

ISSN: 0972-2114


FRAGRANCES
FLAVOURS
Association of India

THE FAFAI JOURNAL

VOL.: XXI. NO.3 JULY - SEPTEMBER 2019





Ultra International

Fragrances, Flavours & Essential Oils



Quality Revolution

Ultra International delivers Quality, to enrich your lives, to fulfil your dreams and to improve your tomorrow. Ultra has envisioned its long-term future in India & World wide to actively fill people's lives with moments of JOY and COMFORT. To fill your hearts with HAPPINESS and give you an experience of the Global Standard in Quality.

This is Ultra's commitment towards the Globe.

 www.ultrainternational.com  ultra@ultrainternational.com  +91-120-4388500

- GLOBAL NETWORK -

INDIA | NETHERLANDS | INDONESIA | SINGAPORE | USA | AUSTRALIA

THE FAFAI JOURNAL

VOL. XX1 NO. 3 July - September 2019

DEDICATED TO EXCELLENCE IN FRAGRANCES & FLAVOURS

EDITORIAL BOARD

Mr. Rishabh C. Kothari

Hon. Editor

Mr. Kamlesh Hiralal Shah

Printer & Publisher

Mr. Ashish Jhunjunwalla

Mr. Ankit Agrawal

Mr. Geemon Korah

Dr. Geethanjali Ranade

Mr. Krish Hirani

Mr. Shakti Vinay Shukla

Dr. Sitaram Dixit

CONTENTS

PAGE NO.

First Persons – Presidents Message	3
FAFAI News	25
Indiascope	33
Worldview	49
Overview on Agarwood -Dr. Kanwal Deep	55
Essential Oil growth models and their practical Applications A Novel Approach (Review)	67
Standardizing Essential Oils for Purity and Quality - A dire consumer Need	81
Essential Oil Review - Hemlock Oil	91
All about Black Gold	98
Calender of Events	100
Market Indicators	105
Advertisers' Index	126



Association of India

FRAGRANCES & FLAVOURS

ASSOCIATION OF INDIA

N. R. Shah Hall

2-B, Court Chambers, Second Floor

35, Sir Vithaldas Thackersey Marg,

Mumbai - 400020

Tel.: 022 2209 0184 / 2207 6075

E-mail ID : mail@fafai.org

Website : www.fafai.org

Inland ₹500/-

Single Copy ₹ 150/-

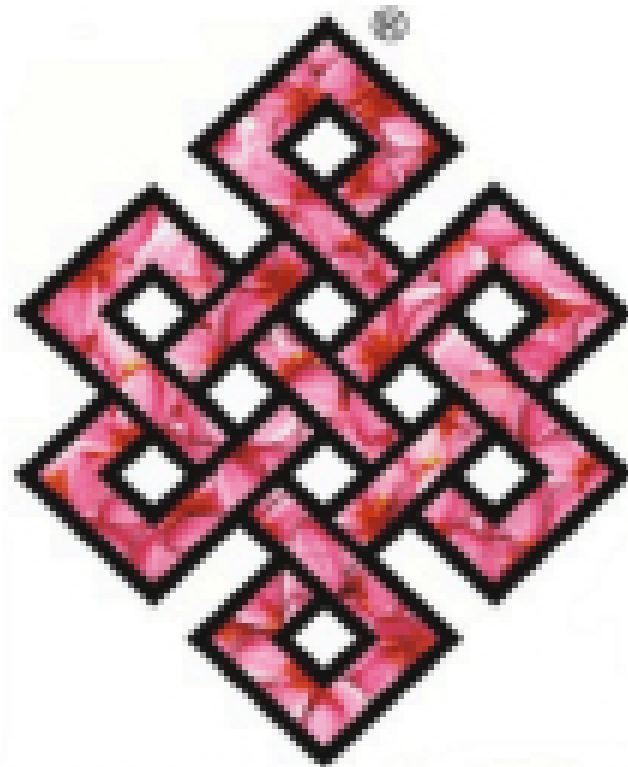
By Air \$ 40

View and Opinions expressed in this publications by various authors are not necessarily those of Association. The Publisher and Editor are in no way responsible for these views and may not necessarily subscribe to these views.rinted and Published

Printed and Published by Kamlesh Hiralal Shah on behalf of **Frgrances & Flavours Association of India** , 2-B, Court Chambers, 35, Sir Vithaldas Thackersey Marg, Mumbai - 400020 and printed at **Onlooker Press** , 16 Sasoon Dock, Colaba, Mumbai - 400 005, **Editor Rishabh C. Kothari**

BMV FRAGRANCES (P) LTD

Resinoids | Absolutes | Super Absolutes | Essential Oils | Reconstitutions | Specialities



www.bmvfragrances.com

Address:

J- 44, 45 & 46, Surajpur Industrial Area, Site -V
Kasna, Gautam Budha Nagar, Greater Noida

Uttar Pradesh - 201308, India

Email: bmw@bmvfragrances.com

Telephone : +91 8800397839, +91 8800397840





Dear Friends,

Greetings.

I feel humbled in penning this Editorial for the first time in my capacity as the President of our Association. I first joined the FAFAI Managing Committee in 1999 under the Presidency of Shri Kishore Satoskar and it has been a journey of learning ever since. I was handed over the reins of the FAFAI Journal first in 2003 and through the Journal I have had the privilege of not only bringing to you the latest news, developments and learnings in the field of fragrances and flavours but through the Editorial page share with you my views and ideas on myriad of subjects.

Today I would like to share my personal development story which began in 1991 when I was first introduced to a practice of meditation and self-development called Heartfulness (www.heartfulness.org). Heartfulness is a simple system of meditation, which, with a bit of practice, can help us achieve happier and more balanced lives. Of course, it does not remove all of life's difficulties but it reveals inner resources which help us deal with them. I believe practicing it has helped me in experiencing the wisdom of the heart and, in doing so, one also learns to let go of fear and to trust ourselves and our intuition. One also becomes calmer, clearer, and thus more effective.

Why am I sharing all this with you? I sincerely believe that we are blessed to be in an industry which is a unique confluence of both science and art. In our industry we are required to balance the requirements of both of beauty and functionality, of uniqueness and acceptability, of price and affordability, and similarly, we also need to balance our lives, the temporal and the spiritual, our outer and inner lives, the needs of the body and that of the soul, such that our lives are a balanced confluence of the mind and the heart. Our craft is nothing but a reflection of our lives and if we cannot be happy and joyous inside, our external expression of the same in the beauty and charm of our creations is unlikely to be there.

Therefore friends, as we seek greater victories in the marketplace, seek to create newer palettes for our customer or secure newer markets for our businesses, let us not forget that at the center of all this enterprise is 'us' ourselves, whom we often neglect. Let us pause for a bit from all the frenzy all around us and see if we could do better with ourselves. Let us reevaluate our priorities, let us recalibrate and balance our lives, and let us seek to listen to the heart and live by the heart. Each one of us has an individual and unique journey of self-discovery, I personally found mine through Heartfulness and invite all of you to seek and experience yours for yourself.

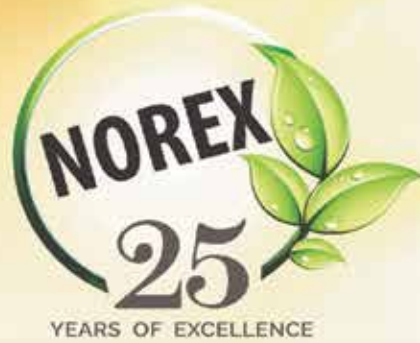
Wishing you all the very best for the coming Festive Season.

With fragrant wishes,

Rishabh C. Kothari

rck@ckc.in

www.norex.in



WORLD OF POSIBILITIES



FLAVOURS - FRAGRANCES - MENTHOL - MINT OILS - ESSENTIAL OILS

INSPIRED by *Nature*

NOREX FLAVOURS PRIVATE LIMITED

A Star Export House Recognised by Government of India.

Gajroula Chandpur Road,
MANDI DHANAURA - 244231
Distt Amroha, U.P., INDIA

Unit -02, Amroha Road,
DHANAURA - 244231
Distt Amroha, U.P., INDIA

Tel: +91-5924-273095 / 273241
Fax: +91-5924-273328/275318
email : sales@norex.in

Noida Office : 606, 6th Floor, Wave Silver Tower,
Sector 18, Opp. Sector 18 Metro Station,
Noida - 201301, U.P. INDIA | +91 120 2664141

Contact Sales @ +91-7055201570 / 7060297400

Local Sales support is also available in Chennai and Mumbai Regions



Sacheerome - A Sojourn in the World of Fragrances & Flavours

Aerosols: Energize The Inner You! Creating a fragrant equilibrium, in between the dispersion of liquid in the shape of vapors to establish a connection of mind, body and soul, is always undertaken by Sacheerome's master craftsmen. We, being a creative house, understand the intricacies of the Indian & Global Aerosols consumers and are a best fit to provide distinct fragrant energy in day to day life.



CDL



Cluster



HCSD



Storage

Sacheerome Private Limited

F-89/4/2, Okhla Industrial Area, Phase -1,
New Delhi - 110020. India. T: +91-11-47311111.
1007, 10th Floor, K.P. Aurum Building, Marol Maroshi Road,
Marol, Andheri East, Mumbai - 400059. India.
T: +91-22- 29200138, +91-22- 29202027 & 2028.
E: info@sacheerome.com W: www.sacheerome.com



SACHEEROME

Fragrances & Flavours



aromas from NATURE



www.plantlipids.com

Essential Oils

- Ajowan
- Black Pepper
- Calamus
- Carrot Seed*
- Celery Seed
- Clary Sage*
- Clove
- Coriander Seed
- Cumin Seed
- Curcuma Aromatica
- Curry Leaf
- Davana
- Dill Weed*
- Fennel Seed
- Galangal
- Geranium*
- Ginger
- Java Galangal
- Lavender*
- Lavandin Grosso*
- Mace
- Marjoram*
- Nutmeg
- Palmrosa
- Patchouli*
- Parsley Seed
- Turmeric
- Vetivert*

Oleoresins

- Black Pepper
- Capsicum
- Cardamom
- Celery Seed
- Clove Bud
- Coriander Seed
- Fennel Seed
- Ginger
- Mace & Nutmeg
- Rosemary
- Saffron*

Eco Series

- Oils**
 - Cardamom
 - Lavender*
 - Geranium
 - Vetivert
 - Ylang Ylang*
- Resinoids**
 - Benzoin
 - Labdanum
 - Oakmoss
 - Olibanum
 - Tolubalsam
 - Styrax

Gums

- Oils**
 - Elemi
 - Galbanum
 - Myrrh
 - Olibanum Somalia
 - Opoponax
 - Styrax
- Resinoids**
 - Benzoin
 - Elemi
 - Galbanum*
 - Labdanum
 - Myrrh*
 - Oakmoss*
 - Olibanum
 - Opoponax
 - Styrax

SCFE**

- Black Pepper
- Cardamom
- Cinnamon
- Cumin
- Ginger
- Nutmeg
- White Pepper

Scan with your mobile



Plant Lipids Private Limited, Cochin, Kerala, India - 682 311

+91 484 284 4500

+91 7760 897 252

info@plantlipids.com

www.plantlipids.com

** new arrivals ** Super Critical Fluid Extracts

Widest range of **ETHNIC INDIAN FLAVOURS & SEASONINGS**

**Sonarome offer
an exciting range of ethnic Indian flavours
(Kulfi, Ras Malai, Mawa, Kheer, Gajar Halwa, Nanke Lassi,
Gulab Jamun and many more)
and extensive range of spice seasonings.**




sonarome
India's No.1 flavour company

Sonarome Flavors Limited
One Sonarome Way
KANDR Industrial Area,
Dobbalivillapur
Bangalore 561 209 INDIA

T +91 80 3898 2200
+91 80 3898 2288
F +91 80 3898 2289
sonarome@sonarome.com
www.sonarome.com

Partner

FOUNDED 1999

An ISO 22000, GMP, Halal & Kosher Certified Company.

Your ingredient for success...!

TODAY'S COMPETITIVE BUSINESS DEMAND PRECISE SOURCING OF RAW MATERIALS

You may trust us.

ESSENTIAL OILS

AJOWAN
AMISE
AMYRIS
BASIL
BERGAMOT
BLACK PEPPER
CAJUPUT
CALAMUS
CANANGA
CARAWAY
CARDAMOM
CASSIA
CEDARWOOD
CELERYSEED
CINNAMON
CITRATA
CLARYSAGE
CLOVE
CORIANDER
CUMIN
CYPRESS
CARROT SEED OIL
CIT-JAWA OIL
DILL SEED
EUCALYPTUS
FRANKINCENSE
FENNEL
GERANIUM
GINGER
GRAPEFRUIT
GUAIGWOOD
GURJAN
JAMBOSA
JUNIFERBERRY
KAPOOR KACHRI
LAVENDER
LAVANDIN
LEMON
LIME OIL

LEMONGRASS
MANDARIN
NAGAR MOTHA
MARJORAM OIL
MALCE OIL
M. CITRATA OIL
NEROLI
ORANGE
PATCHOULI
PETITGRAIN
PALMROSA
PEPPERMINT
PAN LEAF OIL
ROSEMARY
SPEARMINT
SANDALWOOD OIL
SUGANDH KOKILA OIL
SUGANDH BALA OIL
SUGANDH MANTRI OIL
TEA TREE
TAGETUS OIL
TOMER SEED OIL
TURMERIC
YLANG YLANG
VETIVER OIL

AROMATIC CHEMICALS

ANETHOLE
ALPHA PINENE
ALPHA COPAENE
BERGAMOTENE
BETA PINENE
BISABOLENE
CARYONE
CARYOPHYLLENE
CIS-3-HEXENOL
CIS-3-HEXENYL ACETATE
CITRONELLOL
CITRONELLYL ACETATE
CITRONELLYL FORMATE

DILAPOLE
DIHYDRO MYRCENOL
EUCALYPTOL
EUGENOL
EUGENYL ACETATE
GERANIOL
GERANYL ACETATE
GERANYL FORMATE
HUMULENE
ISO EUGENOL
ISO MENTHON
LIMONENE
LINALYL ACETATE
LINALOOL
METHYL CHAVICOL
MENTHYL ACETATE
MENTHOL
MENTHON
MYRCENE
OCIMENE
3-OCTANOL
3-OCTANONE
3-OCTANYL ACETATE
3-OCTANYL FORMATE
PARACYMENE
PHELLANDRENE
PINENES
PHENYLETHYL ALCOHOL
PHENYLETHYL ACETATE
PHENYLETHYL METHYL ETHER
PHENYLETHYL FORMATE
TERPINYL ACETATE
TERPINENE (GAMMA)
TERPINENE-4-OL
TERPINEOL
THYMOL

RESINOSIDS

BENZOIN
LABDANUM

CARRIER OILS

ARGAN
ALMOND
APRICOT
AVOCADO OIL
EVENING PRIME ROSE OIL
FLAXSEED
GRAPESEED
HAZELNUT
JOJOBA
LINSEED
NEEM
OLIVE
WHEAT GERM
WALNUT

BASES

AGAR ART
AMBER
ANIMALUS
OYET
HYACINTH
JASMINE
KEWRA
MUSK
OAKMOSS
ROSE
SANDALART
SHAMAMA



SIVA EXPORT CORPORATION

SomSanti House, 152, Patparganj Industrial Estate, Delhi - 110092, India

Phones: 91-11-22148207,22143195,22153077 Fax: 91-11-22143066 website: www.somextracts.com, Email: s.v@somextracts.com



SOM VARSNEY GROUP since 1973





Leo Chemo Plast Pvt. Ltd.

In pursuit of excellence

WE HAVE READY STOCK AVAILABLE AS BELOW:

- ACETOPHENONE
- BENZOIC ACID
- CYCLOHEXANONE
- DI PROPYLENE GLYCOL USP – FRAGRANCE GRADE
- ETHYL ACETO ACETATE
- FORMIC ACID 99%
- ISO BUTANOL
- ISO BUTYRIC ACID
- N BUTYRIC ACID
- N BUTYRALDEHYDE
- PARA TERTIARY OCTYL PHENOL
- PARA TERTIARY BUTYL PHENOL
- PROPIONIC ACID
- PROPYLENE GLYCOL USP
- PROPIONALDEHYDE
- SODIUM METAL
- SODIUM METHOXIDE POWDER
- SODIUM BOROHYDRIDE POWDER
- SODIUM BOROHYDRIDE GRANULAR
- TERTIARY BUTANOL

Contact us for your requirements.

Leo Chemo Plast Pvt. Ltd.

B-126, Ghatkopar Industrial Estate, Off. L.B.S. Marg, Behind R City Mall, Ghatkopar (West), Mumbai - 400 086.
Tel.: 022-4027 9000 (30 lines) ■ Fax : 2500 8356 ■ Email : info@leochemo.com ■ leo@leochemo.com
Website : www.leochemo.com

SATYAM ENTERPRISES

A PART OF



INDIA'S ONLY EXCLUSIVE INDENTOR AND DISTRIBUTOR FOR



CALABRIAN CITRUS CENTER
CITRUS OILS AND FLORAL PRODUCTS

OUR PRODUCT RANGE

BEWARE OF IMITATION

LEMON OIL STANDARD 4% CITRAL

LEMON TERPENES

BERGOMAT OIL STANDARD

BERGOMAT OIL BERGAPTENE FREE — VARIOUS GRADES

MANDARIN OIL GREEN TYPE

MANDARIN OIL RED PURE

LEMON OIL PURE

LEMON OIL CONC 4X

BERGOMAT OIL PURE

BERGOMAT OIL NATURAL

MANDARINE OIL YELLOW

BITTER ORANGE OIL PURE

NEROLI OIL ITALIAN

ADDRESS YOUR QUERIES TO: -

SATYAM ENTERPRISES

507 NAIN KRUPA BUILDING, 118/122 KAZI SYED STREET,
MASJID BUNDER (WEST) BOMBAY - 400 003, MAHARASHTRA INDIA

TEL: 022 23432526, 23448032 FAX: 02223401805

Write to us on: thakker_group@outlook.com
FOLLOW US ON: www.thakkergroup.co.in



**FLAVOR
BASES**

FLAVOR KEYS

**SPECIALITY
CHEMICALS**



Creating High Impact flavorings,
Flavor Keys & Bases

15/30, HARI MARKET, KHAR (W), MUMBAI - 400052
Email: rupinchem@rediffmail.com Website: www.rupins.com

Krisheema Mehra
8450953030

Maghav Mehra
9892733370

Ravi Mehra
8655512311

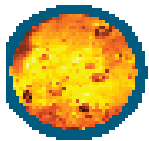
Ylang Oil Complete



*"An elusive floral note
that captivates you,
soothes your senses
and stays with you
forever!"*



FRAGRANCE & FLAVOUR
INGREDIENTS



RESIN



PHARMA



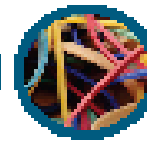
FLAVORS & FRAGRANCES



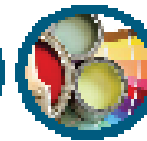
FOOD & BEVERAGES



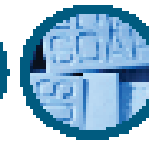
PAPER CHEMICALS



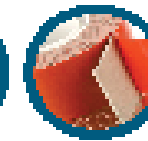
ROPE



PAINTS & COATINGS



PLASTIC & ADHESIVES



AGRICULTURE & HORTICULTURE



" Delivering Quality Pine Chemicals since 1971 "



GREEN PINE INDUSTRIES

Govt. of India Recognized Star Export House

Resin Division

103/2, Railway Rd, Rishikesh 249201 Uttarakhand India

Terpene Division

Plot No 109-110, Shiv Ganga Industrial Estate, Bhagwanpur, Roorkee, Uttarakhand -247662, India

Corporate office,

201/5, Jagan Industrial Estate, V N Purav Marg, Churnabhatt, Mumbai - 400022

T: +91-22-24056704/ 05

F: +91-22-24056700

E: info@himalayaterpene.com

www.himalayaterpene.com / www.greenpine.in





MINT OIL & ISOLATES

Peppermint Oil (Ex Mentha Piperita Oil)
Peppermint Oil (Ex Mentha Arvensis Oil)
Peppermint Oil Blends (Arvensis + Piperita)
Peppermint Oil (ex DMO)
D M O
Menthones (70/28, 80/20, 90/10 &95/5)
Mint Terpenes
Menthyl Acetate
Spearmint Oil
L-Limonene (60 to 98%)
L-Carvone 70 to 99%
L-Menthol (Flake, Rice & Bold Crystals)
CIS-3-Hexanol Natural 95% & 98%
CIS-3-Hexenyl Acetate Natural 98%
CIS-3-Hexenyl Butyrate
CIS-3-Hexenyl Caproate
CIS-3-Hexenyl Caprylate
CIS-3-Hexenyl Benzoate
CIS-3-Hexenyl Valerate
CIS-3-Hexenyl Iso-Valerate
CIS-3-Hexenyl Salicylate



CLOVE OIL & ISOLATES

Clove Leaf Oil 70 to 90%
Clove Bud Oil
Eugenol 99% & 99.5%
Iso Eugenol
Methyl Eugenol
Methyl Iso Eugenol



Di Hydro Eugenol
Eugenol Acetate
Iso Eugenol Acetate
Caryophyllene 65%-95%
Caryophyllene Acetate



GEM AROMATICS PVT. LTD

ESSENTIAL OILS AND ISOLATES

Citronella Oil-Indian
Citronella Oil-Java
Lemon Grass Oil
Palmrosa Oil
Cinnamon Leaf Oil
Cinnamon Bark Oil
Cumin Seed Oil
Linalool Natural
Frankincense Oil
Pomegranate Seed Oil

Celery Seed Oil
Carrot Seed Oil
Turmeric Oil
Linalyl Acetate Ex-Mentha Citrata
Geranyl Acetate Ex-Palmrosa
Geranyl Butyrate
Holy Basil Oil
Basil Oil
Anethole
Estragole



Aroma/Organic Chemicals

WS-03 (Cooling Agent), WS-23, Cuelure



Eucalyptus Oil

Eucalyptus Globulus Oil (60% to 90%)
Eucalyptol

HEAD OFFICE:

A/410, Kailash Complex, Powai Vikhroli Link Rd, Vikhroli (W), Mumbai- 400079. India

Manufacturing Unit I

Plot No. 2, 16/4/2, Near Alok Industries, Rakholi, Silvassa-396230(D & NH), INDIA

Manufacturing Unit II

Khasarano 8,9,10, Village Gathona, Ujhani, Badaun Rd, - 243639, Uttar Pradesh, INDIA

Rakesh PRODUCTS

Star Export House Recognized by Govt. of India
SERVING THE WORLD SINCE 1972

Natural Essential Oils, Aromatherapy Oils & Carrier Oils

Certified for: US-FDA, WHO-GMP, ISO, HACCP, KOSHER, HALAL & ORGANIC Certified (EXPORT AWARD WINNER)

ESSENTIAL OILS

AJOWAIN SEED OIL	CARDAMOM OIL	GALANGAL OIL	LAVENDER OIL	OREGANO OIL	SAFFRON OIL	WINTER GREEN OIL
AMBRETTE SEED OIL	CARROT SEED OIL	GERANIUM OIL	LEMON GRASS OIL	ORIGANUM OIL	SPEARMINT OIL	WORM WOOD OIL
ANGELICA ROOT OIL	CEDAR WOOD OIL	GINGER GRASS OIL	LEMON BALM OIL	PALMAROSA OIL	SUGANDH KOKILA OIL	YARA YARA OIL
ANISE OIL	CELERY SEED OIL	GINGER LILY OIL	LEMON OIL	PASSION FLOWER OIL	SUGANDHMANTRI OIL	YLANG YLANG OIL
AROMISE OIL	CINNAMON LEAF OIL	GINGER OIL	LIME OIL	PATCHOULI OIL	TAGETES OIL	YARROW OIL
ARTEMISIA OIL	CITRONELLA OIL	GRAPE FRUIT OIL	LITSEA CUBEBA OIL	PIPER CUBEBA OIL	TANGERINE OIL	ZEDOARIA OIL
BASIL OIL	CLARY SAGE OIL	GUAJAC WOOD OIL	MACE OIL	PEPPERMINT OIL	TARRAGON OIL	
BAY OIL	CLEMENTINE OIL	HYSSOP OIL	MANDARIN OIL	PETITGRAIN OIL	TEA ROSE OIL	
BERGAMOT OIL	CLOVE OIL	HEDYCHIUM OIL	MARJORAM OIL	PIMENTO BERRY OIL	TEA TREE OIL	
BETEL LEAF OIL	CURRY LEAF OIL	HOPS OIL	MYRRH OIL	RAVENSARA OIL	THUJA OIL	
BLACK PEPPER OIL	CYPRESS OIL	HOO WOOD OIL	NAGARMOTHA	RED THYME OIL	THYME OIL	
BLUE CHAMOMILE OIL	DAVANA OIL	JASMINE OIL	NIAOULI OIL	ROSE OIL	TOMAR SEED OIL	
CADE OIL	ELEMI	JATAMANSHI OIL	NIROLI OIL	ROSEMARRY OIL	TURMERIC ROOT OIL	
CAJUPUT OIL	EUCALYPTUS OIL	JUNIPER BERRY OIL	NUTMEG OIL	ROSE WOOD OIL	VALERIAN OIL	
CALAMUS OIL	FENNEL OIL	KAPUR KACHARI OIL	ORANGE OIL	ROSE PETEL OIL	VANILLA OIL	
CALENDULA OIL	FRANKINCENSE OIL	LABDANUM OIL	OLIBANUM OIL	SAGE OIL	VETIVER OIL	

VEGETABLE / CARRIER OILS

ARGAN OIL	BLACK CUMIN OIL	FLAX SEED OIL	MORINGA OIL	SPINACH OIL
ALMOND OIL	BORAGE OIL	GRAPE SEED OIL	NEEM OIL	PEACH OIL
ALOE VERA GEL	CASHEW NUT OIL	GUAVA OIL	ONION OIL	WALNUT OIL
APRICOT OIL	CHAULMOGRA OIL	HAMP SEED OIL	PRICKLY PEAR OIL	WATER MELON OIL
AVOCADO OIL	CHIRAUJNI OIL	HAZEL NUT OIL	POMEGRANATE OIL	WHEAT GERM OIL
BAWCHI OIL	CUCUMBER OIL	JOJOBA OIL	PUMPKIN OIL	
	EVENING PRIMROSE OIL	MACADAMIA OIL	ROSEHIP OIL	

INDIAN PERFUMES

AGARIYA BLACK	DARBARIYA	KEWARA-RW	RAAT KI RANI
AGARIYA GREEN	DHANALUD SSL	MAJMUA -RT	ROSE -RN
AMBERIYA	DIWANIYA	MASTI-RN	SAMAMA MH-26
AQUAMARIYA	FIRDOUS-RL	MASTI-RB	VALLEY-RW
BOUQUET-RZ	GUL HINA	MAULSHREE	ZAFRAN
CHAMELI GREEN	HINA-1-2-3	MITTI ATTAR	
CHAMPA GREEN	JASMINE-R6	MUSK RSI	

FLORAL WATER

BASIL	LAVENDER	ROSE PETAL
FULWARI	LEMON	SANDELKA PLUS
GINGER	LEMON GRASS	TURMERIC
JASMINE	ROSEMARY	



OUR GROUPS



Rakesh PRODUCTS

25, Azad Nagar, Kanpur-02 (U.P.), India. Tel: +91-512-2563930 to 35 Fax: +91-512-2563936

Email: info@rakeshsandal.com | info@rakeshin.com Web: www.rakeshin.com



Musk & Fragrance

Indentors for : AROMATIC CHEMICALS & ESSENTIAL OILS

911/A, 'B' Wing, Kanakia Wall Street, Near Holy Family Church, Andheri Kurla Road,
Andheri (East), Mumbai - 400093.(India).

