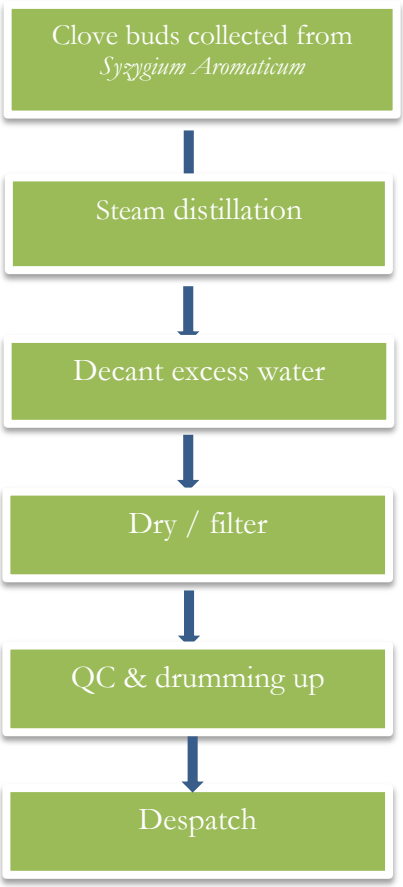
CERTIFICATE OF ANALYSIS

PRODUCT DESCRIPTION	CLOVE BUD OIL
APPEARANCE	PALE YELLOW TO BROWN LIQUID
BATCH NUMBER	4397301
Best Before	May 2023

ANALYSIS	RESULTS	SPECIFICATION
Refractive Index 20degC	1.535	>= 1.528 <= 1.537
Optical Rotation	-0.6	>= -2.0 <= 2.0
Specific Gravity (20c)		>= 1.030 <= 1.063

Production of Clove Bud Oil



SAFETY DATA SHEET

Printed on 14 May 2020

CLP: According to 2015/830/EU

Code Number *RCP-79360*

Version 11 Revised 10/10/2019 14:24:56

Section 1. Identification of the substance / mixture and of the company / undertaking

1.1 Product Identifier

Product Name	CLOVE BUD OIL
Code Number	RCP-79360
Alternative Name	
REACH Reg No	01-2119970580-36-XXXX

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

Concentrated material for manufacturing purposes only

1.3 Details of the supplier of the safety data sheet

Tuli A Tuli Laboratories
Pezinská 5104
90101 Malacky
Slovakia

Telephone Number	+421 950 597 664
Email Address	tuliatuli@tuliatuli.sk

1.4 Emergency Tel No +421 (0)2 54-774-166

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

SS 1B	Skin sensitisation, category 1B
EDI 2	Eye damage/irritation, category 2

CLP Label elements

CLP classification according to Regulation (EC) No 1272/2008

Hazard Pictograms

Signal Word Warning

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Hazard Statements

H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

Precautionary Statements

P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves and eye protection
P305	IF IN EYES:
P351	Rinse cautiously with water for several minutes.
P362+P364	Take off all contaminated clothing and wash it before reuse.
P501	Dispose of contents and container in accordance with local regulation.

2.3 Other Hazards

Contains Eugenol which may produce an allergic reaction

No further information available at this time

Section 3. Composition / information on ingredients

Any percentage values listed here for hazardous components are for illustrative purposes only

3.1 Substances

Description	CLOVE BUD OIL
EC/EINECS	284-638-7
CAS Number	84961-50-2
USCAS Number	8000-34-8

Hazardous components

ID Numbers	Chemical Name, Classification and Hazards	Conc (%)
CAS 97-53-0 EINECS 202-589-1 REACH	Eugenol EDI 2;SS 1B H317,H319	73.0000
CAS 87-44-5 EINECS 201-746-1 REACH	Caryophyllene AH 1 H304	16.0000
CAS 93-28-7 EINECS 202-235-6 REACH	Eugenyl acetate ATO 4(1670) H302	8.0000

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Refer to section 16 for the wording of listed classification and hazard statement codes

Section 4. First Aid measures

Take phrases in sections 2 into account

4.1 Description of first aid measures

After inhalation

Remove from the exposure area to fresh air. Contact a doctor if necessary.

After skin contact

Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical advice if irritation persists or there is any sign of tissue damage.

After eye contact

Flush with plenty of water and seek medical advice if necessary.

After ingestion

Wash mouth with plenty of water and obtain medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further information available at this time

4.3 Indication of immediate medical attention and special treatment needed

No further information available at this time

Section 5. Fire-fighting measures

5.1 Extinguishing Media

Carbon dioxide, foam or dry powder
DO NOT USE A DIRECT WATER JET.

5.2 Special hazards arising from the substance or mixture

May produce Carbon dioxide and unidentified organic compounds.

5.3 Advice for fire-fighters

Wear protective clothing and avoid inhalation of vapours.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Avoid inhalation, skin and eye contact.
Ensure proper ventilation.

