact with skin and eyes. Information regarding personal protective measures: see section 8.

6.2. Environmental precautions

To avoid possible contamination of the environment, do not discharge into any drains, surface waters or groundwaters.

6.3. Methods and materials for containment and cleaning up

Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash).

Place in covered containers using non-sparking tools and transport outdoors.

Avoid open flames or sources of ignition (e.g. pilot lights on gas hot water heater).

Ventilate area and wash spill site after material pickup is complete.

6.4. Reference to other sections

Information regarding exposure controls, personal protection and disposal considerations can be found in sections 8 and 13.



BENZOPHENONE CRYST.

Revision date: 05-08-2016 Version: 3.0/CLP/EN

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not store or handle this material near food or drinking water. Do not smoke. Avoid contact with the eyes, skin and clothing. Wear protective clothing and use glasses. Observe the rules of safety and hygiene at work. Keep in the original container or an alternative made from a compatible material.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed and preferably full containers in a cool, dry and ventilated area, protected from light. Keep away from sources of ignition (e.g. hot surfaces, sparks, flame and static discharges). Keep away from incompatible materials (see section 10).

7.3. Specific end use(s)

No information available.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control parameters

Components with occupational exposure limits: None known.

8.2. Exposure controls	
Appropriate engineering controls:	Measures should be taken to prevent materials from being splashed into the body.
	Provide adequate ventilation, according to the conditions of use. Use a mechanical exhaust if required.
Eye/Face protection:	Chemical safety goggles are recommended. Wash contaminated goggles before reuse.
Hand Protection:	Chemical-resistant gloves are recommended. Wash contaminated gloves before reuse.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
Respiratory Protection:	In case of insufficient ventilation, use suitable respiratory equipment.
Environmental exposure controls:	Emissions from ventilation or process equipment should be checked to ensure they comply with environmental protection legislation.
	In some cases, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

5.1. Information on basic physical and ci	lennear properties
Appearance:	Solid
Colour:	Conforms to standard
Odour:	Conforms to standard
Odour theshold:	Not determined
pH:	Not determined
Melting point/freezing point:	47
Boling point/boiling range:	306
Flash point:	145 °C
Evaporation rate:	Not determined
Flammability:	Not determined
Lower flammability/Explosive limit:	Not determined
Upper flammability/Explosive limit:	Not determined
Vapour pressure:	< 0,1 mbar to 20°C
Vapour Density:	Not determined
Density:	Not determined
Relative density:	Not determined
Water solubility:	INSOLUBLE IN WATER
Solubility in other solvents:	SOLUBLE IN ETHANOL
Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity, dynamic:	Not determined
Viscosity, kinematic:	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not determined



BENZOPHENONE CRYST.

Revision date: 05-08-2016 Version: 3.0/CLP/EN

9.2. Additional information

No information available.

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to Avoid

Conditions to Avoid: Excessive heat, flame or other ignition sources.

10.5. Incompatible materials

Avoid contact with strong acids and bases and oxidizing agents.

10.6. Hazardous decomposition products

During combustion may form carbon monoxide and unidentified organic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity STOT-single exposure STOT-repeated exposure Aspiration hazard Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. Based on the data available, the criteria for classification are not met. May cause damage to organs through prolonged or repeated exposure. Based on the data available, the criteria for classification are not met.

SECTION 12. ECOOLOGICAL INFORMATION

12.1. Toxicity

Assessment: Toxic to aquatic life with long lasting effects. Experimental/calculated data: No information available.

12.2. Degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Soil mobility

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

See also sections 6, 7, 13 and 15 Do not allow to get into waste water or waterways.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of in accordance with national and local environmental regulations.



BENZOPHENONE CRYST.

Revision date: 05-08-2016 Version: 3.0/CLP/EN

SECTION 14: TRANSPORT INFORMATION

	ADR/RID/ADN	IMDG	IATA-ICAO
14.1. UN Number	UN3077	UN3077	UN3077
14.2. UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BENZOPHENONE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BENZOPHENONE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BENZOPHENONE)
14.3. Transport Hazard Class(es)	9	9	9
14.4. Packing Group	III	Ш	III
14.5. Environmental hazards Additional information	Yes	Yes	Yes

14.6 Special precautions for user None known

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture No information available

15.2. Chemical safety assessment

No information available

SECTION 16: OTHER INFORMATION

Full text of the R-phrases, hazard statements and precautionary statements mentioned in section 3:

H373 - May cause damage to organs through prolonged or repeated exposure.

H411 – Toxic to aquatic life with long lasting effects.

The information included in this safety data sheet is based on the available data at the moment this document is issued. It is meant to be a description of safety requirements for our product and does not stand for a guarantee of its properties. The user is responsible for taking all necessary steps leading to compliance with local rules and legislation.



SPECIFICATION SHEET

VERSION 4,00 VERSIO	ON DATE 05/12/06	PRINT DATE 09/11/18
PRODUCT APPLICATIONS IUPAC NAME SYNONYMS	METHANONE, DIPHENYL-	intended for the manufacture of flavours and/or fragrances.
FORMULA MOLECULAR WEIGHT CAS	C13 H10 O 182,00 119-61-9	O II
EINECS	204-337-6	
FEMA TARIFF NUMBER	2134 2914390030	

REACH REGISTRATION NO. 01-2119488052-40

SPECIFICATIONS

ASPECT AT 20° C	CRYSTALLINE SOLID (POWDER)
COLOUR	WHITE TO PALE YELLOW
ODOUR	SWEET, ROSY, SLIGHTLY HERBAL
TASTE	SLIGHTLY CITRIC, FRUITY
DENSITY A 20° C (g / ml)	-
DENSITY 25/25	-
REFRACTIVE INDEX nD20	-
REFRACTIVE INDEX nD25	-
OPTICAL ROTATION (°)	/
BOILING POINT (°C)	306
MELTING POINT (°C)	47
FLASH POINT (°C)	145,00
ASSAY (% GC)	> 99.5
ACID VALUE (mg KOH/g)	-
SOLUBILITY	INSOLUBLE IN WATER
VAPOUR PRESSURE	< 0,1 mbar to 20ºC
OTHER SOLUBILITIES	SOLUBLE IN ETHANOL

OTHER TECHNICAL DATA

STABILITY AND STORAGE

KEEP IN TIGHTLY CLOSED CONTAINER IN A COOL AND DRY PLACE, PROTECTED FROM LIGHT. WHEN STORED FOR MORE THAN 24 MONTHS, QUALITY SHOULD BE CHECKED BEFORE USE.

WE BELIEVE THE ABOVE INFORMATION TO BE CORRECT BUT WE DO NOT PRESENT IT AS ALL INCLUSIVE AND AS SUCH SHOULD BE USED AS A GUIDE. IT IS THE SOLE RESPONSIBILITY OF THE RECEIVER OF OUR PRODUCT TO COMPLY WITH EXISTING REGULATIONS AND INSTRUCTIONS.

THIS PRODUCT HAS NOT BEEN FILTERED DUE TO TECHNOLOGICAL REASONS. WE RECOMMEND NOT TO USE IT UNLESS FILTERED WHEN USED AS A RAW MATERIAL IN FOOD INTENDED FOR FINAL CONSUMERS.