Tel. : +91-22-68151800(100 lines) E-Mail : indentor@muskfrag.com Web : www.muskfrag.com

We indent for

Kuraray Co. Ltd., Japan

Cital-R / Isoprenol / Isovaleral / Prenol
3MMB (3-Methoxy-3-Methyl-1-Butanol)
2-Phenylpropanal (Hydratropic Aldehyde)

KLJ Plasticizers Ltd. India

Kanatol-200 (D.E.P.) / Kanatol-201

Super Chemicals, India

Cinnamic Alcohol / Yara Yara

Moraya Global Ltd. India

Indole / Skatole / Styrallyl Acetate
Allyl Amyl Glycolate

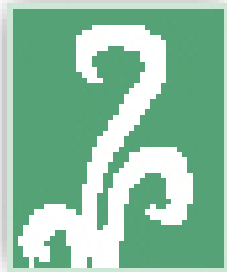
Jiaxing Zhonghua Chemical Co.Ltd., China

Vanillin Julan Ex Catechol / Vanillin Eternal Pearl
Ethyl Vanillin Eternal Pearl

Aripê Citrus Agro Industrial Ltda. (Bio-Citrus) Brazil

Bitter Orange Oil CP / Orange Oil CP / Lemon Oil CP / Mandarin Oil CP Green
Mandarin Oil CP Red / Persian Lime Oil CP / Tangerine Oil CP





Roma Aromas

MUMBAI
SINCE 1997

1-811, Many Imported Oils,
1st Best Prices @
Retail Rates.

88-474-2170
88-474-2171
88-474-2172

88-474-2173
88-474-2174



◆ DISTILLING SUPPLIER SALES &

- Alpine Teapolea 100%
- Bergamot Laurus Acetate Crystal
- Citrus Fennel - R
- Chamomile Oil Pure
- Chamomile Oil Spanish
- Cedar Oil Cedar
- Cedar Oil Scented 100% Pure & Natural
- Cypress Oil 100% Pure & Natural
- Galbanum Resinoid
- Lavon Natural Pure
- Lavonum Green 100% Natural
- Lavonum Resinoid - R
- Lavonum Resinoid - 100%
- Lavonum Absolute (Distilled)
- Lavender Oil Pure
- Mandarin Oil
- Orange Oil - R/L
- Peppermint Oil Pure
- Peppermint Oil Pure
- Pine Oil
- Sage Oil Spanish - R/L
- Spilan Lavender Oil - R/L
- Spilan Lavender Oil Pure
- Thyme Oil White 100%
- Thyme Oil White 100%
- Thyme Oil White - R/L

◆ LES AROMAS DU SAHARA CORCOCO

Citrus Oil

◆ CORCOCO BO-SM INTERNATIONAL

Resins
Black Citrus (Black Orange)

◆ MALINDANG CHEMICAL CHEMICAL OIL LTD.

Lily Abubayda Pine
(Lilyoil)

◆ RUYE EL BALQAN, OIL BALQANSHI

Pure Balsam (100% P&M)



◆ **NIFFON JEDOH CLAFAN
(DUTSU) (INDONESIA)**

OLE -3- Hexanol
 OLE -3- Hexenyl Acetate
 OLE -3- Hexenyl Salicylate
 Caproate
 2 Cyclopentyl Cyclopentanone
 Citral (Indonesian)

◆ **HARGENON GRASSENT CO. LTD**

Alpha Damsone
 Allyl Cetyl Hexyl Propionate
 Alpha Cedrene Epoxide
 Cetyl Acetate 50%
 Di Methyl Heptanol (Di Mito)
 Delta Damsone
 Methyl Cetyl Ketone 50%
 Methyl Cetyl Ketone (Ester)
 Methyl Cetyl Ether (ester rich)
 Mucosanol (Japan)
 Sandarac (Indonesian)
 Santalol (Indonesian)

◆ **O'LAUGHLIN INDUSTRIES CO. LTD.**

Oil Jojoba
 Ethylene Succinate
 Methyl (Percyclanone-10)
 Octane PO
 Pivalol (Methoxyethyl)
 Triglycerol (Equivalent to Triol / Myristol)
 Xerol (Lyoal)

◆ **INTELLIGENT BLEU PROVENCE S.A. (FRANCE)**

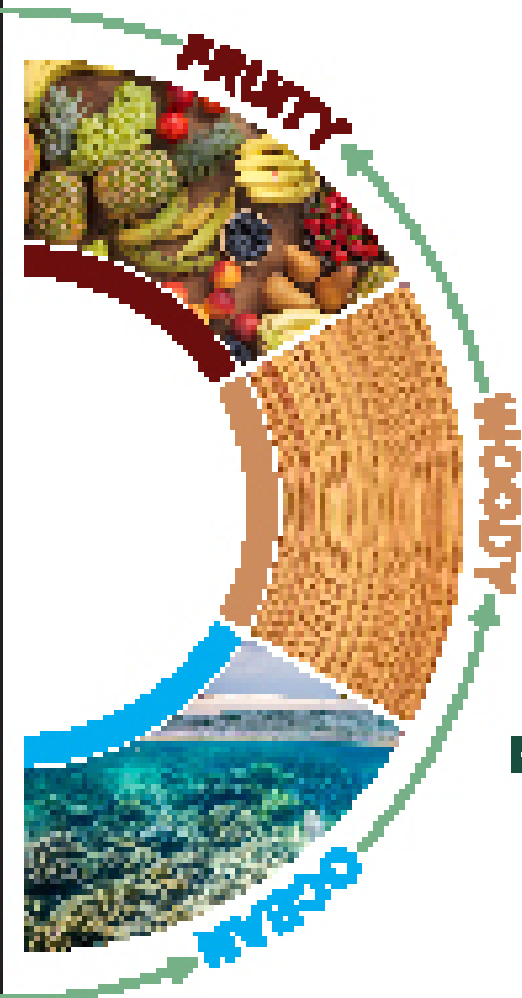
Lowndia Green (100 % P&M)
 Lowndia Abrol (100 % P&M)
 Lowndia France (100 % P&M)
 Grey Sage Oil (100 % P&M)

◆ **NEORATA GLOBAL PVT. LTD.**

Allyl Amyl Glycolate
 Indole
 Shariol
 Stearyl Acetate

◆ **DOMINUS OLEUM LTD.
(SRI LANKA)**

Chamomile Roman (100% P&M)



Thakker Group
a promise for quality

Importers and Stockist of



TEXTRON

HIGHEST QUALITY SUPPLIER OF OILS

READILY AVAILABLE

AVACADO OIL

EVENING PRIMROSE OIL

EVOIL APRICOT KERNEL OIL

EVOIL WHEATGERM OIL HVE PLUS

HAZELNUT OIL

JOJOBA OIL CLEAR

MACADAMIA NUT OIL

OLIVE OIL EXTRA VIRGIN

ROSE HIP OIL

SWEET ALMOND OIL

BORAGE OIL

HVOIL ALMOND OIL

HVOIL SESAME OIL

GRAPESBEE OIL

HEMPSEED OIL

JOJOBA OIL GOLDEN

OLIVE OIL POMACE

PUMPKIN SEED OIL

SHEA BUTTER

WALNUT OIL

AND MANY OTHER PRODUCTS ON DEMAND

PHARM AROMATIC CHEMICALS

507 MAIN KRIPA BUILDING, 118/122 KAZI SYED STREET,
MASJID BUNDER WEST, MUMBAI - 400 003

ASHISH THAKKER 022 23432528
MAHESH THAKKER 022 23440032

TELEPHONE : 022 23432528/23440032 EMAIL : thakker_group@outlook.com

EXPERIENCE THE MYSTICISM OF FRUITY FRAGRANCE AT ITS BEST!

We at **Karnataka Aromas** have partnered with some of the world leaders, to delight your senses with ground breaking innovations to achieve perfect fruity fragrant balance.

WE REPRESENT WORLD LEADERS



**KARNATAKA
AROMAS**
A MARLECHA VENTURE

PRODUCTS	OLFACTORY
Aldehyde C-14	Fruity, Peachy
Allyl Amyl Glycolate	Fruity, Galbanum, Pineapple
Allyl Caproate	Fruity, Pineapple, Cider
Allyl Cyclo Hexyl Propionate	Fruity, Pineapple, Fresh
Allyl Heptanoate	Sweet, Fruity, Banana
Cyclogalbanate	Green, Galbanum, Fruity, Pineapple
Dimethyl Benzyl Carbonyl Acetate	Sweet, Floral, Fruity, Rose, Green, Pear, Berry, Jasmine
Dimethyl Dioxolan	Fruity, Apple, Strawberry, Sweet
Ethyl Butyrate	Sweet, Fruity, Tutti-Fruity
Ethyl Maltol	Cotton Candy, Sweet Fruit
Fruitate	Fruity, Woody, Floral Citrusy
Gama Decalactone	Fruity, Peachy
Pyranyl Acetate	Fresh, Floral, Fruity - Bergamot, Peppery, Leathery, Woody
Raspberry Ketone	Sweet, Fruity, Raspberry
Sauvignone 100	Fruity, Grape, Cassis, Sulphur
Sultanene	Fruity, Pineapple, Pear, Plum, Jackfruit
Thesaron	Fruity, Floral, Rose, Amber

+91 80 4346 8800 / 8801

aromas@karnatakaaromas.com

karnatakaaromas.com

A MUSKY, GREEN TO FRAGRANT F ACCORDS!



CYCLODUMOL ACETATE

Olfactory	Floral, Geranium, Pear, Damascone, Musk
Useful In	Fragrances, Agarbati, Toiletries
Fragrances	Agarbati (33%), Perfumes (0.5 - 8% recommended)
Toiletries	Eau de Toilette (4.0%), Soap (1.2%), Detergent Powder (0.3%), Shampoo/Shower Gel (0.5%) Body Lotion (0.3%) Fabric Softener Conc. (0.6%) Rimblock Liquid (8.0%) Cleaner APC Liquid (0.3%)



NEW TWIST FLORAL



Karnataka Aromas presents the flagship product from Symrise - 'Cyclodumol Acetate'.

- An elegant combination of a dark rose with an amber dry down.
- A floral bouquet with dominant jasmine character, hyacinth and lily of the valley connotations rounded off by a decent balsamic fond.
- A typical sandalwood scent for use in agarbatti.
- Creates Nitromusk-like effects in incense stick.

Get inspired and showcase your truest creative product innovation.

Let's collaborate to bring out the mystic fragrant wonder and **It's Scent!**



NOW

NATURAL FLAVOURS NATURAL FOOD COLOURS & NATURAL INGREDIENTS



NATURALLY
YOURS



sonarome
India's No.1 flavour company

Sonarome Private Limited
One Sonarome Way
KADB Industrial Area,
Doddballapur
Bangalore 561 203 INDIA

T +91 00 3090 2200
+91 00 3090 2200
F +91 00 3090 2299
sonaroms@sonarome.com
www.sonarome.com

Partners
FRUTAROM
FOUNDED 1933

An ISO 22000, GMP, Halal & Kosher Certified Company.

Your ingredient for success...!

70th Annual General Meeting

The 70th Annual General Meeting of FAFAI and the installation of incoming President Mr. Rishabh C. Kothari and the new team of office bearers and Managing Committee members was held on Wednesday, the 10th July 2019 at the Maharashtra Chamber of Commerce and Industry (MACCIA), Mumbai.

The report of the 35th Managing Committee, the Audited Accounts for the year 2018-19 and budget for the year 2019-20 were adopted during the AGM.

In his address the outgoing President Mr. Hasmukh Patel reviewed the activities of the Association during his tenure and also placed on record his gratitude to his colleagues. He also extended his cooperation to the new team of office bearers and wished all the very best.

The outgoing President Mr. Hasmukh Patel then handed over the reins of the Presidency to the incoming President Mr. Rishabh C. Kothari.

Mr. Rishabh C. Kothari in his speech thanked all the members of the Association and his colleagues in the Managing Committee for unanimously electing him as the FAFAI President and the trust they have reposed in him. He recollected the contributions of all the past Presidents and other prominent personalities who have brought the Association to this stage and hoped that he will be able to build upon their work to take the Association forward.

In his message to all the members of the Association, he said-

I am humbled, honoured and privileged to assume the role of the President of this august and prestigious organisation.

Today, as the Indian Industry is at the cross-roads of both unprecedented opportunities and challenges, FAFAI, which completes 70 years this year, shall have to reinvent itself to act like a catalyst in supporting Indian F&F Industry to meet these challenges and take advantage of the opportunities emerging from the ever-changing global order.

It is to this end that we shall venture to provide opportunities for growth and development for the Indian Industry through the 4E's ~ Explore, Educate, Empower and Enable and I am confident that this shall naturally lead to the 5th E ~ Excellence in all spheres.

As I take over the mantle of taking up this challenge, I feel confident that with the eclectic team of both 'young blood' and the 'experienced' that I am fortunate to have, including my Vice President Mr. Kedar Ramesh Vaze, Secretary Mr. Shyam Prabhu, Joint Secretary Mr. Sanjay Harlalka and Treasurer Mr. Hitesh Mehta, we shall be able to achieve much of what we have set out to do for our members and the Industry.

I sign off with a tribute to my predecessor Mr. Hasmukh Patel, and all the illustrious Presidents of the past who have provided character, leadership and an enduring legacy to FAFAI and it shall be our endeavour to take this legacy forward for the benefit of our industry and our great nation.



I look forward to hearing from and interacting with each and every one of you and solicit your active participation in this noble enterprise for our collective benefit and growth.

The President then introduced the office bearers and rest of the managing committee members to the audience. They are as follows-

THE 36TH MANAGING COMMITTEE

Office Bearers :



President

Mr. Rishabh Kothari
M/s. Chandrakant Kothari & Co.,
Kolkata



Vice President

Mr. Kedar Vaze
M/s. S.H. Kelkar & Co; Ltd., Mumbai



Hon. Secretary

Mr. Shyam Prabhu
M/s. S.S. International Mumbai



Hon. Jt. Secretary

Mr. Sanjay Harlalka
Nishant Aromas, Mumbai



Hon. Treasurer

Mr. Hitesh C. Mehta
M/s. Leo Chemo Plast Pvt. Ltd.,
Mumbai

Regional Secretaries



Central Zone

Mr. Krish S. Hirani
M/s. S.K. Flavours & Fragrances, Mumbai



North Zone

Mr. Atul Anand
M/s. Aromatika, New Delhi



South Zone

Mr. Geemon Korah
M/s. Kancor Ingredients Ltd., Cochin



West Zone

Mr. Atul Dattani
M/s. Vraj Aroma House,
Ahmedabad



East Zone

Mr. Ashish Jhunjhunwalla
AFF Aromatics Pvt. Ltd., Kolkata

Members :



Mr. A. Appa Rao

M/s. CEC Flavours & Fragrances
Pvt. Ltd., T.N.



Mr. Arpan Shah

M/s. Arpan Aromatics,
Ahmedabad



Mr. Ashish Gupta

M/s. Kanta Chemical Company,
Delhi



Mr. Atul Agarwal

M/s. Satyasha Chemicals,
Kanpur



Mr. Jaideep Gandhi

M/s. LDG International,
Delhi



Mr. Piyush Gupta

M/s. Kanha nature Oils,
Bahadurgarh



Mr. Rahuul Mehrotra

M/s. Lalji Aromatics Pvt. Ltd.,
Lucknow



Mr. Ravi Mehra

M/s. Rupin Chemicals,
Mumbai



Mr. Shabd K. Mehta

M/s. U.K. Aromatics & Chemicals,
Boisar



Mrs. Shanta Pillai

M/s. Godavari Biorefineries Ltd.,
Mumbai



Mr. Sharad Gupta

M/s. Gangotri Essential Oils (P) Ltd.,
Kanpur

Co-opted Members



Mr. Kamlesh Shah

M/s. BBK Specialities,
Navi Mumbai



Mr. Mohit Gulati

M/s. BMV Fragrances Pvt. Ltd.,
Greater Noida



Mr. Sanjiv Mehrotra

M/s. Latin Flavourosynthesis Co.,
Kolkata



Mr. Hasmukh Patel (Ex-Officio)

M/s. jayshree Aromatics Pvt. Ltd.,
Ankleshwar

A special memento was presented to the outgoing President Mr. Hasmukh Patel as a token of gratitude by all the members of the Managing Committee. The meeting concluded with a vote of thanks proposed by Mr. Kamlesh Shah followed by lunch.

FAFAI Flavour Committee Meet

With a view to facilitate exchanges and deliberations between FAFAI, FICCI and IOFI on setting Fragrance standards for India, a joint meeting of FICCI, IOFI and FAFAI was organised to discuss all matters related to the Draft Flavouring Regulations on 6th September, 2019 at Hotel Courtyard by Marriott, Mumbai on 6th September, 2019.

The meeting was chaired by Chairman of the Flavour Committee Mr. Geemon Korah, three representatives from IOFI and about 20 FAFAI members from all over India.

Mr. Geemon Korah highlighted the FAFAI activities, its growth and development of the F & F industry, and how it had to represent national issues.

Mr. Geemon Korah stated the focus areas for the Flavour Committee were as under:

- **Information sharing** : to act as a platform providing scientific information, not just to members, but also work with government agencies to ensure that everyone is aligned on the information
- **Regulatory challenges:** Increasing regulatory challenges in the attempt to make the world a safer place and to ensure uniformity in understanding of what constitutes 'safe' or 'unsafe'
- Harmonise standards and usage limits, allergens
- Remove the gap in understanding how these components are tested and how they are regarded as safe and unsafe - documentation and processes involved in safety trials

All the members present participated in the deliberations. It was concluded to share with all the members the Draft Flavour Regulations and the Positive List submitted by FICCI to FSSAI and take their inputs on the same including any additions to the Positive List based on what is specifically used in India and not listed in this List.

FAFAI Fragrance Workshop

FAFAI organised an exclusive Fragrance Workshop for members of the Fragrance and Agarbatti Industries at Hotel Marriott, Indore on 21st September, 2019. The day-long event was attended by more 130 delegates from all over the country who actively participated in the same.

Shri Shankar Lalwani, the Hon'ble Member of Parliament from Indore was the Chief Guest at the event and Shri Prakash Agarwal, noted industrialist and President of the Agarbatti Association of Madhya Pradesh was the Guest of Honour at the Workshop.

The President of FAFAI Shri Rishabh C. Kothari in his Presidential Address spoke about the importance of such events which help in industry members to refresh and upgrade their skills and understanding on the various facets of the industry. He also highlighted the current disruptive scenario being faced by the Agarbatti Industry with respect to the import of unperfumed Agarbatti sticks and requested the Hon'ble M.P. Shri Shankar Lalwani to kindly use his good offices to help the industry find an acceptable solution.

Shri Shankar Lalwani his address assured all Industry members that he is well conversant of the issue related to import of unperfumed Agarbatti sticks and

promised that he shall take this matter up with all relevant authorities in the Government of India.

The Workshop consisted of presentations by the following eminent speakers who in their presentation enlightened the delegates on some of the critical aspects of the industry.

- 1) Mr. Kedar Vaze, Director of S.H. Kelkar & co., Ltd.. Mumbai
- 2) Mr. Janardhan Pandey, Managing Partner of Nett Value Media Pvt. Ltd.
- 3) Mr. Pankaj Nagdev, Director of Hari Darshan Sevashram Pvt. Ltd.
- 4) Mr. Anshul Agrawal, Partner in Mysore Deep Perfumery House, Indore

The presentations were followed by a lively and interactive Open House where all the speakers fielded questions from the audience and clarified their doubts. All the Presentations by the above speakers will be reproduced in future editions of the FAFAI Journal for the information of all members.

The workshop concluded with a Vote of Thanks proposed by the Hon. Secretary of FAFAI Mr. Shyam Prabhu who thanked all the speakers, participants and everyone associated with the event, especially Mr. Ankit Agarwal, an invitee to the FAFAI Managing Committee and Partner of the Mysore Deep Perfumery House, for their contribution in making this event successful.

Support extended to the Agarbatti Fraternity

In view of the sudden restrictions on Agarbatti imports which has caused a lot of despair amongst the Agarbatti manufacturers, FAFAI office bearers have constantly been in touch with members of the All India Agarbatti Manufacturers' Association (AIAMA) and extended all support including representations to various Government departments and officials in support of their cause.

FAFAI President Mr. Rishabh C. Kothari in this context also met senior parliamentarian Shri Digvijay Singh and explained to him in detail the challenges faced by the Agarbatti Industry due to the sudden restrictions. The meeting was facilitated and hosted by Shri Akash Goyal and Shri Venkatesh Goyal, leading Agarbatti manufacturers in Bhopal.

FAFAI also invited Shri Shankar Lalwani, Hon'ble Member of Parliament to be the Chief Guest at its Perfumery Workshop in Bhopal and used the occasion



to appraise him of the challenges being faced by the Agarbatti Industry.

In addition FAFAI has given supporting representations wherever requested by the Agarbatti Industry requesting for extension on the said restrictions and are hopeful that the Union Government will help ease these problems.

CSIR Foundation Day

FAFAI President Mr. Rishabh C. Kothari was the Chief Guest at the 77th Foundation Day of CSIR at the Centre for Medicinal and Aromatic Plants (CIMAP) at Lucknow. During his visit Mr. Rishabh Kothari met with all the officers working on the National Aroma Mission and reviewed with them the progress made in the first phase of the Mission. He gave the industry's perspective with respect to the Aroma Mission to



the assembled scientists and discussed the various challenges and opportunities being faced by both the F&F Industry and the Farming Community. He not only assured them of the Industry's support to the Aroma Mission but suggested that the Scientific, Farming and F&F communities work together to ensure greater linkages and efficiency which would not only be advantageous to all the stakeholders but of immense benefit to the country.

FAFAI FRAGRANCE WORKSHOP



Chief Guest Shri Shankar Lalwani the Hon'ble Member of Parliament from Indore being honoured by President of FAFAI Mr. Rishabh Kothari and President of Agarbatti Association of M.P. Mr. Prakash Agarwal



Guest of Honour Mr. Prakash Agarwal honoured by President Mr. Rishabh Kothari



Mr. Kedar Vaze presenting his paper



Mr. Pankaj Nagdev presenting his paper



Mr. Anshul Agrawal presenting his paper



Mr. Ankit Agrawal being honoured by President Mr. Rishabh Kothari and Vice President Mr. Kedar Vaze

70TH ANNUAL GENERAL MEETING



Welcome Address by President Mr. Hasmukh Patel



Hon. Secretary Mr. Kamlesh Shah presenting the Report of the Managing Committee



Hon. Treasurer Mr. Tarun Rawji presenting the audited accounts



AGM proceedings



A view of the audience



The incoming President Mr. Rishabh Kothari is being introduced by outgoing President Mr. Hasmukh Patel



Incoming President Mr. Rishabh Kothari addressing the gathering

70TH ANNUAL GENERAL MEETING



Past President Mr. Rohit Seth addressing the gathering



Mr. Sanjay Harlalka extending vote of thanks



Office bearers of the 36th managing committee



Members of the 36th managing committee



Mr. Hasmukh Patel receives memento from Mr. Kedar Vaze



Outgoing President Mr. Hasmukh Patel along with members of 36th managing committee

FAFAI FLAVOUR COMMITTEE MEET





Centre imposes curbs on agarbatti imports

The government on Saturday imposed restrictions on the import of agarbattis (incense sticks) in a move aimed at stemming the inflow of the product from markets such as China and Vietnam.

In a notification, the director-general of foreign trade put agarbattis and other odoriferous preparations which operate by burning under the restricted list. So far these products were allowed unrestricted or free entry.

Now imports of agarbattis can be done only if there is a DGFT licence.

The Rs. 6000-crore domestic agarbatti industry in 2018 imported nearly Rs. 800 crore worth of incense sticks, including round bamboo sticks raw agarbatti (without perfume), leading to several domestic units shutting shop and job losses.

Imports of raw agarbatti (bamboo sticks coated with masala) to India soared from Rs. 31 crore in 2009 to Rs. 546 crore in 2018. Import of raw agarbatti surged in 2018, especially after import duty was slashed from 30% to 10% in 2011 and gradually reduced to 5% in 2018 under the India-Asean free trade agreement.

Importers of agarbatti and other odoriferous preparations was estimated at \$17.75 million during April-June 2019-20. It was at \$83.58 million in 2018-19 compared to \$84.95 million in the previous fiscal year.

To cut the country's depending on imports, the Khadi and Village Industries Commission (KVIC) has said that it plans to help farmers grow a particular variety called Bamboos Tulda which is used in raw agarbattis. The agency plans to plant around 20,000 saplings of these every year.

Times of India, 1st August 2019

Leading Indian personal care brands increasingly banking on 'naturals' trends

Some of the leading personal care brands in India are acknowledging the growing preference among consumers for 'natural' products with a slew of new launches, according to an opinion piece in the *Mint* newspaper.

Recently, *Dettol*, the germ protection brand, announced the launch of soaps and hand washes free from parabens and dyes. Reckitt Benckiser (RB), the consumer health and hygiene company that owns *Dettol*, said the new range was designed to keep consumer preferences in mind, especially mothers looking for products that did not have too many chemicals for their children and the families. The soap hand washes are infused with natural tulsi and jasmine.



Hindustan Unilever Ltd. (HUL) has also extended its soap brand *Lux* into the herbal and naturals segment with the *Lux Botanicals* range infused with honey, aloe vera and other natural ingredients.

In the last two years, among the new launches at HUL, the maximum have been the herbal and naturals variants of existing brands. It had earlier launched an Ayurveda version of its Fair and Lovely face cream. *Lifebuoy* soap in neem and turmeric and SunsilK shampoo with coconut water and aloe vera. Honey, green tea and aloe vera were also used to

create a *Naturale* range for *Lakme 9 to 5* brand of cosmetics.