6.2 Environmental precautions

Do not discharge directly into drains or the soil. Keep away from surface and ground

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water

6.3 Methods and material for containment and cleaning up

Soak up spillage with sand or other inert absorbant material such as earth or vemiculite; transfer used material to a suitable waste container and dispose in accordance with regulations.

6.4 Reference to other sections

Refer to information in Sections 7, 8 and 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Maintain good occupational and personal hygiene. Avoid inhalation and contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly sealed original containers away from ignition sources and in a cool place.

7.3 Specific end use(s)

No further information available

Section 8. Exposure controls / personal protection

8.1 Control Parameters

No information available

8.2 Exposure controls

Engineering controls

No information available

Individual protection measures

Refer to Section 5 for specific fire/chemical personal protective equipment advice. Always wash routinely before breaks, meals and at the end of the work period.

Eye/face protection

Wear safety goggles.

Hand protection

Wear chemically resistant disposable gloves.

Other skin protection

Wear overalls. Always wash routinely before breaks, meals and at the end of the work period.

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Respiratory protection

Not generally required. Use inhalation protection in poorly ventilated areas

Thermal hazards

No information available

Environmental exposure controls

No information available

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

FLASH POINT (°C)	>65
Colour	PALE YELLOW TO BROWN
Aroma	CHARACTERISTIC, PHENOLIC SPICY
Solubility	INSOLUBLE

9.2 Other information

No further information available

Section 10. Stability and reactivity

10.1 Reactivity

Not determined

10.2 Chemical Stability

Not determined

10.3 Possibility of hazardous reactions

Not determined

10.4 Conditions to avoid

Extreme temperatures

10.5 Incompatible materials

Highly reactive chemicals which may produce unknown reaction products and so cause additional hazards.

10.6 Hazardous decomposition products

Not determined

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Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion / irritation

No data available

Serious eye damage / irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STO-single exposure

No data available

STO-repeated exposure

No data available

Aspiration hazard

No data available

Information on likely routes of exposure

No data available

Symptoms related to the physical, chemical and toxicological characteristics

No data available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available

Interactive effects

No data available

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Other information

No data available

Section 12. Ecological information

12.1 Toxicity

No data available; avoid soil, surface water and water-bearing stratum contamination.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

Section 13. Disposal considerations

Please refer to the information in section 8 (Exposure controls and personal protection)

13.1 Waste treatment methods

Dispose in accordance with the law and local regulations. Treat as trade effluent.

Section 14. Transport information

14.1 UN number	Not Regulated
14.2 UN proper shipping name	CLOVE OIL
14.3 Transport hazard class(es)	
14.4 Packing group	
Tunnel Code	

14.5 Environmental Hazards

No relevant information available

14.6 Special precautions for user

No relevant information available

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14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No relevant information available at this time

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out

Section 16. Other information

Full list of precautionary phrases

P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves and eye protection
P305	IF IN EYES:
P351	Rinse cautiously with water for several minutes.
P362+P364	Take off all contaminated clothing and wash it before reuse.
P501	Dispose of contents and container in accordance with local regulation.

Wording of any hazard classes listed in section 3

ATO 4	Acute toxicity, oral, category 4
AH 1	Aspiration hazard, category 1
SS 1B	Skin sensitisation, category 1B
EDI 2	Eye damage/irritation, category 2

Wording of any hazard statements listed in section 3

H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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IFRA Conformity Certificate

Compound Name : CLOVE BUD OIL

We certify that the above compound is in compliance with the standards of the INTERNATIONAL FRAGRANCE ASSOCIATION (IFRA-48th amendment), provided it is used at a maximum concentration level of:

IFRA category (*)	Maximum level of use (%)(w/w) (**)
1 (***)	0.27 (***)
2	0.27
3A	0.68
3B	0.68
3C	0.68
3D	0.68
4A	0.68
4B	0.68
4C	0.68
4D	0.68
5	0.68
6 (***)	5.87 (***)
7A	0.55
7B	0.55
8A	0.68
8B	0.68
9A	0.68
9B	0.68
9C	0.68
10A	0.68
10B	0.68
11	100.00

(*) See annex for definition of IFRA categories
(**) Usage limit N/A = Not Applicable; no IFRA restrictions
(***) 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

For other kinds of application or use at higher concentrations, a new safety evaluation may be needed; please contact F.D. Copeland and Sons Ltd.

The IFRA Standards regarding restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITIUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.
Evaluation of individual Fragrance ingredients is made according to the safety standards contained in the relevant section of the IFRA Code of Practice.