Safer Ingredients

“The belief is that anything which is natural or herbal may have fewer side effects compared to chemical based products. There is also a high involvement with skin care and personal care products; good skin is seen to be the window to beauty and health and hence, people don’t want to take a risk with it,” Ms. Ashwini Sirsikar, country service line leader at the qualitative research department of Ipsos, was quoted as saying in the report.

Ingredients such as rose, turmeric, saffron, aloe vera and cucumber, have benefits that the consumers are aware of and are linked strongly to skin care; while others such as jojoba and hibiscus add a more exotic touch to the product, she noted.



Rise of Naturals

Sales data from research and analytics firm Nielsen backs the naturals trend. According to Mr. Sunil Khiani, head of retail measurement services, Nielsen South Asia, consumers are more aware of the benefits of naturals products in toilet soaps, skin care, toothpaste, etc. According to Nielsen data, the current market size for naturals in personal care stands at Rs.17,500 crore, currently growing at 14.1 % in value terms. The growth is entirely driven by the increase in volume/consumption, while prices have remained stable. On the other hand, the non naturals segment has maintained its 9% value growth on the back of price reductions, leading to higher volume growth than value growth.

The contribution of natural products to personal care has increased from 32% in March 2017 to 35% in

March 2019. The categories included for the analysis are toilet soap, tooth paste, shampoo, face care, and hand and body care. In fact, toilet soaps remain the largest contributing category by holding 44% of the naturals segment. Hand and body care is the fastest growing category at 18%, while toothpaste comes second at 15%, as per Nielsen data.

Rural market to the fore

Surprisingly, the rural markets continue to grow faster than urban in the past two years in the naturals segment. Rural grew by 16.5% compared to 12.9% for urban in value terms in March 2019 compared to March 2018. Interestingly, a Nielsen Global Premiumisation study in 2018 revealed that 58% consumers in India are willing to pay a premium for products that provide organic and natural ingredients, compared to 41% globally.

Regulations are also making it more sustainable, “Whether you look at what Food Safety and Standards Authority of India (FSSAI) or Ayush ministry are doing, it is becoming structured and systemic in India and globally. It’s not a temporary fad or fashion. This is an ongoing on-ground conversation. The government and the consumer are more aware. We should see more innovations in this segment in the time to come,” emphasised Mr. Khiani.000.

Hpic, August 2019

Premiumisation, internet driving growth of beauty industry in India

India’s beauty and personal care industry is on a roll thanks to online sales of beauty products, premiumisation, and an inclination towards organic and ethical brands. According to a report by research firm Euromonitor International, last year with the presence of online retailers like Nykaa.com and amazon.com, the beauty and personal care products category crossed \$400 mn in internet sales up from \$100 mn in 2014.

The high penetration of smart phones and easy access to the internet is driving the continued rise of the beauty and personal care industry in the country, the report said.



According to Euromonitor report, since technology has been driving growth in most industries, including beauty and personal care, companies are rethinking the relevance of physical stores and revamping them. Businesses are developing ways to drive engagement as well as to transform the in-store experience for consumers.

Internet connectivity consumerisation has also caused a shift in consumers' traditional power structures, wherein recommendations from families and friends and independent consumer reviews have greater credence over mass marketing channels like celebrity endorsements, in-store advertising etc., according to the Euromonitor International Lifestyles Survey 2019.'

Premiumisation, which essentially refers to the ability and willingness to spend on exclusive, superior quality goods, is of late becoming more popular with the Indian consumer. Premiumisation has especially driven the demand for beauty and personal care products. The Euromonitor study shows that in 2018, \$774 -mn worth of premium beauty and personal care products were sold in India, with 63% share enjoyed by premium fragrances and hair care products. According to the study, with increasing disposable incomes, the per capita expenditure on premium personal care and beauty products is expected to show a CAGR of 15% from 2018 to 2023.

Meaningful consumerism has also been shaping the beauty and personal care industry as customer focus shifts towards conscious consumption and ethical living.

The Euromonitor survey shows that respondents have the greatest understanding of, and trust in environmentally conscious and eco-friendly products (67%), followed by natural products (65%)

The Euromonitor study added that in 2018, India was ranked eighth globally, in terms of sales of beauty and personal care products, with a total retail value of \$ 14-bn. The majority of this value is occupied by bath and shower products, followed by hair care, oral care and skin care.

- hpicIndia, July 2019

Nivea completes Rs. 150 Crore expansion at Sanad Unit

Personal care player Nivea India Pvt. Ltd., an affiliate of German Beiersdorf AG, recently inaugurated its phase-2 of the manufacturing facility in Sanand, Gujarat, with an investment of Rs. 150-crore.



After the latest capacity augmentation, the company's total investment in the facility so far has reached Rs. 350 crore out of the approximate Rs. 850-crore investment committed in 2014-15.

Nivea's Sanand capacity now stands at about 240 million units per annum.

Nivea manufacturers emulsion products such as creams, lotions, shower products, newly launched face wash and lip care products at Sanand. It looks to grow at twice the pace of market growth in skin and personal care segments. The market size in which Nivea operates is pegged at about Rs. 13,000 crores – growing about 10-12 percent annually, in which Nivea holds second position after Hindustan Unilever's Fair & Lovely.

Mr. Neil George, Managing Director, Nivea India, said “we believe that this new production centre will take us closer to achieving our goal of being emerging India’s most loved skincare brand.

- hpicIndia, July 2019

GCPL eyes Rs. 300 crore turnovers from professional hair care segment

Godrej Consumer Products Ltd. (GCPL), which entered the professional hair-care market nearly two years back, is eyeing a 25% market share and a turnover of Rs. 300 crore in the next three years.



The professional hair-care market in India stands at Rs. 1,200 crore and has registered 8-9% growth over the past few years. The space is currently dominated by MNCs such as L’Oreal, Estee lauder, wella and Schwarzkopf.

The target is to have a 25% market share over the next three years (FY22). With 25% market share, our turnover is expected to be around Rs. 300 crore,” Mr. Ketan Takalkar, Associate Vice-President, Godrej Professional. GCPL, said without revealing the current turnover of the segment.

Godrej Professional is a brand of professional hair-care products, including hair colours, shampoos and conditioners, which are sold to salons. End-consumers can buy these products from the salons, too.

Expansion plans

Mr. Takalkar, said the company would foray into other categories such as hair treatments, texture and styling by the end of this year. Colour and hair

care offerings account for 65% of the hair care market in the country.

As a part of the growth plan, GCPL is planning to offer its range of professional offerings across 10,000 salons by the end of FY 19. Over the next three years, the target is to take its offerings to 50,000 salons across India. “The best MNC brand is present in 5,000 odd salons or so. And we, on our part, are looking at a 10% growth compared to any MNC,” he said.

- hpicIndia, July 2019

Beauty & Wellness business has market potential of Rs. 80,000 crore in India

The beauty and wellness business in India has a market potential of Rs. 80,000 crore and can provide employment opportunities to lakhs of people, according to Mr. Mahendra Nath Pandey, Union Minister for Skills Development.

“India would need more than 70 lakh skilled manpower in coming months in this sector due to unleashing of economy,” he said while speaking at the 18th annual convocation ceremony of VLCC Institute of Beauty and Nutrition.



“skilling course is an important tool of women empowerment as the students after training can set up wellness and beauty centres by availing easy loans like Mudra and can also motivate others for such gainful employment opportunities,” he added.

Spain's Eurofragrance begins Asian expansion with new subsidiary in Mumbai

Eurofragrance, a fragrance creation company based in Spain is moving ahead with plans to increase its footprint and presence in Asia, with India being its first stop.

Till now, the company had been catering to the Indian market through its affiliate in Dubai, where Eurofragrance regionally designs fragrances adapted to the needs and preferences of the Gulf/India countries. The company recently announced the opening of its own offices in Mumbai with Mr. Abhishek Pandya at the helm as Eurofragrance's Country Manager in India.

Eurofragrance has also entered into a strategic partnership with Orris Tech under which the Mumbai based firm will manufacture all Eurofragrance fragrances aimed at the Indian market.

"This initiative supports Eurofragrance's ambition to offer to Indian customers an appealing and competitive olfactive proposition in order to rapidly capture its fair share of this growing market," the company said.

"India is a market undergoing a major and steady growth. Eurofragrance, with the knowledge acquired during the past years working with Indian companies primarily focused on export, is well prepared to rapidly capture its fair share of the Indian market. The initial response to our offer is above our expectations. Our ability to deliver our high standard quality products from 'inside' India opens a completely new perspective, commented Mr. Laurent Mercier, Eurofragrance's CEO.

- Hpicindia, July 2019

YOGESH DUBEY ELECTED PRESIDENT OF EOAI



Mr. **Yogesh Dubey** has been elected President, Essential Oil Association of India (EOAI), New Dehli, at the 62nd Annual General Meeting of the Association in New Delhi recently. Mr. Pradeep Kumar Jain has been elected as General Secretary.

AVAILABLE
AT MOST
COMPETITIVE
PRICES

- **TEA TREE OIL.**
- **JOJOBA OIL.**
- **WHEATGERM OIL.**
- **OTHER ESSENTIAL OILS FOR AROMA THERAPY.**

*Kamal
Arochem*

Dealers in
Essential Oil & Aromatic Chemicals
1, Amita Co-op. Hsg. Soc. D. K. Angre Marg,
Andheri (East), Mumbai - 400 069
Tel.: 2684 5485 Fax: 2682 4597
E-mail: kamalarochem@hotmail.com
Website: www.kamalarochem.com



**AUTHORISED AGENTS AND DISTRIBUTORS FOR JEAN NIEL PRODUCTS,
PERFUMERY COMPOUNDS AND RAW MATERIALS**

DEALERS IN

A Indian Products

- | | |
|-------------------|----------------------|
| 1 Citronella Oil | 8 Virgin Coconut Oil |
| 2 Lemon Grass Oil | 9 Petitgrain Oil |
| 3 Palmarosa Oil | 10 Rosemary Oil |
| 4 Geranium Oil | 11 Cedarwood Oil |
| 5 Basil Oil | 12 Tea Tree Oil |
| 6 Eucalyptus Oil | 13 Saffron RC |
| 7 Tagete Oil | 14 Neroli Oil |

B Indonesian Products

- 1 Patchouli - Sulawesi Minimum 30% & Minimum 27%
- 2 Vetiver Oil

C Italian Products

- | | | |
|----------------|--------------|--------------------------------------|
| 1 Bergamot Oil | 3 Orange Oil | 5 Yellow, Red and Green Mandarin Oil |
| 2 Lime Oil | 4 Lemon Oil | |

D Bulgarian Products

- 1 Rose Water Edible (water soluble) 100% pure and natural
- 2 Rose Oil 100% pure and natural

E Specialised Quality of

- | | | |
|-----------------------|-------------|-------------------|
| 1 Precious Wood Extra | 2 Civet RCO | 3 Osmanthus T ABS |
| 4 Cardamom 347 | 5 Ambreine | 6 Castoreum Base |
| 7 Castoreum T ABS | | |

F Australia

- 1 Tea Tree

G Madagascar

- 1 Vanilla Beans - Green and Black

GIRISH ENTERPRISE

1st Floor, Room No. 13, Mani Bhuvan, 9, P Athak Wadi, Princess Street, Mumbai 400002.
Contact Office: 22013385; 22013384 Email Id - Info@girishenterprise.in, Viraat@girishenterprise.in

SOLIR GROUP

1st Floor, Gala No. 43, Mahavir Industrial Estate, Sakinaka, Andheri East, Mumbai-400072.
Contact Office - 28501120 / 28501110 Mobile: Viraat Vajani 9820959540.

**GIRISH
ENTERPRISE**



JN
1779
JEAN NIEL

**AUTHORISED AGENTS AND DISTRIBUTORS FOR JEAN NIEL PRODUCTS,
PERFUMERY COMPOUNDS AND RAW MATERIALS**

**Products now available in Flexible,
Small and Bulk packing.**

- 1. Vanillin**
- 2. Linalool**
- 3. Linalyl Acetate**
- 4. Tea tree oil Australian**
- 5. Geranium oil Chinese**
- 6. Citronella oil**
- 7. Lemongrass oil**
- 8. Rose water organic Bulgarian**

GIRISH ENTERPRISE

1st Floor, Room No. 13, Mani Bhuvan, 9, P Athak Wadi, Princess Street, Mumbai 400002.
Contact Office: 22013385; 22013384 Email Id - Info@girishenterprise.in, Viraat@girishenterprise.in

SOLIR GROUP

1st Floor, Gala No. 43, Mahavir Industrial Estate, Sakinaka, Andheri East, Mumbai-400072.
Contact Office - 28501120 / 28501110 Mobile: Viraat Vajani 9820959540.



Musks & Fragrance

Indentors for : AROMATIC CHEMICALS & ESSENTIAL OILS

911/A, 'B' Wing, Kanakia Wall Street, Near Holy Family Church,
Andheri Kurla Road, Andheri (East), Mumbai - 400093.(India).
Tel. : +91-22-68151800(100 lines) E-Mail : indentor@muskfrag.com
Web : www.muskfrag.com

INDENTORS FOR AROMATIC CHEMICALS & ESSENTIAL OILS

Vanillin Julian

Vanillin Eternal Pearl

Ethyl Vanillin Eternal Pearl

All Products are Ex Catechol & FCC IX Grade

Manufactured by

Jiaxing Zhonghua Chemical Co.Ltd.,
China



Crafting scents with ingredients people love



Our name is an invitation to engage your senses at
www.givaudan.com

Givaudan (India) Pvt Ltd.
Fragrance Ingredients Business
Akruti Center Point, 4th Floor,
MIDC Central Road, Andheri East,
Mumbai 400 093, India
Tel # +91-22-66625749

Givaudan

engage your senses



ARPAN AROMATICS

"Wide Range of Speciality Products Across The Globe"

WANXIANG
INTERNATIONAL



MILTIZ
AROMATICS



IFF



VAN AROMA



O'LAUGHLIN

Mfg. & Importer of Aromatic Chemicals & Natural Essential Oils

14, Maskati Market, Kalupur, Ahmedabad - 380002.

Tel. : +91 79 2217 3788 Telefax : +91 79 2216 5160.

web : www.arpanaromatics.com

e-mail : arpanaromatics@yahoo.co.in

e-mail : info@arpanaromatics.com



ARPAN AROMATICS

WE ARE PLEASED TO OFFER QUALITY PRODUCTS FROM OUR MANUFACTURING DIVISION

AURANTIOL	GERANYL ISO BUTYRATE
iso AMYL ACETATE	GERANYL FORMATE
iso AMYL BUTYRATE	GERANYL PROPIONATE
iso AMYL PROPIONATE	GERANYL TIGLATE
iso AMYL SALICYLATE	GUAIYL ACETATE
CARYOPHYLLENE ACETATE	HEXYL ACETATE
CINNAMYL ACETATE	HEXYL BUTYRATE
CINNAMYL FORMATE	HEXYL ISO BUTYRATE
cis - 3 - HEXENYL ACETATE	HEXYL SALICYLATE
cis - 3 - HEXENYL BENZOATE	NERYL ACETATE
cis - 3 - HEXENYL BUTYRATE	OCTYL ACETATE
cis - 3 - HEXENYL ISO BUTYRATE	ORANGE OIL FOLDED (5X)
cis - 3 - HEXENYL CAPROATE	ORANGE OIL FOLDED (10X)
cis - 3 - HEXENYL ISO VALERATE	ORANGE OIL FOLDED (20X)
cis - 3 - HEXENYL PROPIONATE	PATCHOULI OIL (RCO)
cis - 3 - HEXENYL PHENYL ACETATE	PATCHOULI OIL (STANDARD)
cis - 3 - HEXENYL TIGLATE	PARA CRESYL ACETATE
cis - 3 - HEXENYL 2 METHYL BUTYRATE	PHENYL ETHYL ACETATE
CITRONELLYL ACETATE	PHENYL ETHYL FORMATE
CITRONELLYL BUTYRATE	PHENYL ETHYL BUTYRATE
CITRONELLYL CAPROATE	PHENYL ETHYL BENZOATE
CITRONELLYL FORMATE	PHENYL ETHYL ISO BUTYRATE
CITRONELLYL ISO BUTYRATE	PHENYL ETHYL TIGLATE
CITRONELLYL PROPIONATE	ROSE PETAL ACETATE (ROSEATE)
CITRONELLYL TIGLATE	RHODINOL (SYNTHETIC)
CLOVE OIL RECTIFIED 85%	RHODINOL (EX GERANIUM)
CLOVE OIL PG	RHODINYL ACETATE
CLOVE TERPENES	SCHIFF'S BASE
DIHYDRO MYRCENYL ACETATE	SANDAL BOOSTER
DMD ACETATE	TERPENYL ACETATE
EUGENOL	TRANS 3 HEXENYL ACETATE
EUGENYL ACETATE	TRANS 3 HEXENYL BENZOATE
FDL - 40	VETIVERYL ACETATE (ECO)
GERANYL ACETATE (MIN 98% / 2 PEAK)	VETIVERYL ACETATE (ex HAITI)
GERANYL BUTYRATE	WOODAMBER

14, Maskati Market, Kalupur, Ahmedabad - 380002.
Tel : +91 79 2217 3788 Telefax : +91 79 2216 5160.
web : www.arpanaromatics.com
e-mail : arpanaromatics@yahoo.co.in
e-mail : info@arpanaromatics.com



Hemani Aromatics

...where fragrance is the only identity

Manufacturers of Industrial Perfumery Compounds for :-

Personal Care

- o Beauty Soaps
- o Body Lotions
- o Creams
- o Hair Oil
- o Shampoos
- o Shaving Aid
- o Talc



Perfume Concentrates

- o Body Oils
- o Colognes
- o Deodorants
- o EDT Sprays

Home Care

- o Floor Cleaners
- o Laundry Detergents
- o Laundry Soap
- o Liquid Soaps



Incense Sticks

- o Designer
- o Floral
- o Fruity
- o Herbal
- o Spicy
- o Woody

Go Beyond



Quality fragrances for

Cosmetics

Fine Fragrances

Hair Oils, Gels & Lotions

Hand Wash & Body Lotions

Toilet Soaps

Detergents

Candle & Incense Sticks



sonarome

Sonarome Private Limited

One Sonarome Way

KIADB Industrial Area

Dodeballapur, Bangalore 561 203, India

T +91 80 3090 2200

F +91-80-3090 2299

sonarome@sonarome.com

www.sonarome.com

WE
ARE

CONSTITUENTLY
TRANSFORMING THE
FINDINGS INTO KEY
POLICY POINTS

WE
ARE
CONSTITUENTLY
TRANSFORMING THE
FINDINGS INTO KEY
POLICY POINTS



THE VOLUNTARY SOCIETY
FOR POLICY MAKING
Keva Ltd



WHERE SCIENCE BLENDS WITH ART

01 | A SCIENTIFIC EDGE AND AN ARTISTIC IMAGINATION

A scientific edge and an artistic imagination are the key pillars of Firmenich & Company Limited that began in 1792. Here, science and art have played an equal part, ensuring continued growth and success for our clients across the world.

02 | CONTINUOUS EVOLUTION & STRATEGIC INVESTMENTS IN TECHNOLOGIES & NEW MARKETS

Constant curiosity drives a more complex and competitive landscape. We embrace this challenge wholeheartedly as we consistently evolve and refine our offerings and processes.

03 | LARGE SCALE, YET OPERATIONALLY AGILE

Our manufacturing excellence stems from the versatile skills we manage complex operations, resulting in a unique combination of size and agility.

04 | SPREAD ACROSS THE GLOBE

Manufacturing facilities at India, Netherlands & Italy. Creative centers in Mumbai & Amsterdam. Close to clients across Asia, South East Asia, Middle East, Europe & Africa.

IMPACT IN
SUSTAINABLE
AGRICULTURE

ARTIFICIAL
SWEETENERS
FROM FERMENTATION TO
THE LEVEL OF MOLECULES
RESEMBLING THE ORIGINAL

FRAGRANCES, FLAVOURS & AROMA INGREDIENTS

Our remarkable growth and success are powered across varied categories and we are backed with a fleet of brands

Firmenich & Company Limited

1111, Ring Road, Singapore 410759 | 65-6341-2222

☎ 02 36 369 0000 | 02 363694000 | www.firmenich.com



INDENTA

Breathing life in the Chemistry

Manufacturers & Exporters

- Potassium Hydroxide Pellets
- Sodium Hydroxide Pellets
- Methyl Salicylate
- Salicylic Acid
- Essential Oils
- Laboratory & Research Chemicals
- Pharma Grade Essential Oils



Guatemalan
Cardamom Oil



Braxilian
Orange Oil



Finland
Birch Tar Oil



Chinese
Eucalyptus Oil



Indonesian
Gum Rosin Oil



Morrocon
Argan Oil



Egyptian
Geranium Oil



Indonesian
Nutmeg Oil



Madagascar
Clove Leaf Oil



Sole agents in India:



INDENTA
ISO 9001:2015 Certified Company

117, The Summit Business Bay,
Off Andheri Kurla Road,
Nr. WEH Metro Station, Andheri (E),
Mumbai 400093, INDIA

Tel.: 91-22-2684 9600
Fax: 91-22-2684 9060
Email: indenta@indenta.com
URL: www.indenta.com



• India • China • USA

Givaudan to acquire German Fragrance maker, Drom :

Swiss manufacturer of flavours, fragrances and active cosmetic ingredients, Givaudan, has agreed to acquire Drom to further extend its leadership in the global fragrance market.

Founded in 1911, Drom is a global perfume house creating fragrances for consumer products and fine fragrance customers across the world. Drom is headquartered near Munich in Germany and has manufacturing facilities in China, Germany, the USA and Brazil. The company employs 489 people



globally.

Mr. Gilles Andrier, CEO of Givaudan said, "The acquisition of Drom is very exciting for Givaudan as it further asserts our leadership position in the Fragrance market globally and is fully in line with our strategic ambitions. Like Givaudan, Drom has a long heritage in fragrance creation and their capabilities and strong culture will fit perfectly with ours."

While terms of the deal have not been disclosed, Drom's business would have represented "approximately Euro 110-mn of incremental sales to Givaudan's results in 2018 on a proforma basis".

Home, Personal & Institutional Care India, August, 2019

Brenntag Acquires South Africa-based Chemgrit Cosmetics :

German Chemicals distribution firm, Brenntag, has signed an agreement to acquire the operating business of Chemgrit Cosmetics (Pty) Ltd., headquartered in Johannesburg, South Africa. The company, part of the larger Chemgrit chemicals group, is an independent speciality chemical distributor in South Africa with a focus on personal care and cleaning markets.

"The company's cosmetics focus perfectly complements our existing national food and pharma business and supports our ambition to achieve a strong position and comprehensive offering in South Africa," said Mr. Karsten Beckmann, Member of the Management Board of Brenntag Group and CEO Brenntag Europe, Middle East and Africa.

Chemgrit Cosmetics operates three warehouses, located in Johannesburg, Durban and Cape Town and an in-house laboratory to provide its customers with value-added services including mixing, refilling, redistribution and delivery, formulating and testing of materials and products and other technical support. The acquired business generated sales of approximately Euro 5-mn in the financial year 2018.

Commenting on the development, Mr. Anthony Gerace, Brenntag Group's Managing Director Mergers & Acquisitions, "Based on a dedicated structure and team, Chemgrit Cosmetics has a strong foothold in



Personal Care which is one of the fastest growing market segments in South Africa and sub-Saharan Africa. Brenntag can use its existing structure in East and West. Africa as well as Maghreb to roll out the cosmetics business line in the region."

**Home, Personal & Institutional Care India,
August, 2019**

Firmenich Joins coalition targeting ambitious science-based emissions reduction goals :

Swiss fragrances and flavours firm, Firmenich, has announced that it is stepping up its climate action by setting 1.5°C science-based emissions reduction targets for a net-zero carbon future by no later than 2050, alongside 28 visionary companies.

The company is joining the "Business Ambition for 1.5°C : Our Only Future", a broad coalition of firms committed to limiting global temperature increase to 1.5°C and challenging governments to match this ambition.

"The clock is ticking on climate change and it is imperative that business, governments and civil society act together, because there is not sustainable future if we leave the planet behind," said Mr. Gilbert Ghostine, CEO Firmenich.

The "Business Ambition for 1.5c: Our only Future" coalition challenges Chief Executive Officers to set ambitious targets for their companies in line with last October's report by the Intergovernmental Panel on Climate Change (IPCC) which made the case for limiting global temperature rise to 1.5°C above pre-industrial levels. To join the coalition, companies must set verifiable science-based targets through the Science Based Targets initiative (SBTi), which independently assesses corporate emissions reduction targets against scientific best practice.

Mr. Paul Simpson, CEO of CDP, one of the SBTi partners, said, "The science is clear : in order to limit the catastrophic impacts of climate change, we must ensure warming does not exceed 1.5°C. The ambition is high but it's achievable and science-based targets give companies a roadmap for getting there."

Recognised as a global environmental leader, as one of only two companies this year with a CDP triple "A" ranking for climate, water and forestry, Firmenich is reinforcing its climate action by joining this coalition. As signatories of the Paris Pledge for Action, Firmenich set itself ambitious and stretch environmental goals to tackle climate change. As an example, the Group aims to operate with 100% renewable electricity at all manufacturing sites by 2020 and has already reached this objective across its operations in Europe, North America and Brazil, with an 86% global rate to date. It also joined RE100, to accelerate its commitment to 100% renewable power alongside more than 191 of the world's most influential companies. Furthermore, Firmenich is one of 233 companies worldwide to have approved science-based targets today.

**Home, Personal & Institutional Care India,
August, 2019**

Cargill Beauty and Univar announce collaboration for South America :

Univar Solutions Beauty & Personal Care Latin America and Cargill Beauty have announced a new partnership to cater to the personal care market in South America.

As per the deal, Univar will now supply Cargill Beauty's portfolio of nature-derived ingredients throughout the Latin American region. The agreement between the two companies builds on a long history of partnership between the two companies, and makes Cargill Beauty Products available to all cosmetic manufacturers in the region.



Cargill Beauty's portfolio of nature-derived ingredients is composed of texturisers, emollients, emulsifiers and sensory enhancers to help develop

nature-based products for skin care, hair care, colour care and oral care.

"This partnership provides a solid foundation to bring our unique and differentiated nature derived, labile-friendly and highly functional offering to the global personal care market," said Mr. Tony Jaillot, General Manager, Cargill Beauty.

"From now on, Univar Solutions' customers will be able to combine our technical expertise with Cargill Beauty's nature-derived ingredients to develop a new generation of product formulations," added Mr. Edson Zicari, Business Director, Beauty & Personal Care, Univar Solutions South America.

- Chemical Weekly August 27, 2019

Agarwood Essential Oil Market to be worth over \$200-mn by 2025 :

The global agarwood essential Oil market is poised to touch \$201.03-mn by 2025 growing at a CAGR of 5.92% during 2018-2025, according to a report by Market Research Future (MRFR).



Agarwood essential oil is extracted from the agarwood tree. It is also termed as oud, eaglewood, and aloes wood. Agarwood is mainly produced in India, China, Vietnam, Indonesia, Thailand and Malaysia and traded across the globe.

Asia-Pacific was the largest market for agarwood essential oils in 2018 and the market is expected to exhibit the highest CAGR of 6.17% during the review period. The region is blessed with widespread

availability and highest production rate of the raw material. In Europe, surging demand for agarwood oil as a base ingredient in perfumes offered by several European brands has resulted in significant market growth.

The cultural, religious, and traditional importance of agarwood essential oil in Asia and the Middle East is boosting product demand.

The oil is widely used in aromatherapy, pharmaceuticals, personal care and air care with the personal care segment accounting for the largest industry share in 2018. The growth of global aromatherapy market is expected to influence the agarwood oil market during the review period as the oil is believed to augment mental clarity, help attain inner peace, strengthen and fortify the body, and improve memory and learning.

The report identifies firms like Amarnath Exports (India), Eden Botanicals (US), K.A.B. Industries (India), Maruti Natural Fragrances (India), Treadmoud (Thailand), MJI Group (India), Hoang Giang Agarwood Company (Vietnam), Shiv Sales Corporation (India), Assam Aromas (India), and Janvi Herbs (India) as the key players in the global agarwood essential oil market.

- Chemical Weekly August 27, 2019

Specialty Food Ingredients Market to reach \$67.76 bn by 26

The global specialty food ingredients market is anticipated to reach \$67.76 by 2026. It has outperformed the other wider sectors of the food and beverage industry.



These were among the findings of a new Market Study Report titled Global specialty food ingredients market report, which focused on information about global major leading industry players, including company profiles, end users / applications, product and specification.

This is due to the shift in dynamics within the food and beverage industry, such as the changing consumer demands for more organic, natural and highly nutritious processed foodstuffs. Several studies have shown that the relationship between the specialty ingredients and processed food industry are evolving due to the higher levels of collaborative innovation and product developments to fulfill stringent regulations and new consumer trends.

Food & Beverage News August 16-31 2019

Symrise Collaborates With Belgian biotech Firm to Neutralise unpleasant body odour :

Germany's fragrance and flavor expert, Symrise, and Belgian biotech company, ChemCom, have agreed to jointly undertake research on human olfactory receptors. The goal of the partnership is the development and identification of aromatic substances that can neutralise unpleasant odours.

Symrise already possesses a broad range of raw materials encompassing potentially suitable candidates. ChemCom is now supplying the technical possibilities for searching through the Symrise database for substances that block olfactory receptors.

Targeting undesired odours

Symrise said it has built up the capability to influence the perception of undesired odours in a targeted manner through receptor interactions. Thanks to many years of research and cooperation with Prof. Dr. Hanns Hatt of Ruhr University Bochum, it has been shown that odours can also be "switched off" using certain aromatic substances. Symrise employs this principle of odour modulation in its *Neofresh* technology platform, which combats bad odours of all types. For example, Symrise has developed a

fragrance that blocks the molecule trimethylamine, which gives off an unpleasant fishy smell, in a targeted manner.

Imitating human sense of smell

In order to further expand the *Neofresh* platform, Symrise hopes to neutralise additional unpleasant odours at the receptor level in the future. The partnership with ChemCom will help achieve this. The Belgian company is a leading player in research into human olfactory receptors. With its "Biological Nose," ChemCom also possesses a technology that can imitate the human sense of smell and facilitate the search for suitable receptor-blockers. Symrise has a comprehensive range of raw materials containing fragrances that can potentially influence odour receptors and thus block bad odours.

"The cooperation with ChemCom will help us expand our *Neofresh* range with specific blockers that efficiently combat bad odours," said Dr. Marco Singer, Head of Fragrance Performance at Symrise. "This is a unique approach, and can be combined with our fragrances with outstanding results. We look forward to bringing this new technology to the market and providing consumers with such effective odour-stopping products," he added.

Mr. Christian Van Osselaer, Managing Director of ChemCom, said that the cooperation is an opportunity to demonstrate the effectiveness of blockers in comparison with traditional products. "Together, Symrise and ChemCom are in a position to reshape an entire category of products used by consumers worldwide," he added.

- Chemical Weekly July 30, 2019

Popular Fragrance notes don't always Make best Perfumes : Study

Perfumes that use the most common scents do not always obtain the highest number of ratings, according to an analysis of 10,000 perfumes and their online ratings. The study, published in the journal *PLOS ONE*, reveals which odours are likely to bring success, with some surprising combinations providing a boost of ratings.

Perfumes are described in terms of 'notes', which can be single odour ingredients, such as vanilla, musk or jasmine, as well as more generic smells like 'floral notes'. Perfume smell is then described in terms of a combination of these notes. Combinations of several notes that are commonly used in perfumes are called 'accords'.

Researchers from Imperial College London in the UK used complex network analysis to determine the most popular notes and accords. The researchers analysed 1,000 notes in over 10,000 perfumes and their success in online shops. They found that some notes and accords are 'over-represented' in the dataset, meaning they appear more often than by chance, but that these are not necessarily the ones that are present in perfumes with the highest number of ratings.

While some common accords, like lavender and geranium, are often present in 'successful' perfumes, some less-common notes and accords have an even stronger link with perfume popularity, for example jasmine plus mint, or musk plus vetiver and vanilla.

Opportunities for Perfumers

The researchers said this could be a new avenue for perfumers to discover scent combinations that are likely to be successful but are not yet widespread.

"Our work provides insights into factors that play a role in the success of perfumes. It also sets up a framework for a statistical analysis of fragrances based on simple properties and customer reviews," said Ms. Vaiva Vasiliauskaite, from Imperial College London. "It could be a beneficial tool for systematic ingredient selection and act as an artificial 'Nose' – a traditional craft-master of perfumery," she added.

The team acknowledged that brand influences perfume popularity but found no correlation between perfume price or time since release and success. The smell itself did have a large relation to perfume success.

Their mathematical analysis analysis also allowed them to determine which notes had particularly high 'enhancement' effects – those that played a significant role in improving the rating of the accord

they were added to. The best enhancers tended to be generic notes, such as 'floral notes', or were well represented in the database, such as musk or vanilla.

- Chemical Weekly July 30, 2019

First batch of IFF supported perfumery course graduate out of prestigious French Institute :

The first batch of 'Master of Scent Design and Creation' programme – a partnership between American fragrances & flavours firm, IFF and ISIPCA, a prestigious France-based higher education institution in the field of perfume, cosmetics, and flavouring graduated recently.

Commenting on the milestone, Mr. Nicolas Mirzayantz, Scent Division CEO, IFF said, "This is the first Masters of Scent Design & Creation graduating class from the first collaboration of its kind in the industry. We are thrilled at the sheer quality and passion of the well-trained and talented class, who are poised and ready to contribute to the world of fragrance."

The three-year programme, based in Versailles, France, offers students a strong foundation in the art of perfumery, including a study of 800 raw materials. It also comprises opportunities for IFF internships, a mentorship programme with senior perfumers, marketing, storytelling and soft skills courses, a study of accords and the history of perfumery, and many other topics to prepare students for a career in scent.

Ms. Valery Claude, Vice President, Creation, Innovation and Design, Global Fragrance, IFF, and the leader of the programme said, "When we partnered with ISIPCA to launch the Masters of Scent design and creation three years ago, it was our goal to design a curriculum that leads the industry in terms of depth and breadth of our offerings to ensure a pipeline of talent for the future. While mentorship and knowledge-sharing are powerfully within the IFF culture, it is very gratifying to be able to extend this

practice to our students.”

Home, personal & Institutional Care India July, 2019

European demand boosting export of essential oils from the Caribbean :

Exports of essential oils from the Caribbean are booming as popularity of natural cosmetics rises amongst European consumers. According to data compiled by the Caribbean Export Development Agency (Caribbean Export), exports to Europe grew 33% in the past year.



In Europe, the cosmetics market is estimated at Euro 77-bn euros, making it the largest market in the world and, within this, natural cosmetic products account for approximately 5% of the market. The sector is currently growing at an annual rate of 8-10%.

The European Union is not only the largest supplier of cosmetics in the world but also the main source of demand for natural ingredients for developing these products, particularly plant-based oils and fats. Around 45% of EU imports of essential oils come from developing countries.

“In 2018, Caribbean countries (CARICOM) exported essential oils valued at over Euro 32-mn euros to the EU, which represents 8% of all imports to the region”, informed Mr. Damle Sinanan, the competitiveness and export promotion manager of Caribbean Export. “We are seeing this demand increase year by year, in large part due to greater

concern about sustainability and ethics on the part of European consumers”.

Consumers’ growing concern about the side effects of chemical products, dissemination of information about the benefits of natural ingredients and the rise in ethical consumption are some of the factors driving the growth of the natural cosmetics segment within the industry.

According to Mr. Sinanan, the Caribbean countries have developed strong positions in the production of black castor oil, widely sought after for its purity and high levels of vitamins, minerals and protein, and coconut oil. Black castor oil is used in moisturising or hydrating products for dry skin, as well as to strengthen hair and prevent hair, eyebrow and eyelash loss. Coconut oil, for its part, is used in moisturisers for the body, lips and scalp, as exfoliants, and even for preventing the appearance of premature wrinkles and spots, thanks to its antibiotic and anti-microbial properties that protect against UV rays and free radicals.

Home , Personal & Institutional Care India August 2019

CPL Aromas opens new creative centre in France :

UK-based fragrance house, CPL Aromas, has opened a new creative centre in Paris, France. The centre is double the size of CPL France’s previous centre and offers new facilities to support the division’s creative perfumery team. These new facilities include a



state-of-the-art evaluation suite, a new lab and flexible work spaces that are designed to help the product marketing team, evaluators and perfumers work more collaboratively on projects.

**- Home, Personal & Institutional Care India
July 2019**

Colgate-Palmolive acquires French skincare brand :

The personal care conglomerate Colgate-Palmolive has added the prestige skincare brand Laboratories Filorga Cosmetiques (Filorga). Colgate-Palmolive purchased the French anti-aging beauty brand for Euro 1.49-bn (approximately \$1.69-bn), as part of its strategy to expand its skin care business, it has announced.

“Filorga is a strong, premium priced brand with distinctive positioning that fits well within our long-term personal care growth strategy,” said Mr. Noel Wallace, Colgate’s President and CEO, in a statement.



Michel Tordjman, a doctor of aesthetic medicine and a cellular biologist, Filorga is known for its scientific approach to skincare. Today it offers more than 50 premium products to clients in more than 60 countries. Beyond France, the brand enjoys a strong international presence in Italy, Spain and Greater China.

**Home, Personal & Institutional Care India
July 2019**

NIRMITI LABS PVT. LTD.

**Established Analytical Testing Laboratory for
GLC, GC-MS, HPLC and HPTLC Testing, Chemical analysis of**

- ❖ **Fragrances and Flavours**
- ❖ **Essential Oils, Aroma Chemicals, Solvents**
- ❖ **Aroma Therapy oils including Carrier oils**
- ❖ **All edible and non edible vegetable oils**
- ❖ **Active matters in Soaps and Detergents**

Analysis offered at competitive prices

Building No. 5, Unit No.7, Jogani Industrial Complex,
N.V. Purav Marg, Sion-Chunnabhatti, Mumbai - 400 022

Telefax: 022-2405 0960

Email: nirmitylab@gmail.com

Mobile: 9820501422

website: www.nirmitylabs.com



ProcessWare
ERP

www.ProcessWareERP.asia

What if...

*...you could contain Manufacturing costs by having
Customer Specifications tied with Production Formulas?*

"The uniqueness of ProcessWare™ **ERP** is the focus the development team has put in understanding the nuances of the F&F industry. Features like Drum-off and customized menus offer tremendous flexibility for existing companies to adopt the change fairly seamlessly."

— Paolo George
CEO
Symega Flavours India (P) Ltd.

"With ProcessWare™ **ERP** team's honest and hardworking approach, we managed our implementation without any problem or inconvenience. I would highly recommend it to anyone in the F&F industry!"

— Mustafa Kemal Altinel
Business Development Executive
eps fragrances (Erdoğan Parfüm Sanayi)

Contact Us Now!

Harmander Singh Bindra - CEO

Mobile: +91 98300 34635

EMail: hsbindra@dipssindia.com

Dip Software Solutions Pvt. Ltd.
P-561, Lake Road
Kolkata 700 029

Member - IFRA North America



#1 Software Solution for the Flavors & Fragrance industry - ProcessWare™ **ERP!**

Overview on Agarwood

Dr. KANWAL DEEP, PhD

Ajmal Perfumes Manufacturing & Oudh Processing Industry L.L.C.,
UNITED ARAB EMIRATES deep@ajmal.net



INTRODUCTION

What is Agarwood?

Agarwood is a resinous heartwood found in the Aquilaria and Gyrinopsis species belonging to the thymelaeaceae family. Hence agarwood and agarwood trees are different entities.

Agar is not found in all trees in the forests or in natural habitats. Approximately 15% of the trees have been found to contain agar in the forests. Agarwood hunters fell trees indiscriminately, without knowing whether a fallen tree has any resinous material or not. Due to this greed of hunters, we have lost millions of agarwood trees. Specialist knowledge is needed to identify trees containing resinous heart wood. We are working on sensors to identify agar formation in the living trees so that even a single tree does not get wasted. Agarwood possesses a complex anatomy and cells containing sacs of resin are found in heartwood, which is actually the dead portion of the tree.

Ajmal has been at forefront to unravel the science behind this prized and mysterious wood of the Gods and in sharing our knowledge with our stakeholders to improve the lives of agarwood farmers and small traders

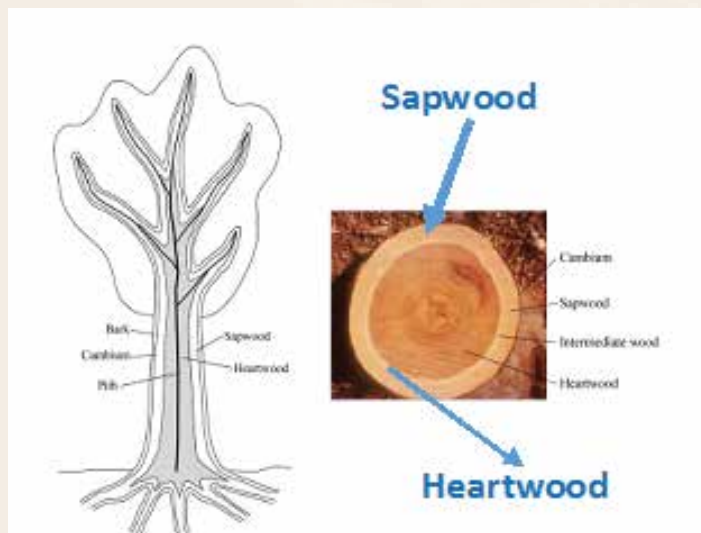


Figure 2 : Anatomy of agarwood tree

The major agarwood producing species are Aquilaria and Gyrinops, widely distributed in the Indo-Malaysian region, and Southern China. These species are native to South-East Asia. The different species can be identified on the basis of morphological characteristics and more precisely on the basis of their DNA sequence. In Aquilaria, the number of stamens is twice the number of petals; while in Gyrinops they are equal.



Figure 1 : Agarwood (Resinous heartwood)



Figure 3 : Flowers of Aquilaria

Multiple usages of Agarwood and its oil make it high in demand, especially in the Middle East regions, China and Japan. Agarwood oil is used as a perfume, perfume ingredient and in medicinal preparations.



Dahn al Oud Moattaq



Dahn al Oud Arzan



Oud Mubakkhar



o'Boticario's Malbec Signature



Frederic Malle's The Night

Figure 4 : Oud in the Fragrance World



Figure 5 : Agarwood used during Cultural and Religious practices.

Among the 34 or more known species, Aquilaria Malaccensis, Aquilaria Filaria, Aquilaria Crassna and Gyrinops Walla are important sources of highly valuable precious wood & oil. Some species of agarwood are known to possess medicinal properties

since ancient times. Chinese and Tibetan medicines use agarwood as an active component. Extensive research is being carried out to explore medicinal properties. Aquilaria sinensis has been demonstrated to have a number of medicinal properties.

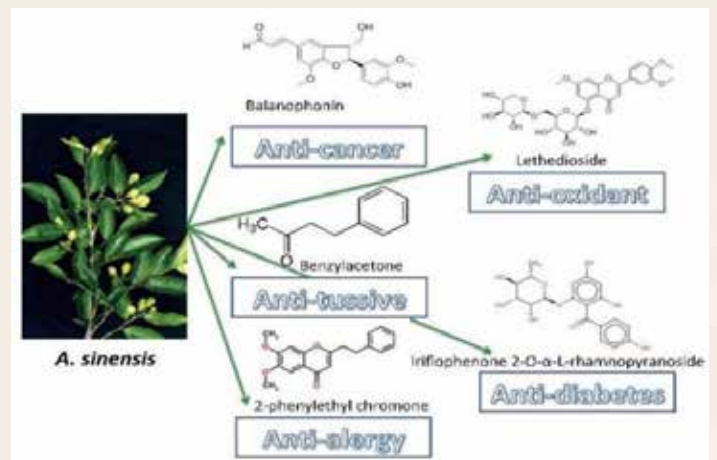


Figure 6 : Leaves of Aquilaria sinensis shows antioxidant activity, antidiabetic properties and other medicinal advantages.

Aquilaria Malaccensis syn. *A. agallocha*, *A. crassna* and *A. sinensis* are among the most common cultivated species.

A normal Agarwood tree is white or pale yellow, and is practically devoid of any resin, hence lacks the peculiar Agarwood odour. It is just like timber and valueless. Only resinous heartwood is sensorially and commercially important.



Figure 7 (a) Normal agarwood tree, very low value due to absence of resinous material and (b) High quality, high value, induced resinous agarwood

Agarwood is known as a pathological product produced by the tree as the result of its defense mechanism against external threats.

External threats or stress may be induced from any of the following:

- **Physical - Mechanical inflicted wounding**
- **Chemical - Stress inducing chemicals**
- **Biological - Microorganism**

Once an Agarwood tree has been subjected to stress by any of the above methods, terpenoids synthesis gets initiated by specific enzymes.

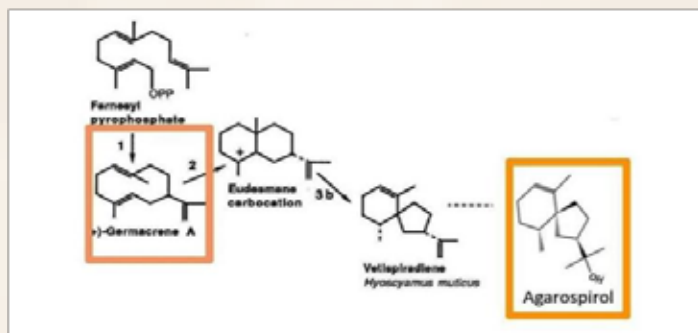


Figure 8 (a) The defense mechanism involves activation of biosynthetic pathways by using induced enzymes.

Depending upon the extent of resin induction, the colour of the wood patches, and the streaks vary from almost black to brown.



Figure 9 Black streaks due to agar formation in trees

The extent of resin induction does not depend upon the species, but on the area of cultivation. Certain species have a tendency to develop resin faster. Formation of Agarwood in the trees takes anything between 20 years to 50 years. Various inoculation techniques are being refined, screened and validated. Ajmal is a pioneer in developing one of the techniques, and is the first to file a patent on the induction process (1994). We are working on optimum methods for plantation, inoculation techniques, harvesting and distillation techniques.



Figure 10 : Inoculation of agarwood tree at Ajmal Farm, Hojai, Assam

Anatomy of natural and harvested agarwood in Ajmal's farms as examined under an electron microscope is quite similar. This feature of agarwood is used to distinguish between real and artificial agarwood. Artificial agarwood is prepared by soaking some light and porous wood with various resins and chemicals. It is called black magic wood in trade.

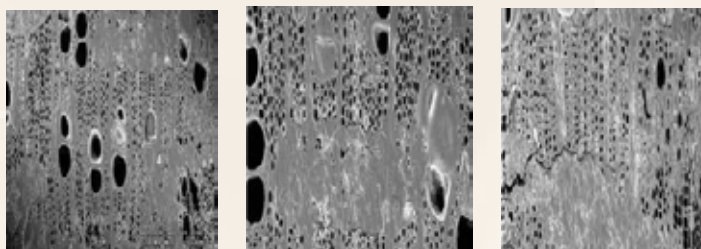


Figure 11 : Anatomy of wild agarwood trees

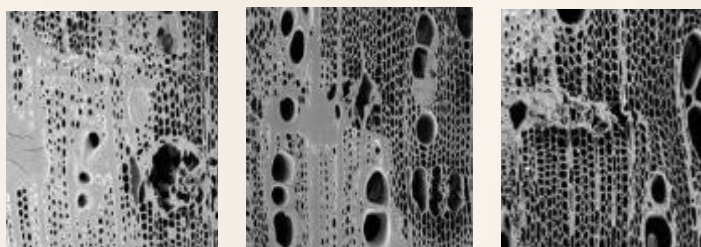


Figure 12 : Anatomy of harvested agarwood trees

CHEMISTRY & CHALLENGES

Agarwood oil contains several types of sesquiterpenes mainly derived from agarospiroane, seliane, prezizane and nookatane.

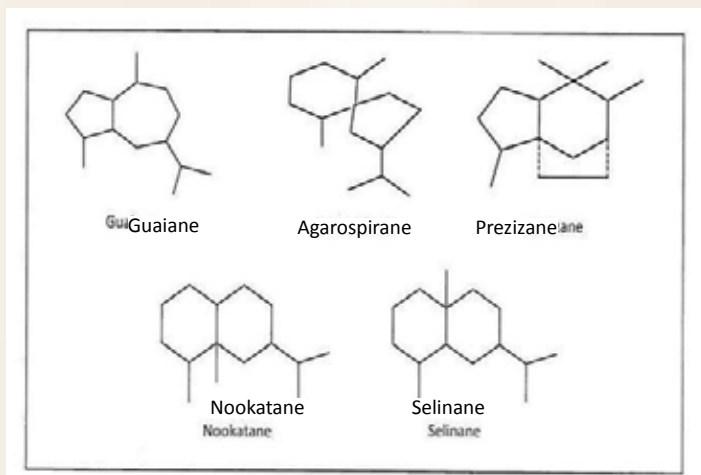


Figure 13. : Sesquiterpenes in agarwood oil

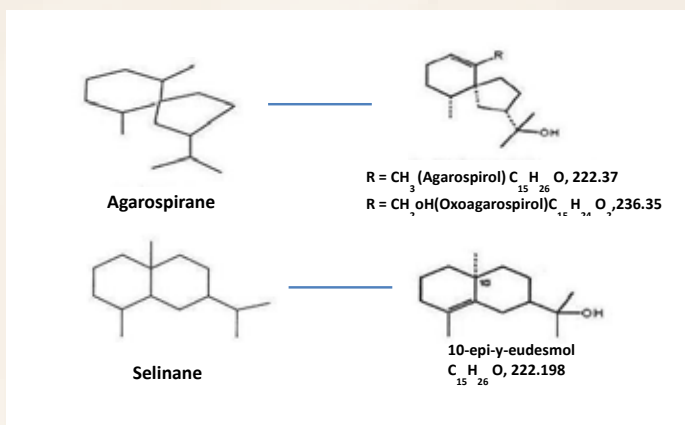


Figure 14: Important components of agarwood oil

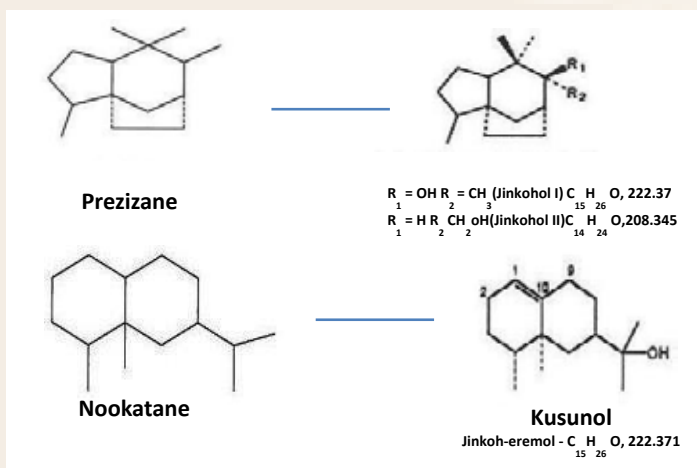


Figure 15 : Important components of agarwood oil

These sesquiterpenes have a specific profile of a particular species of agarwood. The composition of the oil depends upon area of cultivation and not of a particular species. The same species at different geographical locations produce oil with a different chemical compositions and profiles. A lot has to be done on this prized oil due to following constraints.

- Regulatory compliance is a challenge
- IFRA guidelines do not exist
- National and International standards on Agarwood oil do not exist
- There is a need to identify and establish key markers for QA purposes
- The Agarwood oil is marketed in various qualities based on its physical appearance such as fragrance, color and physical form
- The consumer perception of a particular fragrance character and quality determines pricing of Agarwood.

AGARWOD OIL CLASSIFICATIONS

Due to absence of any formal grading system, we propose grading as follows.

INDIAN (HINDI)

- Mainly grows in North East India: its characteristic component is agarospirol in the range of 5% to 20%.
- The essential oil is normally distilled from the low-quality Agarwood and/or its leftovers (after processing of the Agarwood).
- Dahn Al Oudh Hindi is mainly produced from Aquilaria Malaccensis species.

INDIAN BOYA

- It is distilled mainly from the heart wood of Agarwood sans induction. Its composition is mainly C4 to C28 fatty acids and traces of sesquiterpenoids.
- This is the waxy substance and can also be distilled from non oil bearing trees.

BANGLADESH

- Species: *Aquilaria Malaccensis*.
- Its characteristic component is agarospirol in the range of 5% to 10%.
- It is quite similar to the Indian variety.

AGARWOOD OIL FROM FAR EAST

LAOS

- Species: *Aquilaria Crassna*.
- It mainly grows in Laos and adjoining areas such as Thailand.
- Its characteristic component is Agarospirol in the range of 5% to 20%.

VIETNAM

- Species: *Aquilaria Crassna*.
- Its characteristic component is Agarospirol in the range of 2% to 10%. It is the most animalic in its olfactive profile.

MALAYSIA

- Species: *Aquilaria Filaria*.
- Its characteristic component is alpha eudesmol in the range of 5% to 15%.

INDONESIA

- Species: *Aquilaria Beccariana*.

TARAKAN

- Its characteristic component is Jinkohl alcohol in the range of 10% to 30%.

MERUKE

- Mainly grows in Meruke province of Indonesia.

THAILAND

- Two varieties are available in Thailand:

PRACHIN

- Trad. This variety of agarwood oil is obtained from *Aquilaria Crassna*. This species is most widely cultivated as it grows fast. The marker for this variety of agarwood oil is allo aromadendrene in 5% to 15%.