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

The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. It is your responsibility to ensure that the usage of the fragrance ingredients and the levels of such usage are permitted at all times according to the relevant laws and regulations

Annex: Definition of IFRA QRA categories

Finished Product Types	IFRA category
Lip Products of all types (solid and liquid lipsticks, balms, clear or colored, etc.) Children's Toys	1
Deodorant and Antiperspirant Products of all types including any product with intended or reasonably foreseeable use on the axillae or labelled as such (spray, stick, roll-on, under-arm, deo-cologne and body spray, etc.) Nose Pore Strips Fragranced Bracelets	2
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave) - EdT	3A
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave) - Fine Fragrance	3B
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc.) including eye care Men's Facial Creams and Balms Baby Creams, Lotions, Oils Body Paint for Children	3C
Tampons	3D
EdT - Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne,eau de cologne, Eau de Parfum or Parfum Ingredients of Perfume Kits Scent Pads, Foil packs Scent Strips for hydroalcoholic products	4A
Fine Fragrance - Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne,eau de cologne, Eau de Parfum or Parfum	4B
Hair Styling Aids Sprays of all types (pumps, aerosol sprays, etc.) Body Creams, Oils, Lotions of all types (except baby creams, lotions and oils) Body sprays (including Body Mist) with no intended or reasonably foreseeable use on the axillae Fragrance Compounds for Cosmetic Kits Foot Care Products Hair deodorant Body Paint (except those for children)	4C
Fragrancing Cream, Solid Perfumes	4D
Facial Masks Women's Facial Creams/Facial Make-up, Hand Cream, Hand sanitizers, Baby Powder and Talc, Hair Permanent and other hair chemical treatments (e.g. relaxers) but not hair dyes, Wipes or Refreshing Tissues for Face, Neck, Hands, Body, Dry Shampoo or Waterless Shampoo	5(*) 5
Mouthwash, including Breath Sprays, Toothpaste	6
Intimate Wipes, Baby Wipes	7A
Insect Repellent (intended to be applied to the skin)	7B
Make-up Removers of all types (not including face cleansers), Hair Styling Aids Non-Spray of all types (mousse, gels, leave-conditioners, etc.), Nail Care, Powders and talcs, all types (except baby powders and talcs)	8A
Hair Dyes	8B
Conditioner (Rinse-Off), Liquid Soap, Shampoos of all types (including baby shampoos), Face Cleansers of all types (washes, gels, scrubs, etc.), Shaving Creams of all types (stick, gels, foams, etc.), All Depilatories (including waxes for mechanical hair removal), Body Washes of all types (including baby washes) and Shower Gels of all types, Bar Soap (Toilet Soap), Bath Gels, Foams, Mousses, Salts, Oils and Other Products added to bathwater	9A
Feminine hygiene - pads, liners, Toilet paper, Wheat bags	9B
Facial tissues, Napkins, Paper towels, Other Aerosols (including air freshener sprays and air freshener pump sprays, but not including deodorants/antiperspirants, hair styling aids sprays)	9C

Annex: Definition of IFRA QRA categories - continued

Finished Product Types	IFRA category
Handwash Laundry Detergents of all types including concentrates, Fabric Softeners of all types including fabric softener sheets, Household Cleaning Products, Other Types (fabric cleaners, soft surface cleaners, carpet cleaners, etc.), Machine Wash Laundry Detergents (liquids, powders, tablets, etc.) including laundry bleach and concentrates, Hand Dishwashing Detergent including concentrates, Hard Surface Cleaners of all types (bathroom and kitchen cleansers, furniture polish, etc.), Shampoos for pets, Dry cleaning kits, Scented gloves, socks, tights with moisturizers	10A
Diapers, Toilet seat wipes	10B
All non-skin contact or incidental skin contact including: Candles, Air Fresheners and Fragrancing of all types (concentrated aerosol with metered doses (range 0.05-0.5mL/spray), plug-ins, solid substrate, membrane delivery, electrical), Air Delivery Systems, Cell phone cases, Pot pourri, powders, fragrancing sachets, liquid refills for air fresheners (non-cartridge systems), Reed diffusers, Liquid refills for air fresheners (cartridge systems), Shoe Polishes, Deodorizers/Maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders), Insecticides (mosquito coil, paper, electrical, for clothing etc.) excluding aerosols, Scent delivery system using a dry air technology that releases a fragrance without sprays, aerosols or heated oils (technology of nebulization), Air freshening crystals, Toilet Blocks, Joss Sticks or Incense Sticks, Machine Dishwash Detergent and Deodorizers, Machine-only Laundry Detergent (e.g. liquitabs)**, Plastic articles (excluding toys), Fuels, Fragranced lamp ring, Scratch and Sniff (sampling technology), Paints, Cat Litter, Animal Sprays (all types), Treatment products for textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics), Floor Wax, Odored Distilled Water (that can be added to steam irons)	11

* Class 5, Facial masks: There are several types of masks: peel off (similar to rinse-off, rinse-off and leave-on (you only remove the excess with a facial tissue). To ease the split the most restrictive, i.e. leave-on is applied for all.