Agarwood oil may be graded on the basis of Sesquiterpenoids.

GRADE	Total Sesquiterpenoid Contents (Minimum)
A	70%
B	30%
C	10%
D	0%

PLANTATIONS

For the sustainable supply of Agarwood, proper systematic approach and management is needed like...

- Plantations
- Artificial inoculation techniques
- Registration of plantations with Local Authorities
- Harvesting Management /Selection of seeds
- Extraction methods
- Analysis & Quality Control
- Compliance to CITES and Local Regulations
- The forward thinking of our Late Chairman Haji Ajmal Ali empowered us to start Agarwood Plantations in 1979 and as of today Ajmal's plantations include approximately 1 million trees.





Figure 16 : AJMAL Agarwood plantation in Assam, India

Agarwood can be grown by adopting any of the following methods:

- Seeds
- Seedlings from Nursery
- Tissue culture

Selection of plant material is important due to long harvesting period



Figure 17 : (a) AJMAL Nursery of aquilaria malacensis in Assam, India and (b) Indian aquilaria malacensis seedlings

ARTIFICIAL INOCULATION

One of the techniques for artificial inoculation of agarwood trees.



Figure 18 : Artificial inoculation

PROCESSING OF HARVESTED AGARWOOD



Figure 19 : Processing of harvested agarwood

The good quality Agarwood is segregated, to be used as incense for burning purpose and lower quality for distillation of oil.



Figure 20 : (a) Agarwood Incense and (b) Agarwood for distillation of Oil



Figure 21 : Processing of Agarwood as Incense



Figure 22 : Conventional agarwood distillation facility in Assam, India

SUSTAINABILITY & CITES

- CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments.
- Its aim is to ensure that international trade does not threatens the survival of specimens of wild animals and plants.

1994	CoP9 - USA : India proposed <i>Aquilaria Malaccensis</i> to be included in Appendix II.
2004	CoP13 – Bangkok Indonesia proposed inclusion of the entire genera of <i>Aquilaria</i> and <i>Gyrinops</i> in Appendix II with annotation #1 that covers all parts and derivatives.
2006	Expert group meeting on Agarwood in Malaysia Based on presentation on artificial induction of Agarwood by Ajmal and Prof. Blanchet from USA, a serious thought on harvesting and plantation discussed.
2007	CoP14 – Hauge Proposed NDF was neither done; nor presented. Agreed to present NDF in CoP15, 2010, Qatar
2010	CoP15 – Qatar <ul style="list-style-type: none"> ➤ NDF was not deliberated and pushed to CoP16 in 2013. ➤ To prepare glossary with definitions. ➤ Parties should consider current definitions for Artificially propagated plants and how they applied to mixed species plantations.
2010	Side Event Qatar <ul style="list-style-type: none"> ➤ Joint meeting of GCC, Range states and Ajmal to work out the strategy for CoP16 and make sure required proposals are worked out and presented in CoP16 so as to conclude this issue
2011	Workshop held in Kuwait <ul style="list-style-type: none"> ➤ Agenda prepared to achieve our goals and adopted. ➤ NDF, Glossary and revised annotation deliberated
2011	Workshop held in Indonesia <ul style="list-style-type: none"> ➤ Carried forward agenda of Kuwait workshop. ➤ NDF refined and deliberated ➤ Glossary, annotation, definition and exemptions discussed and agreed with reservations.
2012	20th Meeting of Plant Committee in Dublin <ul style="list-style-type: none"> ➤ Outcome of Workshops in Kuwait and Indonesia discussed. ➤ Agreed to prepare proposal and submit to CoP16 in Bangkok pertaining to artificially propagated <i>Aquilaria</i> species, exemptions (Exhausted Agarwood etc. and personal effects).
2013	CoP16 - Bangkok <ul style="list-style-type: none"> ➤ Proposal 67.2 pertaining to NDF and definitions of artificially propagated agarwood species proposed and adopted. ➤ Proposal 70 pertaining to revised annotation presented and adopted. ➤ Proposal 47 pertaining to personal and household effects presented and adopted.

As per proposal 47, Exhausted Agarwood e.g. leftover after distillation is exempted from CITES. While travelling one can carry 1 kg of agarwood and 20 ml of agarwood oil for personal use, which is also exempted from CITES.

ARTIFICIALLY PROPAGATED AGARWOOD

Earlier it was not possible to harvest agarwood trees by farmers as there was no distinction between wild and domestic agarwood trees as per CITES. The stringent rules applicable to wild plantations were applicable to home grown and harvested trees. Hence though farmers and traders had plenty of plantations, they were not able to process the same. Ajmal played a key role in all the related meetings to change the regulations at CITES ensuring their good for farmers and traders. In order to process harvested trees, the following aspects were worked out.

Basic Requirement

1. Definition of artificially propagated Aquilaria species
2. Clarification on controlled conditions
3. NDF (Non Detriment Findings)
4. Identification criteria for Harvested and wild plantations

NDF (Non-Detriment Finding)

- The NDF is considered as a warranty of sustainable management system and verifies that traded volume of product will not cause further harm to the species within a range state.
- Species in Appendix 2 can be traded only after NDF by a State Authority and or by National CITES Scientific Authority has been completed with exception for re-export.

Block chain activity of agarwood



Figure 23 : (a) Artificial Inoculation,



Figure 23 : (b) Nursery



Figure 23 : (c) Aquilaria Malacensis Seedling Figure



23 (d) Mother Tree



Figure 24 Block chain for reproductivity

Suppliers and users of agarwood and derivatives need to maintain proper records. If all the stakeholders work in coordination and in compliance to local and international regulations, it is feasible to achieve a sustainable supply of agarwood.

ACKNOWLEDGMENT

The authors acknowledge generous support and encouragement from Mohd. Amiruddin Ajmal, CEO & Mr. Abdulla Ajmal, Dy. COO, R&D Team Members and Colleagues of Ajmal Perfumes.

Essential Oil Growth Models and their Practical Applications A Novel Approach (Review)

A.K. SHAHI

5-E-333, Jai Narayan Vyas Colony, Bikaner- 334003, Rajasthan

Energy indices like degree-days, photo-thermal units, helio thermal units, thermo/ photo ratio and Pan- evaporation along with calendar days during the crop growth & developments/phenological developments have been used for development of essential oil growth models for prediction of essential oil yield and its major chemical constituents at specified environmental conditions. The basic concept is applicable at any kind of environment. Developed mathematical models are useful tool for taking crop- management decisions.

An introductory work on this concept had been done on *Mentha arvensis*(*Japnese mint*)¹. It is primarily based on database models which includes common and temporal data, variety and management data and crop information. Weather data includes daily record of data maximum & minimum air temperature sunshine hours and rainfall. Soil data includes soil parameters for soil module variety data include genotype specific coefficients. Layout and flow of system design based on aromatic crops is presented below:

A brief schematic presentation based on development of regional essential oil crop models using environmental factors especially energy indices as independent *variables in multiple regression equation*². It is shortcut way of describing the relationship between variables. These equations are generally include coefficients (b) which will have to be determined from quantitative data.

These coefficients (b) of the equations are useful for parameterizing a simulation model. The concept of essential oil modeling as linear multiple regression equation for prediction of major chemical constituents (%) of essential oil bearing crops as under:

$$(Dependent Variable) Y = a_1 b_1 (\text{Essential oil, g/plant}) \pm a_2 b_2 (\text{Efficient energy indices } E_1) \pm a_3 b_3 (\text{Efficient energy indices } E_2) \pm \dots \pm a_n b_n$$

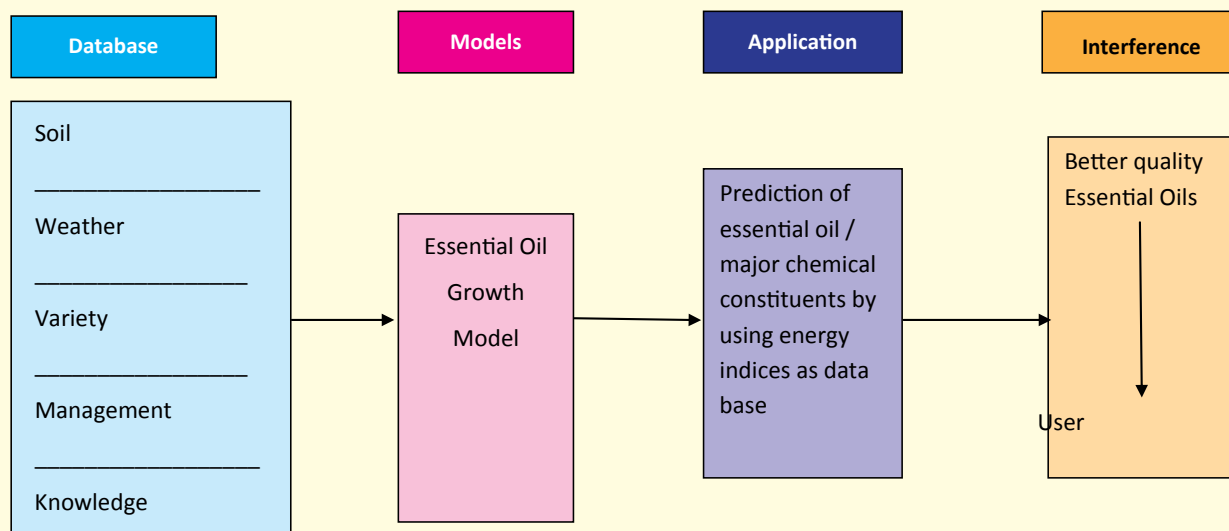
Where, (Independent variables).

Y= Quality (%) of major chemical constituent (s) like citral , geranioll , geranyl acetate & so on.

a = Regression constant

b= Regression Coefficient

n= number of observation



The most efficient energy indices were used for determination of oil yield oil quality in multiple regression equation. Efficiency of the energy indices is determined as Coefficient of variation (CV%) using phenological time scale and growth indices Low CV(%) value indicate *more efficiency of the energy indices* ^{3,4}.

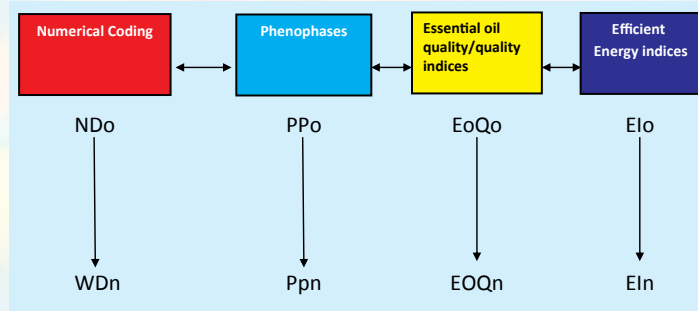
*A phenological time scale for Cymbopogon species in numerical coding/ pheno phases*⁵.

Coding Growth stages

- 2.0 Two leaves/ tiller
- 3.0 Three leaves/tiller
- 3.5 Appearance of 4th leaf after maturation of three leaves on the tiller
- 4.0 Four mature leaves. tiller and tiller induction continued.
- 4.5 Four mature leaves. & 5th one exhibited maturation.
- 5.0 Five mature leaves/ tiller.
- 5.5 5th leaf induction, elongation & culm (Pseudostem) formation after development of five leaves/ tiller and inflorescence appearance
- 6.0 Inflorescence & induction (25%) on the tiller and cuborn formation.

This phenological time scale coupling with plant growth stages/ phenophases, essential oil quality/quantity along with most efficient energy indices as input for essential oil growth model, as depicted below:

Optimal values of oil yield/ quality & energy indices



were determined at particular growth stage along with numerical code.

Now optimal values are each above mentioned parameters are used in multiple regression equation

in to predict oil yield/ oil quality (major chemical constituents) by using as dependent variables while essential oil yield & most efficient energy indices as independent variables.

Therefore, Essential oil growth models were in the form of multiple regression equation have been developed on a few aromatic crops. Developed models details have been presented in Annexure1 represented as multiple regression equation for determination of citral % in *Cymbopogon citratus* essential oil using most efficient energy indices i.e Heat use efficiency and phenol thermal index.⁷

Model Validation:

Validation are done by correlating predicted values with calculated values and its significance tested at 5% probability level. Index of agreement is also used for model validation (Willmott, 1982)⁶.

ANNEXURE-1

Crop: Cymbopogon citratus (Dc) stap f/ RRL(j) CCA 12 citral rich strain⁷

Multiple regression equation

Regression Constant (a)	Essential oil yield (bEoy)	Heat use efficiency (bHUE)	Phenothermal index (b(pt
61.6	1.09	-0.005	0.675

For prediction of citral (%) as essential oil quality index, the multiple regression equation will be as under:

$$EOQI (\text{Citral } \%) = 61.6 - 1.09x_1 - 0.005x_2 + 0.675x_3$$

Where

EOQI= Essential oil quality index (citral %)

b(Eoy)=Regression coefficient (b) for Essential oil yield

b(HUE)=Regression coefficient(b) for Heat use efficiency

b(PTI)= Regression coefficient (b) for phenothermal index.

a = Regression constant

Similar type of essential oil growth models have been developed for prediction of essential oil yield and one or two major chemical constituents by using efficient energy indices of geraniol yielding *Cymbopogon* strains and carvone rich strain of *Mentha longifolia* var incana and *Ocimum* species & other crops. The

detail are given in a book entitled "ESSENTIAL OIL CROP FARMING (A novel approaches for commercially able crops)⁸. And practical analytical work in *Practical work Book for essential oil bearing crops*⁹

NOTATIONS

Degree-days: It is physiological age or thermal time of the crop as governed by the heat accumulation in terms of degree-days. It varied from variety to variety & species and also at growth stages/ phenological time scale/ stages of the aromatic/ medicinal crops.

Phenothermal index: (Degree days/ growth day) It is important index indicating the thermal units accumulation for growth day which decides the rate of growth & development.

Heat use efficiency:(g/plant/degree-day)/ $\text{m}^2/\text{degree day}$): It is thermal units reflects the leaf growth; biomass production and seed yield of the crop.

Photothermal units: It is product of day-length & degree days.

Helio thermal units: It is product of bright sun-shine hours and degree-days.

REFERENCES

1. Shahi, A.K. and Singh, A. 1987. The significance of heat unit system for crop management practices in aromatic plants. An introduction study on Indian performer 31:100-108

2. Dospe khov, B.A. 1984. Field Expere-mentation. Mir. Publishers, Moscow.
3. Shahi, A.K. 1995. Adaptation of Cymbopogon species of India Thar desert under sub-tropical environment at Jammu.
4. Sastry, P.S.N. and Chakra varity, N.V.K. 1982. Energy summation indices for wheat crop in India. Agricultural Meteorology 27:45-48.
5. Shahi, A.K., Kaul, M.K. and Chandra , S. 2006. Phenological approaches to support adaptation and modeling of essential oil production and quality content of Cymbopogon commutatus (Steud) Stapf In: Second International Symposium on plant Growth. Modeling, Simlation, Vizualization and Applications. November 13-17, PR China p 76.
6. Willmott, C.J. 1982. Some comments on the evaluation of model performance. Bull. Am. Meteorol. Soc. 63:1309:1313
7. Shahi, A.K., Kaul M.K., Gupta,R, Dutt, P; Chandra, S. and Qazi, G.N. 2005. Determination of essential oil quality index by using energy summation indices in an elite strain of Cymbopogon citratus (DC) Stapf (RRL(J)ccA12) Flavour and Frag. J. 20:118-121
8. Shahi, A.K. 2018. Essential oil crop farming- A novel approaches for commercially viable crops. Agrobios(India), Jodhpur. p 170
9. Shahi, A.K. 2018. Practical work Book for Essential Oil Bearing Crops Agrobios(India), Jodhpur p 70.

FRAGRANCE FOREVER

M/S. D.G. GORE

MANUFACTURERS OF INDUSTRIAL FRAGRANCES

31, MANGALDAS ROAD,
MUMBAI - 400 002

Tel. 2208 09 09, 2206 6346
Fax: 2208 34 08

Email: dgore@dggore.com





Sacheerome - A Sojourn in the World of Fragrances & Flavours

Fabric Care: The Difference Is Sensational! Clothes are a reflection of your personality; and therefore need the same care and freshness that your body deserves. Master Perfumers at Sacheerome have combined the best of technology, experience and passion to create international grade long lasting aromas for detergents, fabric softeners and laundry products to suit every personality and keep your clothes feeling fresh through the day.



CDL



Cluster



HCS



Storage

Sacheerome Private Limited

F-89/4/2, Okhla Industrial Area, Phase -1,
New Delhi - 110020. India. T: +91-11-47311111.
1007, 10th Floor, K.P. Aurum Building, Marol Maroshi Road,
Marol, Andheri East, Mumbai - 400059. India.
T: +91-22- 29200138, +91-22- 29202027 & 2028.
E: info@sacheerome.com W: www.sacheerome.com



SACHEEROME
Fragrances & Flavours



Speciality Aroma Ingredients for Flavours & Fragrances

We specialize in

ANISE ACETONE

ORANGE ACETONE

4-METHYL-CUMARON

PROPENYL-DIETHYL

RESORCINOL-DIMETHYL-ETHER

BENZALDEHYDE

THOUMERONE

4-VINYL-CUMAROL

CARYOPHYLLENE OXIDE

4-MERCAPTO-4-METHYL-&PENTANONE

1-METHOXY-2-HEXANO

2-METHYL-4-PROPYL-3-OXATHIANE

4-METHYL-2-VINYL-THIOLANE

MENTHYL-PROPATE

4-METHYL-THIOLANE

AROMA AROMATICS & FLAVOURS

67-68-69, Buddi Industrial Area, Buddi, Distt. Solan-173006 (H.P.) India

Tel: +91-1793-244431 Fax: +91-1793-244430

E-mail: aromabuddi@gmail.com, Website: www.aromatasmallies.com

Head Office: New Delhi Fax: +91-11-26388408

E-mail: rohini@google.com, Website: www.google.com



THE ANTHEA GROUP
Fine Chemistry. Better Products.

FINE AROMA PRODUCTS FOR THE FINEST PERFUMES

GROUP COMPANIES



ANTHEA AROMATICS
RESEARCH DIVISION



DRT ANTHEA
AROMA CHEMICALS



CROWN CHEMICALS
VED ANAND CHEMISTRY



CALSYNTH
SPECIALITY CHEMICALS

PRODUCTS

- Anthamber[®] (Iso E Super)
- Boisamber
- Dihydromyrcenol
- Ethyl Safranate
- Florether (Anther)
- Geraniol
- Lilivol
- Linalool
- Nerol
- Synthetic Piperonal (Heliotropin)
- Verdantal (Vertral)

Corporate Office:

502/503, Sigma IT Park, Rabale MIDC,
Navi Mumbai – 400 701, INDIA.
info@anthea-aromatics.com

www.anthea-aromatics.com

CITRUS

Essential Oils
& Specialities

Bergamot

Blood Orange

Lemon

Lime

Mandarin

Neroli Phase

Tangerine etc



Soofi

Trust • Values • Performance | Since 1970

Authorised Distributors in India for

LAPUA 1880

Soofi Traders - 1317, Dalamal Tower, 211, Nariman Point, Mumbai-400 021, INDIA • E: sales@soofi.in • W: www.soofi.in



engage your senses

Soofi

Trust • Values • Performance | **Since 1970**

Authorised Distributors in India for

Givaudan
fragrance ingredients



Soofi Traders - 1317, Dalamal Tower, 211, Nariman Point, Mumbai-400 021, INDIA • E: sales@soofi.in • W: www.soofi.in



Erste Tiroler Latschenölbrennerei
BRÜDER UNTERWEGER

Bruder Unterweger offers a wide range of organic and conventional essential oils

- | | |
|---------------------------------|-----------------------------|
| Abies Oil (Several Grades) | *Pine Oil Pumilionis |
| Dwarf Pine Oil* | *Sage Oil Offic. 30 % |
| Lavender Oil (Several Origins)* | Fir Needle Oil Siberian |
| Pine Oil Sylvestris* | Coriander Seed Oil |
| Clary Sage Oil* | Thuja Oil |
| Organum Oil (70 % Carvacrol)* | *Laurel Leaf Oil |
| Angelica Root Oil | Larch Turpentine Oil |
| Basil Oil (Several Grades) | Myrtle Oil |
| Calamus Oil Crude | Parsley Leaf Oil |
| Calamus Oil (Rect.<10% Asarone) | Parsley Seed Oil |
| Coriander Herb / Leaf Oil | Pine Oil Nigra |
| Caraway Oil | *Pine Oil Pumilionis |
| Carrot Seed Oil | Rose Absolute Russian |
| Cedar Leaf Oil | Rosemary Oil |
| Chamomile Oil Blue | Sage Oil |
| Cognac Oil White / Green | Savory Oils (Summer/Winter) |
| Dill Seed Oil | Silver Fir Cone Oil |
| Dill Weed Oil | *Silver Fir Needle Oil |
| Fennel Oil Sweet | Spruce Needle Oil |
| Fennel Oil Vulgaris / Bitter* | *Swiss Stone Pine Oil |
| Helichrysum Oil* | *Thyme Oil Vulgaris |
| Hyssop Oil | Thyme Oil Wild |
| Juniper Berry Oil 2 x rect.* | Valerian Root Oil |
| Juniper Needle Oil | *Yarrow Oil Blue / Green |

* Organic quality available on request

Agents & Distributors in India

Soofi

Trust • Values • Performance | Since 1970

SOOFI ENTERPRISES & SOOFI TRADERS

1317, Dalamal Tower, 211, Nariman Point, Mumbai-400021, INDIA

E: sales@soofi.in W: www.soofi.in

BALAJI TRADING COMPANY

DEALERS IN NATURAL ESSENTIAL OILS, AROMATIC CHEMICALS AND VEGETABLE OILS

STOCKISTS FOR



BALBAM COPAIBA

BASIL OIL EXTRA

CAMOMILE OIL BLUE EXTRA

CYPRESS OIL EXTRA

ELEMI RESINOID

GERANIUM OIL AFRICAN

JUNIPERBERRY OIL FG

LABDANUM RESINOID

LAVENDER BARREME 50/52%

LAVENDIN OIL

LIME OIL

MYRTLE OIL

OAKMOSS ABSOLUTE

PETTGRAIN OIL

ROSE OIL RECONSTITUTED FG

STYRAX HONDURAS RESINOID

BALBAM TOLU

BIRCH TAR OIL EXTRA

COGNAC GREEN OIL

ELEMI OIL

GALBANUM OIL

GRAPE FRUIT OIL EXTRA

LABDANUM ABSOLUTE

LAVENDER ABSOLUTE

LAVENDER OIL 35/40%

LEMON OIL ITALIAN

MARJORAM OIL

NEROLI OIL FG

OPOPONAX RESINOID

PIMENTO BERRY

ROSEMARY OIL

TARRAGON OIL

YLANG YLANG OIL

AND MANY OTHER PRODUCTS ON DEMAND

WRITE TO US ON :-

507 NAIN KRUPA BUILDING, 118/122 KAZI SYED STREET, MUMBAI - 400 003

TEL : 022 23432526/23448032 FAX: 23401895 EMAIL : thakkar_group@outlook.com

WEBSITE : www.thakkargroup.co.in

ASHISH THAKKER 9870031751

MAHESH THAKKER 9821334436

The Fine Fragrances Boutique

Explore • Experience • Express

Explore
over 250 high
quality ingredients

Experience
odor profiles in accords

Express
ingredients in your own creations
with technical support from us

IFF

International Flavors & Fragrances Inc.
Authorized Distributor for Ingredients

symrise 

Sole Distributor of - Linalool, Linalyl Acetate, Geraniol



FINE FRAGRANCES PVT. LTD.

119, Jolly Maker Chamber No. 2, 11 th Floor, Nariman Point, Mumbai 400 021, INDIA.

Tel.: + 91 22 22023834, Email : sales@finefrag.com, web : www.finefrag.com



High Quality Aroma Ingredients For Master Blends

Introducing soon - Lyrat base 760

**IFF**

International Flavors and Fragrances Inc.
Authorized Distributor For Ingredients

AMBER

- ◆ AMBER XTREME
- ◆ AMBRINOL 95
- ◆ CASHMERAN
- ◆ GRISALVA

HERBAL

- ◆ ISO BUTYL QUINOLENE

FRUITY

- DELTA DAMASCONE

FLORAL

- FLORALZONE
- HELIONAL
- LYRAL
- PHENOKANOL
- ROSETHYL
- STARFLEUR 40

MUSK

- GALAXOLIDE PURE
- GALAXOLIDE 50 DEP
- ZENOLIDE

FRESH

- INTERELEN ALDEHYDE
- PIND ACETALDEHYDE

GREEN

- GALBASONE
- LIFAROME

WOODY

- METHYL CEDRYL KETONE
- TIMBERSILK
- SANIVOL

Now Available all Aramor Israel Ingredients like - Ambermor, Aquamor, Alpha/ Beta Damascone, Cetalar, Dynamor, Damasconone, Karamor, Nootkatone, Musemor, Muscor, Valencene



Pure • Transparent • Sustainable • Natural

**IFF**

International Flavors and Fragrances Inc.
Authorized Distributor For Ingredients

ANIMALIC

- CASTOREUM ABSOLUTE

FLORAL

- ROSE ESSENTIAL LMR

HERBAL

- ARMOISE OIL PURE BLD
- LAVANDIN OIL GROSSO
- LAVENDER ABS H
- HAY ABSOLUTE

GOURMAND

- TONKA BEAN ABSOLUTE

SPICY

- SCHINUS MOLLE OIL LMR

WOODY

- PATCHOULOL SESQUITERPENES
- VETIVER OIL HAITI LMR
- COPAIBA BALSAM OIL BLD
- GUAYL ACETATE BLD



FINE FRAGRANCES PVT. LTD.

Leading distributors and suppliers of high quality aroma chemicals, perfumery and flavor ingredients, essential oils and absolutes.


11B, Jolly Maker Chamber No. 2, 11th Floor, Nariman Point, Mumbai 400 021, INDIA.

Tel: + 91 22 22023834, Email: sales@finefrag.com, web: www.finefrag.com



Natural Identical Bases For Cost Effective Blends

RECONSTITUTES

 Fine Fragrances Pvt. Ltd.

AMBER

- LABDANUM RECON FFPL LB01S
- LABDANUM RESINCHD
(LABD K-15812-2)

AROMATIC

- LAVANDER RECON ECO
- LAVANDER RECON EXTRA
- LAVANDIN RECON
- LAVANDIN RECON ECO

BALSAMIC

- BENZOIN RECON FFPL BZ110
- OLIBANUM RECON MOD-2
- PERU BALSAM RECON BH
- STYRAX RECON FFPL ST010

FLORAL

- GERANIUM RECON POWER
- GERANIUM RECON SUPER
- YLANG OIL SYNTH
- YLANG RECON ECO

HERBAL

- ROSEMARY RECON IND

GREEN

- GALBANUM RECON FFPL GB002

MOSSY

- OAKMOSS RECON
- OAKMOSS RECON IND

SPICY

- PIMENTOBERRY OIL RECON
PM200

WOODY

- PATCHOULI OIL RECON 015



Terpene Based Key Ingredients

symrise 

Sole Distributor For Terpenes Based Ingredients

FLORAL

- LINALDOL COEUR
- LINALYL ACETATE COEUR
- GERANIOL FINE 99%
- NEROLEX



FINE FRAGRANCES PVT. LTD.

Leading distributors and suppliers of high quality aroma chemicals, perfume and flavor ingredients, essential oils and absolutes.

119, Jolly Maker Chamber No. 2, 11th Floor, Nariman Point, Mumbai 400 021, INDIA.

Tel: + 91 22 22023834, Email: sales@finefrag.com, web: www.finefrag.com



Pure

- **BENZOIN**
- **LABDANUM**
- **STYRAX**
- **OLIBANUM**
- **OAKMOSS**
- **GALBANUM**
- **ELEMI**
- **MYRRH**

Natural

Available In :

ABSOLUTES • RESINOIDS • ESSENTIAL OILS

FINE AROMATICS & HERBAL EXTRACTS PVT. LTD.

Plot C1B/4 & C1B/14, GIDC, Umbergaon, Dist. Valsad 396 171. Gujarat (INDIA),

Tel. : Mumbai : +91-22-2202 0644 / +91 8291282872

E-mail: sales@fahs.co.in



Standardising Essential Oils for Purity & Quality - A Dire Consumer Need!

Dr. Sitaram Dixit

Independent Consultant -F&F, Home, Fabric & Personal Care Chemical Industry,
Chairman - Consumer Guidance Society of India (CGSI)
www.sitaramdixit.weebly.com, www.sitaramdixit.yolasite.com



We are all aware that essential oils are extremely concentrated plant extracts not only benefiting the plant itself but also several other life forms depending on the plant. Thus, essential oils are aromatic concentrated hydrophobic volatile liquid extracted from leaves, flowers, stalks, roots, resin or bark of essential oil bearing plants for human use. Essential oils have the exceptional ability; to enter human body through the skin, olfactory senses, ingestion or intravenous means and interact with various human body systems helping it enhance the innate ability to achieve physical and mental well-being. People belonging to all walks of life and professions like medical doctors, naturopaths, chiropractors, aroma therapists, cooks, psychiatrists, massage therapists, dentists, nurses, by perfumers in personal, fabric and home care industry and flavourist in food and beverage industry, etc., to name a few use essential oils in various application techniques for human benefit.

The standards for essential oil quality and purity are highest in aromatherapy as they affect their therapeutic value, whereas aroma, colour and flavour are important for the flavour and fragrance industry. The higher the quality essential oils with specific characteristics the higher the price, a huge inducement for suppliers to adulterate and sell. Unfortunately, today unscrupulous organizations reverse engineer natural essential oils making them artificial while many others adulterate it with fillers (that we cannot easily smell) wherein the real oil percentage itself is very small. When a consumer buys essential oil altered with ingredients other than the pure oil then, it does not provide the desired or expected results or at worse gives unwanted side effects that really do not exist according to traditional and/or scientific research. When such

conflict arises in a consumers mind, it damages the utility of essential oils for therapeutic practice, with a probability to shatter the entire essential oil industry business. Real time unholy practices in addition to very many others gives a bad name to the essential oil industry, making it all obvious for a need for essential oil standards so that consumers would to feel safe to use and benefit from them. Incidentally, today a regulatory agency for the standardization of essential oils does not exist even though users are present all over the world.

Essential Oils are All Not Equal

Many factors affect the therapeutic property of herbal plants and it is critical that they oils have the therapeutic chemical constituents intact in them for aromatherapy or for other medical uses. '100% Pure' essential oil does not mean all the vital therapeutic and medicinal chemical components are present there as we get true therapeutic essential oils only from the first distillation. Second and third distillation essential oils even though overall smelling similar have significantly lowered potency. The temperature and time of distillation is also vital to bind the full chemical potential of the plant. Distilling large batches at high temperatures and pressure destroys the therapeutic properties left even though it is able to maintain the desired fragrance or smell. In addition, for getting essential oil with optimum desired chemistry the plants selected need to be of the highest quality, grown in virgin soil uncontaminated by chemicals and harvested during the correct time of the year (even precise time of day) under strict environmental condition. In this respect essential oil, plants when distilled immediately on harvesting at farms have better therapeutic properties.

'Therapeutic essential oil' standard thus encompass everything from planting to marketing of the essential oil. It means verifying the correctness of the plantation species, the purity of the soil, manner of cultivation (without use of synthetic chemicals), the proper time of harvest, the mode of the distillation process to capture the right chemical therapeutic compound compositions thereby optimizing the healing properties in the oil and the purity of the packaging. In short, right natural means nothing added, nothing taken out and stored in amber or blue coloured light-protected glass or ceramic bottles or teflon or stainless steel in a stable temperature or environmental conditions. A plant grown in one region might have slightly different chemistry than that grown in another region. Similarly, distilling a plant when too green or harvesting at the wrong time of day may yield chemical constituents at incorrect levels, not meeting the therapeutic essential oil quality even though the oil may be '100% pure'. Essential oils for aromatherapy use apart from being therapeutic essential oil should also be unadulterated without addition of any synthetic chemicals or potentially toxic compounds. It is vital to use only that essential oil that meets the rigorous standards and contain the medicinal plant potential to treat any health issues. It is also obvious that essential oils having therapeutic benefit are significantly more expensive and work more efficiently at lower dosage levels.

Organic & Natural

The chemistry of essential oils falls within the dominion of organic chemistry under the broader field of general chemistry. Since, the beginning of chemistry organic means the study of life compounds. Carbon forms the basis of all compounds created by living processes and therefore we define organic chemistry as 'the study of carbon compounds.' Today scientists synthesize thousands of carbon compounds outside of the natural processes of living organisms and call them as 'organic' regardless of their origin. Consequently, petrochemicals (motor fuels, industrial solvents), pesticides, fungicides, herbicides, disinfectants, cleaning fluids, plastics, Styrofoam, paints, other toxic products important

for modern living, pharmaceuticals, etc., are 'organic' since virtually all of them are composed of carbon molecules. Carbon is the most adaptable element capable of forming long chains and complex ring structures with another carbon atom. It an ideal building block for not only making industrial products but also innumerable living forms including essential oils artificially. Seeing the word 'organic' on a package label, a consumer assumes the marketed products (or its ingredients) are free of herbicides, pesticides, chemical fertilizers, hormones, antibiotics, etc., although to an expert chemist, the term only means that the product contains carbon compounds including the presence of synthetic. The legally defined phrase 'Certified Organic' is a much better word than 'organic' to mean what most consumers think of it.

Consumer also believe that the term 'organic' implies that the product was grown in healthy soil under sunlight in a clean atmosphere very naturally and not in a chemical factory or synthesized inside a laboratory. The reality is however different as government regulations does not restrict, use of the word 'natural' in a label if the product contains compounds produced by natural plants even though the content of that particular product may have been produced synthetically equating a natural living plant with that of a factory or in other words a manufacturing plant. In case of essential oils chemistry alone is not responsible for therapeutic and/or nutritional properties, but also the vitality of a life force shaped by living processes that is absent in synthetic products manufactured in a dead environment like a laboratory or manufacturing plant. This becomes crucial in case of essential oils use with synthetics becoming ineffective for aromatherapy healing. However, numerous examples of products exists in the market erroneously labelled as containing natural ingredients when, in reality it is totally manufactured in a laboratory namely fruit flavours in drinks, chewable vitamins, candies, etc. Combining the right type of esters, we can create the taste of bananas, orange, lime, watermelon, apple, peach, raspberry, papaya, kiwi and just about any fruit we desire. We find small amounts

of methyl anthranilate ester in many essential oils also in grapes and cherries. While producing natural flavourings for beverages and confectionaries, making use of synthetic methyl anthranilate ester, adding a little colour and labelling it as a grape or cherry is quite common. Knowledge is power and being aware of the true meaning of 'organic' and 'natural' is important to decipher product labels correctly.

Understanding Standardisation & Adulteration in Essential Oils

Essential Oil: According to ISO, essential oils are 'product obtained from a natural raw material of plant origin, by steam distillation, by mechanical process from the epicarp of citrus fruits or by dry distillation, after separation of the aqueous phase—if any—by physical process'. Additionally, according to the ISO note added to definition, essential oils can undergo physical treatments such as filtrations, decantation, centrifugation that does not result in any significant change in its composition.

"An essential oil can be pure while simultaneously being of poor quality. Oil that is not pure is of poor quality!" To understand this statement better, let us delve ourselves deeper into the subject.

Pure: A pure, natural essential oil extracted from a single species of plant from one specific geographical area. Aroma profile for such oils could differ slightly from season to season and geographical location.

Concrete (Resinoid), Absolute: Solvent extraction of botanicals using oil soluble solvents, like hexane, di-methylenechloride, acetone, etc., and placing the substances extracted in a distillation vessel and applying gentle heat, just enough to recover the solvent present in the mixture without removing any of its volatile constituents.

Concrete: The residual solid wax-like substance left after solvent extraction is termed as a 'concrete'. If the residue is a resinous botanical material, then it is a 'Resinoid' instead of a 'concrete' (e.g., frankincense and myrrh.)

Absolute: Technically absolute is not "essential oils" but "essences." Melting a concrete in warm grain alcohol and stirring it to dissolve the essential oil,

some waxes, fixed oils and fats, etc. and distilling the mixture under vacuum to remove alcohol leaves us a substance we call as an 'absolute'. It is the most concentrated form of fragrance (therefore expensive) for our use in the perfume industry. We generally use flower petals to get absolutes, principally for botanicals where to unlock their fragrance and healing portions using solvents alone (E.g., Jasmine and Neroli extraction)

Rectified Oils: It is a process to removing some essential oil constituents and enhancing the fragrance character. (E.g., remove terpenes from Eucalyptus oil enhancing its fragrance by making it sweeter or remove the prized fresh-scented monoterpenes present in Bergamot oil making it softer and sweeter, thereby resulting in an unbalanced, terpene less Bergamot oil. Thyme oil can have some or all of its valuable thymol removed to make it softer, less skin irritating and more useable.)

Reconstituted Essential Oil: Recreate the fragrance of expensive essential oils or absolutes entirely from isolates and synthetic constituents. (E.g., Industrial Lemon oil using Citral extracted from Lemongrass and adding some d-limonene from Orange oil. Reconstituting Melissa oil artificially by making use of citronella, lemon and lemongrass.)

Bases (Perfumery): Compositions/Accord that may not be complex or true like reconstituted essential oil, but forming a part of a note. (E.g., Rose base, Jasmin base, etc.)

Standardised Oils: Making essential oils uniform to ensure consistency and reliability to a certain aromatic profile/constituents for specific applications. (The fragrance industry requires a standardised odour profile for most of the oils for its use, so that the fragrance they manufacture has a reliable aromatic odour. E.g., Lavender oil (40/42) is a standardised oil where suppliers carry out adjustment to have the proportion of the two main essential oil constituents' linalool and linalyl acetate as 40% and 42%).

We can standardise essential oils in many ways by blending different components.

1. **Origin blend** : Blending oil from the same plant species but from different geographical locations
2. **Natural Blend**: Using the majority of oil (over 90%) from the named species and adding natural extractions from other oils to boost the odour profile reflecting the standardised specification.
3. **Commercial Blend**: Oil having about 20% of the named species of plant, along with natural extracts from other essential oils to confirm the standardised oil profile requirements.
4. **Commercial Oils (Reconstituted oil)**: Oils majorly having synthetic ingredients.
5. **Rectified Oils**: Removing constituents to enhance the essential oils fragrance character.

True therapeutic quality essential oil should contain hundreds of compounds, necessarily in a proper balance. Few of these numerous compounds alone significantly matter commercially in contributing to aroma and/or taste, for use in fragrances or flavours. Manufacturers and consumers do not care whether flavours or fragrance natural or synthetic if they are inexpensive and smell and taste like naturals. Standardisation thus is to carry out a process that alters the composition of the essential oil bringing its constituents to a required standard in consultation and agreement with the user in order to eliminate natural variations or be in line with user regulatory requirements. Sometimes essential oils could contain constituents, classified as toxic, allergic, sensitising or carcinogenic, that could require treatments in order to remove these harmful constituents to meet regulatory requirements. Adulteration of essential oils instead, happens without customer or user knowledge and may be either deliberate or otherwise on part of supplier. Hence, fragrance and flavours are usually incomplete composition, in comparison to the chemical profile of a complete therapeutic essential oil. Additionally, to increase volumes and profitability it may also contain synthetic compounds, adulterants or diluted with petrochemicals.

Adulteration: It is the act of INTENTIONALLY debasing the quality of the product for sale by either

the admixture or substitution by inferior substances or by the removal of some valuable ingredient.

Unintentional adulteration / natural degradation

Lack of knowledge and expertise, incorrect selection and treatment of raw materials, use of improper equipment and following inappropriate manufacturing practices are some possible reasons for unintended adulteration of essential oils. Natural alteration or degradation could also be unintentional. Improper storage and shipping is also important to maintain essential oil quality. Citrus oils are vulnerable to oxidation on exposure to air, heat and sunlight resulting in poor quality stale oil. Storing oils and shipping in cool and dark conditions without any air headspace in the drums or bottles is therefore necessary to maintain essential oil quality.

Why adulteration is rampant?

Natural essential oils supply is limited and its increasing demand for use in industry leads suppliers to adulterate the natural essential oil to increase the supply, lower, and to sell their product as pure essential oils in the market. Another important reason for rampant adulterations is the continued consumer demand of purchasing genuine oils much below the market price, wherein honest traders find themselves virtually impossible to remain and practice ethics in business. Adulterated essential oils may smell pure however; they are unlikely to have the same therapeutic effect or properties. Adulterating essential oils for profitability is widespread and is a common practice (it wrongly termed as "to standardize") with blending occurring with either the true botanical or other similar botanical or with synthetics, so a "100% essential oil" on a label is NO guarantee for purity. The fragrance and flavour industry is by far the biggest user of essential oils and ironically, the practice of adulteration is accepted. Perfumers and flavourist need essential oils that have the same chemical makeup and aroma, consistently year after year. To ensure consistency and acceptability of a product,

the industry carries out adulteration or rectification (putting right) so that the final product is exactly as per demand, as otherwise the same fragrance or flavour bought today would smell different from the one bought last year. Weather and environment greatly influence the aroma and taste of essential oil plant crops year to year. The chemical makeup of the essential oils too differs based due to environment and the place where the plants are grown. These essential oils (fixed, adulterated or rectified of inherent inconsistencies for the exclusive use perfumers) enter into the regular market supply chain for sale to all other consumers as pure and genuine oils raising many safety issues.

Adulterating an essential oil modifies the naturally existing synergistic components diminishing its therapeutic benefits. Pure essential oils contain many scientifically unidentified components and its presence as a 'whole'; give each essential oil its own unique beneficial quality or adverse effect. Many people trust that changing the distribution of chiral components of essential oils by deliberate adulteration with racemic synthetic aromatics changes the beneficial properties of the oil with a possible risk of adverse side effects as apparently these unusable unidentifiable components, actually 'quench' of the negative side effects which therapeutic agents in isolation could or do cause.

Adulteration of essential oils

Every production of essential oil will produce a different composition of essential oil affect the quality of the final product (Flavour & Fragrances) client industries necessitating standard essential oils. We estimate that 95% of most oils available for open sale undergo adulteration to produce commercially standardised essential oils. The process of adulterating an essential oil to improve fragrance profile is 'bouquetting' and when it is to increase its volume, we call it 'cutting' or 'stretching'. Another form of classical adulteration is to substitute or mix pure oil with reconstituted oil.

Dangers of using adulterated oils

One can have adverse skin reactions when using such oils, but these are not reactions to true essential oils, as these reactions are due to the adulterants and not due the natural essential oil components of the oil. Adding racemic synthetic chemicals changes the enantiomeric ratios of natural essential oils that may lead to an unexpected adverse physiological effect on the user especially in aromatherapy practice. Typical examples are

1. Inhaling (+)-limonene increases systolic blood pressure, changing alertness and restlessness of users, however, inhaling (-)-limonene affects only the blood pressure of users. (*Reference: Huenberger et al.*)
2. (-)-carvone increases pulse rate, diastolic blood pressure and restlessness and (+)-carvone increase systolic and diastolic blood pressure (*Reference: Huenberger et al.*)
3. (+)-rose oxide confers relaxing physiological effects whereas (-)-rose oxide is much stimulative. (*Reference: Traynor.*)

Adulterants can be very many. Some common ones are diluents like diethyl phthalate (DEP), synthetic extenders that mimic natural essential oils, non-organic raw materials like artificial fertilisers, chemical pesticides, etc. All have adverse effects on the skin, eyes, endocrine and nervous systems.

ADULTERATION METHODS INCLUDE (BUT NOT LIMITED TO)

1. Adding cheaper oils to an expensive ones,
2. Extraction of a valuable ingredient from an oil,
3. Blending a higher quality essential oil with a lower quality version of the same species,
4. Adding isolates obtained from other essential oils (low cost lemon or orange terpenes),
5. Adding individual natural, synthetic constituents (including nature identical), to improve aroma,
6. Adding vegetable (rapeseed oil / sunflower oil) or mineral oil, solvent, etc. (Invisible adulterants difficult to detect by routine essential oil analysis test methods.)

COMMON ADULTERATIONS INCLUDE (NOT LIMITED TO)

Essential Oil	Adulterants
Angelica Root	Angelica Leaf oil.
Anise	Technical Grade Anethole
Basil (Exotic)	Methyl Chavicol, linalool
Basil (Sweet)	Linalool plus Basil Oil exotic
Benzoin Resinoid	Vanillin, benzyl benzoate, ethyl and benzyl cinnamates, benzoic acid, cheaper Sumatra benzoin
Bergamot	Lemon Oil, Rectified Ho Oil, Sweet Orange Oil & Terpenes, Linalool and Linalyl Acetate, etc.
Bitter Almond	Benzaldehyde
Bitter Orange	Sweet orange, orange terpenes
Black Pepper	Limonene, Phellandrene, Pinene, Sesquiterpenes from the Cheaper Clove Oil.
Buchu leaf	Cuts of monoterpene Sulphide fractions synthesised from hydrogen sulphide by treating pulegone having p-menthan-8-thiol-3-one.
Camomile (Roman)	Moroccan Wild Camomile Oil, isobutyl angelate, synthetic bisabolols.
Cardamom	Eucalyptol, Terpinyl Acetate / Linalyl Acetate
Cassia	Cinnamic Aldehyde, Methyl Cinnamic Aldehyde And Coumarin
Cedarwood (Virginia)	Cedarwood Oil Chinese
Celery seed	Lininene and (+)- carvone
Ceylon Cinnamon Bark	Chinese Cassia oil
Cinnamon Bark	Cinnamon Leaf Oil / Cinnamic Aldehyde, Eugenol
Cinnamon Leaf	Clove Leaf Oil, Eugenol, Cinnamic Aldehyde, benzaldehyde
Citrus Oils (Cold-Pressed)	Distilled versions of these Citrus Fruits.
Clove Bud	Clove Leaf Oil / Eugenol & Eugenyl Acetate / Beta Caryophyllene
Clove bud oil	Clove leaf oil
Cognac	Ethyl esters of aliphatic acids (e.g., ethyl oenanthate)
Coriander seed	Linalool, trace amounts of certain pyrazines
Cumin seed	Cuminaldehyde
Cypress	α -pinene, δ -3-Carene, Myrcene
Dill seed	α -phellandrene. Limonene
Elemi Oil	α -phellandrene, Limonene
Eucalyptus Globulus	Cinnamomum camphora,
Eucalyptus Radiata	Eucalyptus Globulus plus α -terpineol
Floral absolutes	Schiff's bases
Galbanum resinoids	β -pinenes, undecatrienes
Gardenia absolute	Styrallyl acetate
Garlic	Aliphatic sulphide mixtures of 2-propenyl disulphide and 1-propenyl disulphide, etc.
Geranium (Indian)	Palmarosa Oil, Citronella, Synthetic Components, diphenyl oxide
Geranium Bourbon	Geranium Oil from China
Grapefruit	Orange terpenes, sweet orange oil, minor amounts of (+) - nootkatones
Jasmin	Ylang-Ylang, Benzyl Acetate, Indole, Cinnamic Aldehydes And Fractions
Juniper	Terpene hydrocarbon mixtures of α -pinene, δ -3-Carene, poor quality oils.
Labdanum resinoids	Abitol, ambroxan, p-methylacetophenone.

COMMON ADULTERATIONS INCLUDE (NOT LIMITED TO)

Essential Oil	Adulterants
Lavender	Lavandin, Acetylated Lavandin, Aspic, Synthetic Linalool, Linalyl Acetate, Terpenyl Propionate, Ho Leaf Fractions, Eucalyptus, White Camphor Oil Fractions, Spanish Sage Oil, Bulgarian Lavender Oil, Etc.
Lemon	Orange Terpenes, Lemon Terpenes, Lime Oil. Grapefruit Oil, Synthetic Limonene, Citral, Dipentene, BHA, BHT
Lemon Grass	Citral
Linden Blossom absolute	Hydroxy citronellal
Mandarin Citrus reticulata var mandarin	Tangerine Oil plus, γ - terpinene, dimethyl anthranilate, α -sinesal and perilla aldehyde
Melissa	Litsea cubeba oil, Lemon oil (Citrus Limon), Lemon grass (Cymbopogon Citratus) or Citronella (Cymbopogon nardus).
Mentha Citrata	Linalool / Linalyl Acetate
Mentha Piperita	Mentha arvensis oil
Moroccan Myrtle	Myrtle from the Balkans.
Neroli	Linalool, Nerol, Limonene, Linalyl Acetate
Nutmeg	Nutmeg terpenes, α -pinene, Limonene, Turpentine fractions
Orange	BHA, BHT, Distilled Orange Oil Sweet & Bitters Mixed,
Origanum	p -cymene, carvacol
Palmarosa	Geraniol
Patchouli	Cedarwood Oil, Clove Oil, Terpenes, Methyl Abietate, Vetiver Residues, Castor Oil, Gurjun Balsam, Cheaper Chinese Patchouli Oil,
Peppermint	Cornmint, L-Menthol
Petitgrain	Other Citrus Leaf Oils And Fractions, Fatty Aldehydes, Linalyl Acetate And Orange Terpenes.
Pine needle	(-)-bornyl acetate, limonene, camphene, α -pinene
Rose	Geranium Oil, Fractions or Natural & Synthetic Geranium Oil, Phenyl Ethyl Alcohol, Citronellol, Geraniol, Rhodinol fractions, etc.
Rose (Damascena)	Geranium (Pelargonium graveolens) and Palmarosa oil (Cymbopogon martini)
Rosemary	Eucalyptus Globulus Oil / White Camphor Oil, Limonene, Alpha-Pinene And Camphene From Orange And Other Monoterpene-Rich Citrus Oils, Isobornyl Acetate, etc.
Rosewood	Trace amounts of Methyl heptanone, methyl heptanal, p -methylacetophenone, Linalool, 3-octanol
Sandalwood	Amyris, Araucaria, Cedarwood Oil, Castor, Copaiba, Glycerol Acetate, Benzyl Benzoate, triacetin, Sandalwood Terpenes, Cheaper West African & West Australian Sandalwood Oils, Synthetic Sandalwood Fragrance Chemicals (from α -campholenic aldehyde.)
Siberian Fir	Chinese Fir
Spearmint	L-Carvone
Star anise oil	Synthetic anethole
Sweet Orange oil Florida	Orange oil Brazil
Tea tree	Terpinen-4-ol, α and γ terpinenes
Thyme	Thymol, Para Cymene
Thyme (Thymus vulgaris)	Wild Thyme (Thymus mastichina)
Vetiver	Caryophyllene & derivatives.
Wintergreen	Methyl Salicylate
Ylang-Ylang	Cananga Oil, Perubalsam, Copaiba, Inferior Fractions & Synthetics.
Yuzu	Grapefruit, Mandarin

Adulterators generally add Abitol (a primary hydroabietyl alcohol to resinoids), Benzyl alcohol (allergen), Benzyl benzoate (allergen), Dipropylene Glycol (DPG), Carbitol (diethylene glycol monomethyl ether or DRGME), Diacetone alcohol, Herculyn D™ (hydrogenated methyl ester of rosin), Isopar™ (odourless kerosene fractions), Isononyl acetate, Isopropyl Myristate (IPM), Fixateur 404™ (Isotridecyl acetate, ITDA), Triacetin (antifungal glycerol triacetate), 3,3,5 - Trimethyl-hexan-1-ol, and Diethyl Phthalate (DEP), Dibutyl Phthalate (DBP) as diluents as they have practically no odour and adding even up to 10-15% is difficult to notice just by smell even by experts. Using Gas Chromatography (GC) graph also becomes difficult for deciphering adulterants especially for an inexperienced analyst because these materials generally appear as innumerable late eluting small peaks representing their different isomeric forms. Aqueous alcohol solubility tests could indicate their presence, additionally substantiated by use of various GC columns and operating conditions or by derivatization.

purity and quality on subjective olfactory levels as well as quantifiably. However, independent testing, especially for direct consumers and small buyers are very expensive. Today, adulteration is highly sophisticated and detection very difficult without testing and expert analysis.

Subjective test methods

The best that a small consumer can look for is simple cautionary signs like,

1. Visibly cloudy in appearance,
2. Unusual viscosity (high viscosity means an aged oil or oxidised oil),
3. Smelling and comparing an essential can also give a good indication of a genuine essential oil. (However, the consumer should be familiar with a genuine oil smell otherwise adulteration is difficult to detect.)
4. Essential oil usually evaporates after a few hours without being greasy. If a drop of the essential oil on cloth or blotting paper on evaporation leaves a ring of grease it is adulterated with another fixed oil (e.g., a vegetable oil)
5. On placing a drop of essential oil in water, it floats on the top water layer. Emulsified mixtures on the other hand dissolve producing milky white opaque solution.

Quantifiable testing methods

Quantifiable tests allow scientists, producers, suppliers and end users check their oils to determine and confirm quality, purity required for each particular botanical. The most common testing methods include physical methods, chemical methods and instrumental methods by making use of both simple/sophisticated instruments.

1. Olfactory/Organoleptic: Physical tests using our five senses viz., Smell (Aroma), Taste (Flavour), Colour, Texture, Viscosity,
2. Chemical methods: Acid Value, Esters, Aldehydes, Ketones, Alcohols, Phenols, Ethers, etc.,
3. Melting Point,

Passing off a cheaper essential oil with and expensive one is another type of deception prevalent in the essential oil trade.