** Liquitabs corresponds to a dose of liquids wrapped in a film: no contact with hands is expected under normal conditions of use

The table was prepared with the intention to cover the vast majority of the products; however it may not cover some specific applications. In this case other classes may be attributed based on a specific risk assessment.

Allergen Analysis

Compound Name : CLOVE BUD OIL

flavour ingredient	CAS No.	Concentration present as a percentage (%) or 'A' for absent in flavour		
		Added as such	From natural & other sources	Total
alpha-iso-Methylionone	127-51-5	A	A	A
Amyl Cinnamal	122-40-7	A	A	A
Amylcinnamyl Alcohol	101-85-9	A	A	A
Anise Alcohol	105-13-5	A	A	A
Benzyl Alcohol	100-51-6	A	A	A
Benzyl Benzoate	120-51-4	A	A	A
Benzyl Cinnamate	103-41-3	A	A	A
Benzyl Salicylate	118-58-1	A	A	A
Butylphenyl Methylpropional (Lilial)	80-54-6	A	A	A
Cinnamal	104-55-2	A	A	A
Cinnamyl Alcohol	104-54-1	A	A	A
Citral	5392-40-5	A	A	A
Citronellol	106-22-9	A	A	A
Coumarin	91-64-5	A	A	A
Eugenol	97-53-0	A	73.30	73.30
Evernia Furfuraceae (Tree Moss) Extract	90028-67-4	A	A	A
Evernia Prunastri (Oak Moss) Extract	90028-68-5	A	A	A
Farnesol	4602-84-0	A	A	A
Geraniol	106-24-1	A	A	A
Hexyl Cinnamal	101-86-0	A	A	A
Hydoxycitronellal	107-75-5	A	A	A
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde (Lyral)	31906-04-4	A	A	A
Isoeugenol	97-54-1	A	A	A
Limonene	5989-27-5	A	A	A
Linalool	78-70-6	A	A	A
Methyl 2-Octynoate	111-12-6	A	A	A

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Ingredient Declaration for label

Compound Name : CLOVE BUD OIL

Suggested labelling for foodstuffs according to 1334/2008/EEC

Flavour labelling Natural Clove flavouring

Contains:

Legal Composition

List of flavouring categories and other ingredients in descending order of weight

Any substances which are restricted in food are listed below

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Food Allergen Declaration

According to 2007/68/EC

Compound Name : CLOVE BUD OIL

We have carefully reviewed the ingredients in this product.

Allergen Source	Present
Celery and products thereof	No
Crustaceans and products thereof	No
Eggs and products thereof	No
Fish and products thereof	No
Cereals containing gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) and products thereof	No
Lupin and products thereof	No
Milk and products thereof (including lactose)	No
Molluscs and products thereof	No
Mustard and products thereof	No
Nuts i.e. Almond, Hazelnut, Walnut, Cashew, Pecan nut, Brazil nut, Pistachio nut, Macadamia nut and Queensland nut and products thereof	No
Peanuts and products thereof	No
Sesame seeds and products thereof	No
Soybeans and products thereof	No
Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO2	No

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Vegetarian Declaration

Compound Name : CLOVE BUD OIL

Vegan	Y	No ingredients of animal origin or animal derivatives, including additives and processing aids
Vegetarian	Y	No ingredients of animal origin, including additives and processing aids. No egg or dairy; bee products are allowed
Ovo-lacto Vegetarian	Y	May include egg, dairy and bee products. No other ingredients of animal origin or animal derivatives, including additives and processing aids are allowed

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GMO Declaration

According to 1829/2003/EC

Compound Name : CLOVE BUD OIL

We have carefully reviewed the ingredients in this product for their potential genetically modified (GM) origin.The list includes ingredients which may be produced from other GM ingredients

Material	Present	Of GMO Origin
Chicory	No	-
Cotton	No	-
Maize	No	-
Potato	No	-
Rape	No	-
Soya	No	-
Sugar Beet	No	-
Tomato	No	-
Wheat	No	-

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PRODUCT SPECIFICATION

Product Name	:	CLOVE BUD OIL
Flash Point deg C	:	>65
Aroma / Taste	:	CHARACTERISTIC, PHENOLIC SPICY
Appearance / Physical State	:	PALE YELLOW TO BROWN LIQUID
Composition	:	ESSENTIAL OIL INCI Name: Eugenia caryophyllus bud oil

Refractive Index 20degC	>= 1.528	<= 1.537
Optical Rotation	>= -2.0	<= 2.0
Specific Gravity (20c)	>= 1.030	<= 1.063

Shelf Life : 12 Months
(if stored in full airtight containers, protected from heat and direct sunlight)

Version Number : 10 Version Date : 13 May 2020