Cheaper Oil	Expensive Oil
Cinnamomum camphora	Eucalyptus globulus
Peppermint	Cornmint
Citronella & Lemon mixture	Melissa
Micromeria fructicosa (Turkish Pennyroyal) & Hedeoma pulegioides (American Pennyroyal)	Pennyroyal (Mentha pulegium)
Treemoss Resinoid	Oakmoss Resinoid
Petit grain (terpene less)	Rosewood
Petit grain (Paraguay)	Petit grain bigarade
Siberian Silver fir needle	Siberian pine oil
Sweet orange (Brazil)	Sweet Orange (Florida)
Star Anise	Anise
Styrax plus chemicals	Tolu balsam

TESTING ESSENTIAL OIL PURITY & QUALITY

Laboratory tests can determine an essential oil's

4. Congealing Point,
5. Refractive Index,
6. Specific Gravity,
7. Optical Rotation,
8. Thin Layer Chromatography (TLC)
9. Gas Liquid Chromatography (GC / GLC),
10. High Performance Liquid Chromatography (HPLC)
11. Gas Liquid Chromatography & Mass Spectrometry (GC-MS),
12. Mass Spectrometry (MS),
13. Infrared Spectroscopy (IR),
14. Fourier Transform Infrared Spectroscopy (FTIR),
15. Vibrational Spectroscopy,
16. Coupled & Multidimensional Chromatography,
17. Differential Scanning Colorimetry (DSC)
18. Isotope Ratio Mass Spectrometry (IRMS),
19. Nuclear Magnetic Resonance Spectroscopy (NMR)
20. Site-Specific Natural Isotope & Nuclear Magnetic Resonance Spectroscopy (SNIF-NMR)
21. Proton Nuclear Magnetic Resonance Spectroscopy (1H NMR)
22. 13C Nuclear Magnetic Resonance Spectroscopy (13C NMR)

We require sophisticated analytical techniques mentioned above to quantify adulteration in essential oils by making use of unique/specific marker compounds, present naturally in pure essential oils, that we could use as standards constituents to authenticate purchase of oils. Presence of marker compound in essential oils in specified amounts or in an accepted range means the oil is not adulterated. There are two main approaches in determining adulteration in essential oils.

1. Probing for the presence of specific markers in the essential oil tested.
2. Creating the global fingerprints of essential oils and monitoring it regularly.

Typical examples

1. Coriander (Mentha Arvensis), a less expensive mint plant is a frequently used as peppermint piperita adulterant. However, coriander has high menthol content while peppermint piperita contains unique marker compounds 'Menthofuran' from 0.4% to 20% level. Coriander does not contain 'Menthofuran' or sometimes may be present only at 0.01% levels. Similarly, biomarker, Viridifloral is found in peppermint up to 0.9% where as it is totally absent in coriander.

Essential Oil	Marker Compounds
Anise oil (Illicium verum)	γ -himalchene, pseudoisoeugenyl 2-methylbutyrate, foeniculum, absence of Cis-anethole/Anisyl alcohol / Anisic aldehyde
Artemisia vulgaris	Vulgarone
Cinnamon bark & Cassia oils	5-phenyl penta-2,4-dienal should be absent.
Geranium oil (North African Type)	(-)-(4R)-6,9-Guaiadiene / 10-epi-g-eudesmol
Lavender oil (Lavandula augustifolia)	α -santalene, (-)-lavandulol, (-)-lavandulyl acetate
Lemon oil / Mandarin oil	Delta-3-carene absent
Patchouli oil (Indonesian)	Patchulol (26-40%) only, α -Gurjunene
Peppermint Piperita	Menthofuran
Rose Otto (R. Centifolia)	(Z)-9-nonadecene
Rosewood oil (Aniba Spp.)	Eremophilene

2. Detecting adulteration in rose oil is difficult using routine analysis. Enantioselective capillary gas chromatograph-flame ionization and mass spectrometry however, is useful in authenticating the quality parameters of rose oil.
3. NMR spectroscopy is successful in detecting low-grade adulterants, in the high quality sandalwood oil.
4. Evaluating the natural enantiomeric ratios of essential oils can differentiate natural compounds from synthetics.

5. Chirality evaluation of linalool is reliable to authenticate bergamot, sweet orange or lavender oils.
6. IRMS is useful in detecting the botanical origin and adulteration of essential oils like Lemon, Lemongrass, Citronella, Melissa.
7. IRMS easily differentiates between natural and synthetic thymol as natural is deuterium depleted but 18-O enriched.

ARE ALL THESE TEST METHODS INFALLIBLE AND TRUST WORTHY?

Unfortunately the answer is NO. GC/MS and other tests are not truly reliable as testing does risk manipulation depending on the qualifications/knowledge and moral standards of the analysts. Testing equipment is expensive and the ability to use, understand and analyse the readings requires special training. One common debate is always whether olfactory testing (human nose) is superior to instrumental or vice-versa. Although it is true that a trained nose can detect minute differences and identify adulterants that may not be possible by instruments, however the human nose cannot quantify composition of mixtures accurately and quickly as an instrument does thereby indicating that, both these techniques complement each other.

CONCLUSION

There are no regulatory bodies regulating essential oils although governing bodies like the International Organization for Standardization (ISO), International Federation of Organic Agriculture Movements (IFOAM), Food Chemicals Codex, & Food and Drug Administration (FDA), Flavour & Fragrance Associations, Essential Oil Associations and Pharmaceutical Trade organisations in various countries do exist. Some of these organisations merely put out a GRAS 'Generally Recognized as Safe,' list without determining what grade essential oil it is, nor do they label them as such. F&F Industry have their internal purchasing standards for their private use. Essentially this merely means that we as consumers can at best could believe that the

listed items are safe and fit for proposed human use. **Since no governmental regulating body certifying grades for essential oils exists, most consumers who do not have the ability or knowledge to directly perform or oversee testing have no option but trust in the seller.**

Absence of regulations within the essential oil industry means consumers themselves should take efforts to acquire knowledge of adulteration to ensure that they are buying genuine essential oils, with full therapeutic benefits. Using pure, genuine essential oils means we will require less in order for the oil to be effective, and all of tend to easily forget this fact when we buy oils when the offer price is low. In any production cycle, the manufactured products changes hands and in case of essential oils the possibilities for adulteration and contamination substantially increase. An ordinary consumer should therefore make themselves aware of the supply chain, reputation and ethical values of the retailer, supplier and other stakeholders before any purchase of the essential oils for personal use. It is about high time now to have an official regulatory body for essential oils sales and use in India!

Additional Reading:

- Product Specifications its use and importance, Chemical Weekly, July 19, 2005
- Fragrance oil evaluations, Chemical Weekly, October 11, 2005
- Product Specifications in Flavours and Fragrance Industry, The FAFAI Journal, April – June 2006
- Essential Oils Applications Safety – Conflicting Views on Consumer Use, HPIC India, August 2018, Chemical Weekly, September 4, 2018



HEMLOCK OIL

PRODUCT DETAILS

BOTANICAL NAME	TSUGA CANADENSIS
COMMON NAME	"HEMLOCK"
ORIGIN	NATIVE TO EASTERN NORTH AMERICA
PLANT PARTS USED	LEAVES, ROOT, AND SEEDS
EXTRACTION METHOD	STEAM DISTILLATION
COLOR	COLOUR LESS CLEAR LIQUID
PLANT FAMILY	PINACEAE FAMILY

Chemical Composition:

ISOBORNYL

ACETATE - 37.2%,

PINENE - 30.2%,

CAMPHENE- 7.0%,

LIMONENE -5.5%,

CAMPHOR - 3.9%,

CARENE - 3.3%

Specific Gravity :

0.91240

Refractive Index : 1.46705

Optical Rotation : -19

What is Hemlock Oil?

Tsuga canadensis, also known as eastern hemlock, eastern hemlock-spruce or Canadian hemlock, and in the French-speaking regions of Canada as pruche du Canada, is a coniferous tree native to eastern North America. It is the state tree of Pennsylvania.

Common/English Name of *Tsuga* plant *Tsuga*, Hemlock spruce, Eastern hemlock, New England hemlock, Spruce hemlock, Canada hemlock, White hemlock, Spruce pine

The eastern hemlock grows well in shade and is very long lived, with the oldest recorded specimen, found in Tionesta, Pennsylvania, being at least 554 years old. The tree generally reaches heights of about 31 m (102 ft), but exceptional trees have been recorded up to 53 m (174 ft).

It is inherent to North America. It is usually grown in Ontario and usually found in Eastern Canada but except New found land and Labrador.



The aroma of Hemlock essential oil is grounding as well as uplifting. It is used in skin care products for its nourishing properties that make the skin supple and hydrated. It is used for its skin enhancing properties and adding scent.



Origin and Distribution:

Hemlock originated in Europe and was introduced to North America in the 1800's as an ornamental. Since then, it has been extremely successful distributing itself throughout most of North America. It now occurs in every state in the United States except Hawaii and in southern Canada. Poison hemlock is not a Montana state listed noxious weed, but it is on 11 county noxious weed lists as of 2017 (Figure 3). Poison hemlock grows at low elevations bordering pastures and cropland and gradually invades perennial crops. It occurs where moisture is adequate and disturbance is relatively frequent – for example, stream and ditch banks, riparian woodlands and flood plains. Poison hemlock tends to be more competitive in wet soil conditions, but it can survive in dry sites. It is common for the weed to first spread downstream and then move to drier upland sites

How Does it Work?

Because of its soothing components, Hemlock oil is frequently used in massages, saunas, and steam baths. Hemlock oil may be used topically, inhaled directly through aromatherapy or as a tonic. Some oils that complement hemlock oil well include cedarwood, clary sage, galbanum, lavender, oakmoss, pine and rosemary.

In cases when you or someone in your family is suffering from muscle aches, painful joints, poor circulation, strains and sprains, It is highly recommend that you use hemlock oil topically



HEMLOCK SEEDS

with a milder carrier oil. Combining hemlock oil with helichrysum oil, which is known for its toning properties, is suggested to help soothe injuries to the muscles, ligaments and tendons while speeding up healing and preventing the formation of unsightly scars.

Is Hemlock Oil Safe?

Hemlock oil is generally regarded as safe. However, any application without prior dilution to a gentler carrier oil may cause skin irritation in some individuals.

To prevent this from occurring, one practical precautionary measure it is advised when using essential oils for the first time is performing a skin patch test. Simply apply a tiny drop of hemlock oil on a small portion of your skin and wait for at least 24 hours. If any reaction comes up, discontinue use.

On the other hand, if you're pregnant or a nursing mother, it is advised not to use hemlock oil — or any other essential oil for that matter — without your physician's recommendation, to avoid any complications. This caveat is the same if you have any medical condition and are currently taking prescription medication.

Health Benefits of Hemlock Essential Oil:

• Relieves Muscle Pain and Joint Aches

After a hard day's work, joint aches and muscular pains are common. Day-to-day activities can leave you exhausted with muscles aching. In such circumstances, using this essential oil can come in handy. Massaging your body with a diluted spruce hemlock essential oil can work wonders to heal sore muscles. The oil is believed to have analgesic properties. Hence its use in massage can help reduce muscle pain.

The use of this massage oil can also benefit people suffering from arthritis symptoms. A regular massage with this essential oil is helpful in easing pain associated with rheumatoid arthritis. This potent massage oil is said to display anti-rheumatic activity, which works to reduce swelling and stiffness in joints. Simply put, massaging with spruce hemlock essential can help increase the range of motion and improve overall joint function. For massaging purposes, avoid using full-strength

hemlock essential oil as it is highly concentrated and can irritate the skin. Mix 8-10 drops of the essential oil in an ounce of aloe vera gel and then massage it on the affected site to get relief.

- **Promotes Healing of Wounds**

Application of black spruce hemlock essential oil can also help speed up the healing of wounds. It is a convenient and easy way to promote natural healing of wounds. Believed to be an antiseptic, applying this essential oil on skin infections and cuts is an effective aid in treating wounds. Its application may cause a burning sensation but it definitely works to heal the wound faster.

- **Displays Anti-cancer Properties**

Hemlock essential oil obtained from hemlock spruce trees appears to display anti-cancer activity as found out in a study. In 2003, scientists at the Brigham University observed that a concentration of as little as 0.02% of Hemlock essential oil (derived from the Canadian hemlock tree) is effective to check the spread of cancer cells at breast and cervical metastatic sites.

- **Alleviates Respiratory Problems**

The black spruce hemlock essential oil can also be helpful to ease breathing trouble associated with a wide range of respiratory problems. Combine 8-10 drops of essential oil in an ounce of jojoba oil and apply on the chest, back and soles of the feet to ease congestion and improve breathing. Add a drop of black spruce essential oil in a bowl of hot water and inhale the steam. It is very effective to relieve the symptoms associated with bronchitis, common cold, and asthma.

You can also inhale the essential oil by using aromatherapy diffusers, which may also contribute to relieve congestion. The diffusers help in dispelling the essential oil in the air, thereby allowing to spread its aroma in the surrounding atmosphere. The aroma of this essential oil is pleasing and it promotes mental relaxation. A yoga session when combined with aromatherapy by diffusing this essential oil into the room can be helpful to harness the power of yoga in a more effective manner. Just put 4-5 drops of essential oil into the diffuser and you will feel a pleasing aroma filling the room and invigorating your senses.

- **Relieves Cough**

Black spruce hemlock essential oil is thought to have antitussive effects, meaning that it can suppress cough. So steam inhalation with this essential oil can be effective to relieve nagging dry cough.

- **Supports Adrenal Function**

Use of this essential oil may help treat adrenal fatigue, a condition that is typically marked by poor functioning of the adrenal gland. The adrenal glands sit on top of the kidneys and perform numerous functions. Chronic fatigue and muscle weakness are the most common symptoms of adrenal dysfunction. Chronic stress, unhealthy diet and poor sleeping habits are some of the most common causes of adrenal dysfunction. External application of this essential oil may help improve adrenal function, as reported in aromatherapy literature. After combining 8 to 10 drops of essential oil in 1 ounce of aloe vera gel, massage it over the lower abdominal area for adrenal gland support. A daily application of an essential oil blend consisting of 1.5 ml spruce oil, 1.5 ml pine oil, and 27 ml hazel nut oil is yet another alternative to restore adrenal function.

Hemlock Essential Oil Side Effects:

All parts of hemlock, including seeds, flowers, and fruits, are UNSAFE. Hemlock is so poisonous it can cause death. If someone takes hemlock, he or she should get immediate medical attention. Side effects and toxicities include increased saliva, burning of the digestive tract, drowsiness, muscle pain, rapid swelling and stiffening of muscles, kidney damage, rapid breakdown of muscle tissue and release of muscle tissue byproducts into the blood, rapid heart rate followed by a decreased heart rate, loss of speech, paralysis, unconsciousness, heart, lung, and kidney failure, and death.



Special Precautions & Warnings:

It is UNSAFE for anyone to use hemlock oil, but people with the following conditions are especially likely to experience unwanted side effects.

- **Children:** Hemlock should not be used for treating pain in children due to teething. Not for use with children under six and use greater dilution in children over six.
- **Pregnancy and breast-feeding:** Use of hemlock oil is UNSAFE and can be fatal. Hemlock oil should be avoided during pregnancy. At low doses it appears to be nontoxic, non-irritating, and non-sensitizing.
- Before using consult the health professional.
- It should not be used on mucous membranes, eyes and ears.
- A patch test should be done before use.
- There are no known antidotes and treatment of poisoned victims consists of supportive care including sedation, intubation and ventilation. Respiratory support and gastric decontamination should be administered directly. Anti-cunvulsants should be given when needed. Forced diuresis can be applied to prevent renal failure from rhabdomyolysis and myoglobinuria.
- The use of stimulants and large volumes of water have been suggested as treatments against poisoned livestock. Among human beings treatment with alcoholic beverages, tea and coffee has been suggested and also the induction of vomit with a tablespoon of salt dissolved in warm waters, repeating this treatment until the vomit is empty, keeping the victim laying down, resting, covered and under medical control.
- In the case of poisoning by Hemlock, the antidotes are tannic acid, stimulants and coffee, emetics of zinc, or mustard and castor oil, and, if necessary, artificial respiration.
- It is essential to keep up the temperature of the body.
- Like many other poisonous plants, when cut and dried, Hemlock loses much of its poisonous properties, which are volatile and

easily dissipated. Cooking destroys it. Its disagreeable odor has prevented its fatal use as a vegetable in the raw state.

GC REPORT OF HEMLOCK OIL:-

REFERENCES:-

- AS BOUIDIN, ET AL, SOCIAL SCIENCE MEDICINE, 1999, 49,279-289.
- S.AARTI, R.B. MOHILE.J.COSMET.SCI., 2003, 54, 175-192.
- N.ADHIRAJAN.T. RAVI KUMAR, N.SHANMUGASUNDARAM, M. BABU.J. ETHNO-PHARMACOLOGY., 2003, 88,235-239.
- C.KAUR, HC KAPOOR.INT.J.FOOD SCI. TECH., 2002, 37,153-162.
- ARCTANDER, STEFFEN FROM – (PERFUME AND FLAVOUR MATERIALS OF NATURAL ORIGIN)
- BRAIN M. LAWREN FROM – (ESSENTIAL OILS) CHOPRA,
- R.N, NAYAR S.L., GLOSSARY OF INDIAN MEDICINAL PLANTS (COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH), (WEALTH OF INDIA),
- DR. K.M. NADKARNI'S (INDIAN MATERIA MEDICA)
- W.A.POUCHER FROM – (POUCHER'S PERFUMES, COSMETICS AND SOAPS)
- S.N.MAHINDRU FROM – (INDIAN PLANT PERFUMES)
- PERFUMER & FLAVORIST MAGAZINE
- AND PERSONAL DISCUSSION WITH PROFESSOR DR. SUDHA JAIN, DR. SHAKTI VINAY SHUKLA (PRINCIPAL DIRECTOR FFDC KANNUJ) & RAKESH LAB ETC.



YOGESH DUBEY

Rakesh Group (President)
Essential Oil Association of
India (President)

We Craft the Difference

OUR PRODUCTS

- Alpha Damascone
- Beta Damascone
- Benzyl Isoeugenol
- Beta Galbutenone (Beta Dynascone*)
- Damascenone Total
- Fruvertor (Herbavert*)
- Geosmin
- Greenarome (Liffarome*)
- Karanaorg (Karanal*)
- Methoxy Melonal
- Mohanol (Ebanol*)
- Orspirane (Spiroxide*)
- Oriental Ester (Ethyl Safranate*)
- Rionyl (Evernyl*)
- Safranal Pure
- Safranal Ultra-Pure
- Supersantol (Polysantol*)
- Tridecenor (Brahmanol*)

NEW LAUNCH

Amberlox (Cetalox*) • **Methylozone** (Calone*)



No. 4'O' & 5'B', KIADB Indl. Area, Dobaspet, Nelamangala Taluk, Bangalore Rural 562 111
Tel: +91 80 2773 5152, 2773 5252 • www.organicaaroma.com • info@organicaaroma.com

INDIA | USA | EUROPE | JAPAN



EMBEE CORPORATION

DEALERS IN AROMATIC CHEMICALS AND ESSENTIAL OILS

ABITOL

BENZOIN SUMATRA ABSOLUTE

AMBERMOR -EX

AQUAMOR

CINNAMON BARK

HERCULYN D

AMYRIS OIL

VETIVERT OIL HAITI

ALPHA DAMASCONE

HUCHU BETULINA OIL

CINNAMON LEAF OIL

CLOVE LEAF OIL RECTIFIED 95-96%

DAMASCENONE DAMASCENONE 93%

MYSOLENE SANDAL

ORANGE OIL COLD PRESSED

ORANGE OIL EXTRA SWEET

PATCHOULI OIL

VETIVERYL ACETATE

BETA DAMASCONE

FOR MORE INFORMATION WRITE US ON

503 MAIN KRUPA BUILDING
118/RAZI SYED STREET,
MASJID BUNDER (WEST)
MUMBAI - 400 003
TEL : 022 23432526/23449032

Thakker Group
a promise for quality

WWW.THAKKERGROUP.CO.IN
EMAIL : thakker_group@outlook.com

CONTACT PERSON:
ASHISH THAKKER 9870031751

MAHESH THAKKER 9821334436



Musks & Fragrance

Indentors for : AROMATIC CHEMICALS & ESSENTIAL OILS

911/A, 'B' Wing, Kanakia Wall Street, Near Holy Family Church,
Andheri Kurla Road, Andheri (East), Mumbai - 400093.(India).

Tel. : +91-22-68151800(100 lines) E-Mail : indentor@muskfrag.com

Web : www.muskfrag.com

WE INDENT FOR

Orange Oil CP

Lemon Oil CP

Bitter Orange Oil CP

Mandarin Oil CP Green

Mandarin Oil CP Red

Tangerine Oil CP

Persian Lime Oil CP

ARIPE CITRUS AGRO INDUSTRIAL LTDA.(BIO-CITRUS)

BRAZIL

All About Black Gold

A.P.K Padmanabhan

apkpadminabhan123@gmail.com

Mob:9946446182



Black Pepper (*piper nigrum* Linn) is known as black gold. Christopher Morley called pepper "The King of Spices". Indeed black pepper is most widely recognized condiment all over the world. It is believed that Cleopatra was mad of pepper and preserved and concealed huge quantity of pepper. Her love for black pepper was revealed only when Vasco Da Gama landed at Calicut harbor! The history of spices especially black pepper is a story of adventure, exploration, conquest and fierce navel rivalry!

Black pepper (Hindi: Kali Mari, Gujarat: Kala Mari, Marathi: Mire, Kalimirch) is indispensable and inseparable item in the culinary art of cooking.

Black pepper is a prime commodity and India is exporting huge quantity to all over the world. However in recent times there is a stiff competition from Vietnam, Srilanka, Indonesia, Brazil and



Malaysia. Efforts are being made to bring more areas under cultivation of pepper and development of new pepper vines to yield more production. Cultivation of pepper is already begun in Andhra Pradesh, Odisha, Arunachal Pradesh, Assam, Manipur and Andaman. And the results are very encouraging. However in the present scenario the increase in the production of pepper alone is not sufficient but to convert value added products from pepper is a need of an hour.

1. Pepper oil

Pepper oil is an aromatic volatile component, colorless to slight green liquid with characteristic

odor of pepper processed by steam distillation/ CO₂ extraction / solvent extraction. It a mixture of hydrocarbons, monoturpines, sesquiterpines and



small amount of oxygenated compounds.

The oil extracted by CO₂ is no doubt having excellent flavor and quality; however, manufactures mostly prefer steam distillation due to huge investment of machineries and maintenance cost. Physico - chemical properties are evaluated by gas chromatographs and spectrophotometer characteristics, ultimately judged by sensory evaluation. Sometimes the oil is modified to meet tailor made quality for the end users.

2. Pepper Oleoresin

Oleoresin is prepared by extracting deoiled pepper or fresh pepper powder by suitable solvent like acetone/ethyl acetate etc and the micelle is concentrated under vacuum to obtain a semi solid material. Oleoresin represent the true essences of the spice with aroma, taste and color principles in the most concentrated form.

Further oil is added in the oleoresin and homogenized to prepare a free flowing liquid of desired quality.

E.O.A Specification

Pepper oil .30ml/100gm in oleoresin

Piperine content in oleoresin.....40% Minimum

Black pepper is harvested when it is ripe and attains



maximum weight. Few places in Kerala farmers harvest immature pepper to cater extraction units. Sri Lanka also produce immature pepper for extraction and export to India and overseas for conversion into oil and oleoresin. It is believed that harvesting the crop before maturity will enhance span of pepper plant with healthy growth.

YEILD COMPARISON

Commercial Black Pepper	Immature Black Pepper
Volatile Oil	2-3 %
Resin	6-8 %
Piperine	45-50 %

The above tables indicate that the extraction of oil and resin from immature black pepper is more attractive and profitable. Separation of light pepper from commercial grade pepper using with perforated sieves also will increase the extraction yield and bold pepper fetch enhanced price. Even though there is no much commercial importance for "pollu" and pinheads of black pepper this could be extracted for fine tuning and blending of oil and oleoresin to adjust the active principle as required. Pure piperine crystals are also prepared from pepper resin. To improve the appearance of dried black pepper is done soaking green pepper in hot water for 5 to 10 minutes and then sun drying

3. Products from Green pepper/Black pepper

- A. Green pepper oleoresin
- B. De-hydrated green pepper

- C. Frozen green pepper
- D. Tender green pepper in brine
- E. White pepper from green pepper
- F. White pepper from black pepper by socking and bleaching methods
- G. Decortation process
- H. pepper powder/Flakes
- I. Pure piperine isolation

Uses of pepper oil and oleoresin

1. Food flavoring
2. Sausages
3. Canning meat and fish
4. Soups
5. Beverages
6. Biscuits & confectionary
7. Liquors
8. Perfumery
9. Cosmetics
10. Medicines
11. Soaps
12. Pickles
13. Insecticides
14. Pepper spray etc.,



CONCLUSION:

The life style has changed a lot, also the food habits in the modern world has undergone drastic changes. Many consumer products are flooding in the market. Therefore the demand for value added products from pepper will definitely increase in future.



CALENDER OF EVENTS

JANUARY						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

MARCH						
Su	M	Tu	W	Th	F	Sa
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JULY						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

National		
November	7-9, 2019	Event : Ayurveda & Naturopathy (WAAYN) India Location : Expo Centre & Mart, Greater Noida Contact : E-mail : secretary@waayn.org Website : www.waayn.org
November	15-17, 2019	Event : The FAFAI Retreat for Relaxation / Renewal / Rejuvenation Location : Kanha Shantivanam, Hyderabad Contact : FAFAI Office, Mumbai Tel : 91-22-22090184 / 22076075 E-mail : mail@fafai.org
November	26-28 2019	Event : Bakery Business 2019 Location : BKC, Bandra (E), Mumbai - 400 051 Contact : E-mail : chetan@hospitalityfirst.in Web : www.bakerybusiness.in
December	12-14, 2019	Event : Drink Technology India Location : Pragati Maidan, Exhibition Centre, New Delhi Contact : E-mail : info@mm-india.com Web : www.drinktechnology-india.com
December	15, 2019	Event : Kannauj Attar Tour Location : Kannauj, U.P Contact : FAFAI Office, Mumbai Tel : 91-22-22090184 / 22076075 E-mail : mail@fafai.org
December	16, 2019	Event : Aroma Workshop Location : The Landmark Hotel, Kanpur Contact : FAFAI Office, Mumbai Tel : 91-22-22090184 / 22076075 E-mail : mail@fafai.org

OCTOBER						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

FEBRUARY						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

APRIL						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JUNE						
Su	M	Tu	W	Th	F	Sa
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

AUGUST						
Su	M	Tu	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

DECEMBER						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Every effort is made to ensure that the above information given is correct. However, members are advised to recheck the dates with organizers for any change in schedule.





CALENDER OF EVENTS

JANUARY						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

MARCH						
Su	M	Tu	W	Th	F	Sa
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JULY						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

International

November	13-17, 2019	Event : 6 th World Congress on Medicinal and Aromatic Plants for Human and Animal Welfare Location : Northern Cyprus Contact : E-mail : wocmap2019@gmail.com Website : wocmap2019.org
November	15-17, 2019	Event : Food & Beverages Kenya Location : Sait Expo Centre Nairobi, Kenya Contact : Mxexhibitions E-mail : info@mxmexhibitions.com Website : www.mxmexhibitions.com
November	19-20, 2019	Event : In-Cosmetics Formulation Summit Location : Reed Exhibitions Ltd Contact : Tel : Rana Khoury +44-0-20-8439-5436 E-mail : rana.khoury@reedexpo.co.uk ; Website : summit.in-cosmetics.com
December	5-6, 2019	Event : Beauty Care Asia Pacific Summit 2019 Location : Singapore Contact : E-mail : aibileem.wu@duges.cm Website : beautycare-asia.com
February	26-28, 2020	Event : The Personal Care and Homecare Ingredients Trade Show Location : Shanghai, China Contact : E-mail : shuangyang.Liu@reedsinopharm.com
March-April	31-2, 2020	Event : In Cosmetics Global Location : Barcelona, Spain Contact : E-mail : rama.khoury@reedexpo.co.uk Website : www.mxmexhibitions.com
June	2-4, 2020	Event : World Perfumery Congress 2020 Location : Miarni, Florida Contact : Allured Business Media E-mail : dataman@allured.com Website : worldperfumerycongress.com

OCTOBER						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

FEBRUARY						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

APRIL						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JUNE						
Su	M	Tu	W	Th	F	Sa
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

AUGUST						
Su	M	Tu	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

DECEMBER						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Every effort is made to ensure that the above information given is correct. However, members are advised to recheck the dates with organizers for any change in schedule.





NISHANT AROMAS

Quality Source for Aroma Ingredients

If you are looking out for Quality, Price and Delivery, We are the best choice.

Certified For :



ISO 14001:2004

ISO 9001:2008

Aromatic Chemicals

α - Humulene	Ethyl Benzoate	L-rose oxide	Orange Oil (10 Fold & 20 Fold)
α - Pinene Ex Eucalyptus	Ethyl 2 Methyl Butyrate	Linalool Ex Basil	p- Cymene
α - Pinene Synthetic (98%)	Fructose	Menthone (70-30)	p- Cresyl Acetate (99%)
α - Terpinene	Gamma Decalactone	Menthone (98%)	p- Cresyl Methyl Ether
α - Thujene	Gamma Terpinene	Menthyl Acetate	Phenyl Ethyl Acetate
Anisic Aldehyde (99%)	Geraniol Synthetic (98%)	Methyl Anisate	Phenyl Ethyl Alcohol
Anisol	Geraniol Ex. Palmarosa	Methyl Benzoate (98%)	Phenyl Ethyl Benzoate
Anisyl Acetate	Geraniol For Soap	Methyl Charivcol (99%)	Phenyl Ethyl Butyrate
Anisyl Alcohol	Geraniol Natural	Methyl Eugenol	Phenyl Ethyl Caprylate
Allyl Caproate	Geranyl Acetate	Methyl Heptanone	Phenyl Ethyl Formate
β - Ionone	Geranyl Butyrate	Methyl Heptyl Carbonate	Phenyl Ethyl Methyl Ether
β - Pinene - Ex Mint	Geranyl Caprylate	Methyl Iso Eugenol	Phenyl Ethyl Phenyl Acetate (98%)
β - Pinene Synthetic (98%)	Geranyl Formate / Propionate	Methyl Phenyl Acetate	Phenyl Ethyl Propionate (99%)
Camphene	Greenal	Methyl Salicylate	Pommerol (P.E.I.A. E.) (99%)
Caryophyllene (98%)	Gurjan Balsam Light (α - Copaene)	Methyl Toluate	p-Tolualdehyde
Caryophyllene (80%)	Gurjan Balsam Light (Gurjunene)	Myrac Aldehyde	Rhodinol
Caryophyllene Oxide	Gurjan Balsam Dark	Myrcene	Rose Oxide
Citronellyl acetate / butyrate	Herbogreenal	Methyl hexyl ketone	Roseol
Citronellyl formate	Hydroxy Citronellal (Imp)	Nerol (90% +)	Sabinene
Citronellyl propionate	Hydroxy Citronellol	Nerol Super (70%)	Terpinolene
Caryophyllene Alcohol/Formate/Acetate	Iso Amyl Acetate (99%)	Nerolidol	Terpine n-4-ol
Citral	Iso Amyl Alcohol	Neryl Acetate / Formate	Terpineol
Citronella	Iso Amyl Benzoate	3 - Octanol	Terpinyl Acetate
Citronellol (Natural)	Iso Amyl Butyrate	Octanyl Acetate	Tolyl Alcohol
Citronellol (96%)	Iso Amyl Phenyl Acetate (98%)	Odinene	Trans Anethole (99%)
Cis - 3 - Hexanol	Iso Amyl Propionate	Olibanum Resinoid & Powder	Thymol
Cis - 3 - Hexenyl Acetate/ Butyrate	Iso Amyl Salicylate (99%)		
Cis - 3 - Hexenyl Benzoate	Iso Butenol Natural		
Cyclogalbanate	Iso Cyclo Citral		
D-Carvone	Iso Eugenol		
Delta - 3 - Carene	Isophytol		
Di Hydro Beta Ionone	Iso Menthone Dextro (90%)		
Di Hydro Eugenol	Isopulegol		
Di Hydro Terpineol	Javanol		
Di Hydro Terpinyl Acetate	L- Limonene		
Dimethyl Octanol Extra			
Dimethyl Octanyl Acetate/Formate			
D-Limonene			
Elemol			
Eucalyptol (99.5%)			
Eugenyl Acetate			
Eugenol			





NISHANT AROMAS

Quality Source for Aroma Ingredients

Certified For :



ISO 14001:2004 ISO 9001:2008

If you are looking out for Quality, Price and Delivery, We are the best choice.

Schiff's Base

Aurantiol
Anisic Aldehyde Schiff's Base
Benzaldehyde Schiff's Base
Citronellal Schiff's Base
Citral Schiff's Base
Indolene
Tolualdehyde Schiff's Base

Absolutes

Jasmine Auriculatum
Jasmine Grandiflorum
Jasmine Sambac
Tuberose
Rosa Damascena
Rose Edward
White Ginger Lilly

Essential Oils

Amryis Oil	Jojoba Oil
Apricot kernel Oil	Lavender Oil
Ajowain Oil	Lemongrass Oil
Anethi Oil	Mentha Piperita Oil
Basil Oil	Nagarmotha Oil
Cade Oil Crude & Rectified	Neem Oil
Cardamom Oil Steam Distilled	Orange Oil
Cedarwood Oil	Palmrosa Oil
Citronella Oil Java	Patchouli Oil (Indian)
Cinnamon Oil	Patchouli Oil
Clove Oil Rectified 85%	Peppermint Oil
Eucalyptus Oil (60% & 80%)	Spearmint Oil
Frankincense	Tea Tree Oil
Galbanum Oil	Vetiver Oil
Geranium Oil	



604, 605, 606, 607 Lotus Business Park, Ram Bagh Lane, Off S V Road,
Malad (W), Mumbai- 400 064. Tel. : 022 2880 6611 / 22 / 33 / 44
Website : www.nishantaromas.com, Email : info@nishantaromas.com

Our Agents

South India:

"MASP ENTERPRISES" 28/3, "GANDHAN",
5TH MAIN, 2ND CROSS, CHAMRAJPET,
BANGALORE - 560 018.
Tel: +91-80-2261 0076/+91-94834 26971
Email ID: maspenterprise@gmail.com

North India :

Mr. Govind Tiwari,
Kannauj (U.P.)
Tel.: 05694-235004,
Mob.: 09839715553

Mr. P. V. Pillai,

Pune, Maharashtra.
Tel.: 020-27356718,
Mob.: 9665065184
Email: pillai.vidyadharan@yahoo.com



SPECIALITY AROMA INGREDIENTS



Product	Common Synonym	CAS No.
2 Isobutyl Quinoline	-	93-19-6
2 Methyl Quinolnline	Quinaldine	91-63-4
6,8 Secondary Butyl Quinoline	-	65442-31-1, 67634-06-4
6 Methyl Quinoline *	Para Methyl Quinoline	91-62-3
6 Secondary Butyl Quinolnline	Pyralone	65442-31-1
Ambrether	Kephalls	36306-87-3
Diphenyl Methane	-	101-81-5
Fructose *	Apple Ketal, Applitone	6413-10-1
Methyl Benzoate *	-	93-58-3
Methyl Phenyl Acetate *	-	101-41-7
Muguet Carbinol *	Dimethyl Phenyl Ethyl Carbinol	103-05-9
Neo Jasminoid	Projasmane P, Fleuromone	137-03-1
Phenyl Ethyl Iso Amyl Ether *	Anther, Pommerol	56011-02-0
Veticone	Vetikon	7403-42-1
Amyl Vinyl Carbinol *	Matsutake Alcohol	3391-86-4
Amyl Vinyl Carbiny Acetate *	Matsutake Acetate	2442-10-6
Green Acetal	Heptaldehyde ethylene glycol acetal	1708-34-5
Neo Greenal *	Heptanal propyleneglycol acetal	4351-10-4
Penta Sandal	Iso Mohanol	68480-04-6
Vetacetate	Vetkolacetate	68083-58-9

*These products are also approved by FEMA

INDENTING Agent & Stockist



Research Associates
BANGALORE
INDIA 560025

+91 9845300000
+91 9845300001
+91 9845300002 / 03
+91 9845300004



Vijay Trading Co.
BANGALORE
INDIA 560025

+91 9845300000
+91 9845300001 / 02
+91 9845300004
vijaytrading@vijaygroup.com



**UNITED CHEMICALS
& PERFUMES**
BANGALORE
INDIA 560025

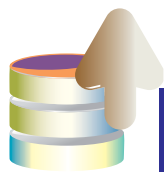
+91 9845300000 / 000001
united@vijaygroup.com



Mfg. by:
MEK CHEMICALS PRIVATE LIMITED

W-6, TTC Indl. Area, Pinate,
Mavelur - 588703.





MARKET INDICATORS

LOCAL MARKET INFORMATION INDICATIVE PRICES

SR. NO.	NAME OF THE ITEM	PRICES (INR)			
		(PAST) MARCH 2017	(PAST) APRIL 2019	(CURRENT) October 2019	FUTURE TREND
1	A.C.H.P.	875	800	800	≈
2	ALDEHYDE C – 10	500	475	450	≈
3	ALDEHYDE C – 11 Undecylenic	1200	1500	1425	↓
4	ALDEHYDE C – 12 LAURIC	500	475	450	≈
5	ALDEHYDE C – 12 MNA	1250	950	900	↓
6	ALDEHYDE C – 18	950	850	700	↓
7	ALDEHYDE C – 8	650	600	550	↓
8	ALDEHYDE C – 9	1500	1250	1000	↓
9	ALLYL AMYL GLYCOLATE	650	650	675	≈
10	ALLYL CAPROATE	500	550	500	↓
11	ALPHA DAMASCONE	7000	7500	6000	↓
12	AMBROXAN / AMBERMOR -EX (AROMOR)	38000	33500	33000	≈
13	AMYRIS OIL	6700	8700	8000	↓
14	ANETHOL SYNTHETIC	850	850	850	≈
15	AQUAMOR/ CALONE / WATER MELON KETONE	11000	18000	16000	↓
16	ARMOISE OIL	15200	11000	12000	≈
17	BACDANOL	1200	1400	1300	↓
18	BALSAM PERU	1700/2700	1800/3400	2800/5000	↑
19	BALSAM TOLU	2700	2700	2800	↑
20	BENZYL SALICYLATE	265	275	275	≈
21	BERGAMOT OIL	21500	20000	20000	≈
22	BETA DAMASCONE	15000	15000	15000	≈
23	BLUE CHAMMOMILE OIL	130000	120000	120000	≈
24	BOISAMBRENE FORTE / AMBERWOOD F	1700	4250	3250	↓
25	BRAHMANOL – F	5000	5400	5500	↓
26	BUCCOXIME	16000	32000	29000	↓
27	BUCHU OIL BETULINA	26000	120000	110000	↓
28	C.P.D/CYCLOPENDECANLIDE	2400	8000	3500	↓
29	CASSIA OIL	2800	3000	3000	≈
30	CEDAR LEAF OIL (THUJA OIL)	11000	14000	14000	≈
31	CEDARWOOD OIL (TEXAS)	1650	2300	2200	↓
32	CEDARWOOD OIL HIMALYAN RECTIFIED	675	850	800	≈
33	CEDARWOOD OIL VIRGINIA	2400	2600	2600	≈
34	CEDRYL ACETATE LIQUID	925	900	900	≈
35	CINNAMIC ALCOHOL	550	550	525	↓
36	CINNAMIC ALDEHYDE	280	240	230	≈
37	CINNAMON BARK OIL	17000	21000	21000	≈

LOCAL MARKET INFORMATION INDICATIVE PRICES

SR. NO.	NAME OF THE ITEM	PRICES (INR)			
		(PAST) MARCH 2017	(PAST) APRIL 2019	(CURRENT) October 2019	FUTURE TREND
38	CINNAMON LEAF OIL	1550	2100	2100	≈
39	CIS 3 HEXENOL	2200	5500	11000	≈
40	CIS 3 HEXENYL ACETATE	2300	5300	10500	≈
41	CIS 3 HEXENYL SALICYLATE	1900	2300	2800	≈
42	CIS JASMONE	11000	10000	10000	≈
43	CITRONELLA OIL	1200	1400	1100	↓
44	CITRONELLOL	800	750	600	↓
45	CLARY SAGE OIL	17500	19000	18500	↓
46	CLOVE OIL REC 85%	1200	1650	1200	↓
47	CLOVE TERPENES	160	250	250	≈
48	COGNAC OIL GREEN	45000	55000	55000	≈
49	CORIANDER LEAF OIL	14000	6500	6500	≈
50	CORIANDER SEED OIL	9300	8500	8250	↓
51	CYCLAMEN ALDEHYDE	1200	1150	1200	≈
52	CYCLOGALBANATE/ ISO ANANATE	1500	1000	1500	↑
53	CYRESS OIL SPANISH	6500	6000	6000	≈
54	D-LIMONENE (ORANGE TERPENES)	850	500	250	↓
55	DAMACENONE	60000	55000	53000	↓
56	DIHYDROMYRCENOL	400	1200	750	↓
57	DIMETOL	1500	1200	1100	↓
58	DMBCA	700	950	700	↓
59	ETHYL 2 METHYL BUTYRATE	650	650	650	≈
60	ETHYL MALTOL	1300	1450	1000	↓
61	ETHYL VANILLIN CHINA	1150	1150	1000	↓
62	EUCALYPTUS OIL 60 %	1250	1800	1600	≈
63	EUCALYPTUS OIL 80 %	1600	2350	200	≈
64	EVERNYL	6000	4300	4250	≈
65	FIR NEEDLE OIL SIBERIAN	4200	4200	4200	≈
66	GALAXOLIDE - DEP 50%	470	525	480	≈
67	GALBANUM OIL	20000	29500	40000	≈
68	GERANIOL	900	950	825	↓
69	GERANIUM OIL CHINESE	19500	21000	13000	↓
70	GERANIUM OIL EGYPTIAN	7500	8500	8250	≈
71	GUAIAACWOOD ACETATE	3000	3400	3400	≈
72	GUAIAACWOOD OIL	2100	2200	2800	↑
73	HEDIONE / MDJ	650	900	800	↓
74	HELITROPIN	1900	2800	2400	↓
75	HERCOLYN - D / FORALYN	600	550	500	≈
76	HEXYL CINAMIC ALDEHYDE	500	375	365	↓
77	HEXYL SALICYLATE	350	400	400	≈
78	HYDROXY CITRONELLOL	2300	2500	1900	↓
79	INDOLE	1300	1350	1275	↓
80	ISO DAMASCON	16000	13000	13000	↑
81	ISO E SUPER	475	1000	800	↓
82	ISO EUGENOL	1700	2100	2000	↑
83	ITD ALCOHOL / OXO C13	500	500	500	≈
84	LABDANUM ABSOLUTE	6000	7500	19000	↑
85	LAVANDIN OIL GROSSO	3300	4400	4400	≈
86	LAVENDER OIL BULGARIAN	11000	14000	12500	↓

LOCAL MARKET INFORMATION INDICATIVE PRICES

SR. NO.	NAME OF THE ITEM	PRICES (INR)			
		(PAST) MARCH 2017	(PAST) APRIL 2019	(CURRENT) October 2019	FUTURE TREND
87	LAVENDIN OIL ABRALIS	3200	6000	6000	≈
88	LEMON OIL C.P.	5500	4200	4000	≈
89	LIME OIL CP	6500	4500	4300	↓
90	LIME OIL DISTILLED MEXICAN	4500	5500	5250	↓
91	LINALOOL	600	700	625	↓
92	LINALYL ACETATE	800	875	825	↓
93	LYRAL/ KOVYRAL	1080	2100	1750	↓
94	LYSMERAL	650	1450	800	↓
95	MALTOL	1450	2500	1600	↓
96	MANDARINE OIL GREEN	10000	11000	11000	≈
97	METHYL BETA NAPHYL KETONE(ORANGE CR)	900	750	750	≈
98	MUSK AMBRETTE	1300	1550	1500	↓
99	MUSK KETONE	1550	2250	1800	↓
100	MUSK T	800	800	800	≈
101	MUSK XYLOL	550	575	550	≈
102	MYSOLENE SANDAL	4800	4800	4800	≈
103	NEROLI OIL NATURAL	250000	250000	250000	≈
104	OAKMOSS ABSOLUTE	28500	24500	24000	↓
105	ORANGE OIL COLDPRESSED BRAZIL	1075	750	600	↓
106	OREGANUM OIL	8500	9000	9000	≈
107	PADMA	850	750	700	↓
108	PATCHOULI OIL	2700	3700	3800	↑
109	PETITGRAIN OIL	5500	5800	5750	↑
110	PHENYL ACETALDEHYDE 85%	1000/1800	1000	1000	≈
111	PHENYL ETHYL ALCOHOL	350	300	250	↓
112	PIMENTO BERRY	13500	14500	14500	≈
113	RASPBERRY KETONE	1750	1500	1400	↓
114	RESINOID LABDANUM	1700	1600	1600	≈
115	ROMAN CHAMMOMILE OIL	120000	98000	95000	↓
116	ROSE OXIDE INACTIVE	2550	3300	2350	↓
117	ROSEMARY OIL SPANISH	6500	6500	6500	≈
118	SANDENOL CHINA / ICCH	425	650	900/550	≈
119	TONALIDE PFW	1650	3000	2500	↓
120	VANILLIN CHINA	825	850	800	↓
121	VERTOFIX COEUR CHINA	2500	1600	1450	↓
122	VERTOFIX METHYL CEDRYL KETONE-CHINA	1550	1350	1350	≈
123	VETIVERYL ACETATE	32000	42000	40000	↓
124	VETIVER OIL HAITI	27000	34000	32000	↓

Intrepretation of symbols;
 Possible price increase ↑
 Possible price decrease ↓
 Price Stable ≈



INTRODUCING
MATIÈRES PREMIÈRES ESSENTIELLES
FRANCE

PURE NATURAL ESSENTIAL OILS

AMYRIS OIL
ARMOISE OIL BAY SAINT THOMAS CRUDE / RECTIFIED
BUCCHU BETULINA OIL
CAJEPUT OIL
CANANGA OIL
CEDARLEAF OIL
CEDARWOOD OIL VIRGINIA / ATLAS / TEXAS
CLARYSAGE OIL
COPAHU BALSAM OIL
CORIANDERLEAF OIL
CYPRESS OIL
GERANIUM BOURBON REUNION
GALBANUM OIL
GRAPEFRUIT OIL FOLDED 5X/10X
JUNIPERBERRY OIL
LAVANDIN OIL ABRIALIS / GROSSO
LAVANDIN SUPER
LEMON OIL COLD PRESSED
LEMON OIL TERPENELESS
LOVAGELEAF / ROOT OIL
MANDARIN OIL COLD PRESSED - GREEN / YELLOW / RED
MYRRH OIL
NIAOULI OIL
OLIBANUM OIL
PETITGRAIN OIL BIGARADIER / CITRONNIER / MANDARINIER
PIMENTO LEAF / BERRY OIL
ROSE OIL
PINE OIL SACHALINENSIS / SIBERIAN / SYLVESTRIS
ROSEMARY OIL
SAGE OIL OFFICINALIS
SANDALWOOD OIL NEW CALEDONIAN
TAGET OIL
VERBENA OIL
WHITE THYME OIL
ANGELICA ROOT / SEED OIL
BERGAMOT OIL (VARIOUS GRADES)
CADE OIL
CALAMUS OIL
CARAWAY OIL
CHAMOMILE OIL BLUE
CHAMOMILE OIL ROMAN
COGNAC OIL GREEN & WHITE
COPAHU BALSAM RECTIFIED
CORIANDER SEED OIL
CISTUS OIL
GERANIUM OIL EGYPT
GRAPEFRUIT OIL COLD PRESSED
HELICHRYSUM OIL
LAUREL LEAF OIL
LAVANDIN SUMIAN
LAVENDER 40/42, 50/52
LEMON OIL FOLDED 5 X / 10 X
LIME OIL COLD PRESSED / DISTILLED
MARJORAM OIL
NEROLI OIL
MYRTLE OIL
ORIGANUM OIL
PARSLEY HERB / SEED OIL
PERU BALSAM NATURAL
RED THYME OIL
RUE OIL
RHODINOL NATURAL
SWEET ORANGE OIL / 5X/10X
SAVORY OIL
TARRAGON OIL
VETIVER OIL
YLANG EXTRA. I / II / III

Exclusive Business Partner in India

PUSHPA FLAVOUR & FRAGRANCE PVT LTD

506, SYNERGY, Mamlatdarwadi Road Extn., Kanchpada, Malad (West),
Mumbai-400064, India.

PH : 022-28811931/32/8380081933

EMAIL : pushpaflav@gmail.com & office.pushpaflav@gmail.com



INTRODUCING
MATIÈRES PREMIÈRES ESSENTIELLES
FRANCE

CONCRETES / ABSOLUTES / RESINOIDS

ALGUES ABSOLUTE
BEESWAX CONCRETE/ABSOLUTE
BASIL ABSOLUTE
BENZOIN SUMATRA RESINOID
BRAN ABSOLUTE/CONCRETE
CASTOREUM ABSOLUTE/RESINOID
COCOA ABSOLUTE
ENCENS RESINOID
FUCUS ABSOLUTE
GERANIUM ROSAT CONCRETE/ABSOLUTE
HELYCHRISUM CONCRETE
LABDANUM RESINOID
LAVANDIN CONCRETE/ABSOLUTE
MATE ABSOLUTE
MYRRH RESINOID
ORANGER CONCRETE/ ABSOLUTE
OSMANTHUS ABSOLUTE
SEAWEED ABSOLUTE
STYRAX RESINOID
TONKA BEANS ABSOLUTE
VANILLA ABSOLUTE

BASIL LINALOOL CONCRETE
BLACK CURRENT ABSOLUTE
CASSIE CONCRETE /ABSOLUTE
CIVET ABSOLUTE
ELEMI RESINOID
FENUGREEK ABSOLUTE
GENET CONCRETE / ABSOLUTE
HAY ABSOLUTE
JASMIN CONCRETE/ABSOLUTE
LAVENDER CONCRETE/ABSOLUTE
MARIGOLD CONCRETE/ABSOLUTE
MIMOSA CONCRETE/ABSOLUTE
OPOPONAX RESINOID
ORIS BUTTER 8, 11, 15% IRON
ROSE CONCRETE/ABSOLUTE
SON CONCRETE / ABSOLUTE
TUBEROSE CONCRETE/ABSOLUTE
VIOLETFEAF CONCRETE /ABSOLUTE

Exclusive Business Partner in India

PUSHPA FLAVOUR & FRAGRANCE PVT LTD

506, SYNERGY, Mamlatdarwadi Road Extn., Kanchpada, Malad (West),
Mumbai-400064, India.

PH : 022-28811931/32/8380081933

EMAIL : pushpaflav@gmail.com & office.pushpaflav@gmail.com

PUSHPA FLAVOUR & FRAGRANCE PVT LTD

506, SYNERGY, Maharashtra Road Extn., Kanchpada, Noida (West),
Mumbai-400064, INDIA.

PH : 022-28811931/32/33/34/35/36/37

EMAIL : pushpaflav@gmail.com & office.pushpaflav@gmail.com

EXCLUSIVE IMPORTER & DISTRIBUTOR IN INDIA OF -



Reconstituted Oils

LAVENDER OIL
ROSEMARY OIL
GERANIUM OIL ETC.

LAVANDIN OIL
NUTMEG OIL

BOISE DE ROSE OIL
YLANG YLANG OIL

PETITGRAIN OIL
LIME OIL

STUCK INTO OF -

1) XIAMEN BESTALY BIOTECHNOLOGY CO. LTD.

• ACETYL PYRAZIN
• ACETYL FURAN
ACETON
E-2-M- BUTYRATE
RASPBERRY KETONE
• OTHER FRAGRANCE / FLAVOUR INGREDIENTS

• ACETYL THIAZOLE
• ACETYL ̢ METHYL FURAN
DIACETYL
FURANOL
SULFUROL

• ACETYL PYRIDIN
ETHYL MALTOSE
ETHYL BUTYRATE
MALTOSE
WATERMELON KETONE

2) SHANGHAI ZITONG, CHINA

ALPHA DAMASCONE 98%
DAMASCENONE PURE
CIS-̢-HEXENYL BENZOATE
CIS-̢-HEXENYL ISOBUTYRATE

BETA DAMASCONE 98%
DAMASCENONE TOTAL
CIS-̢-HEXENYL BUTYRATE
CIS-̢-HEXENYL ISOVALERATE

3) C.Y. AROMA, INDONESIA

CLOVELEAF OIL
GURJUN BALSAM OIL
PATCHOULI OIL PURE /STD.

EUGENOL
GALANGAL OIL
NUTMEG OIL

ISO EUGENOL
GUM BENZOIN
VETIVER OIL

4) INDIAN PURE SPICE ESSENTIAL OILS & CONCRETES

BLACK PEPPER OIL
CUMINSEED OIL
CORIANDER OIL
GINGER OIL
TURMERIC OIL

CARDAMOM OIL
CELSESEED OIL
COFFEE EXTRACT
MACE OIL

CINNAMONLEAF OIL
CLOVESUD OIL
COCOA EXTRACT
NUTMEG OIL

PUSHPA FLAVOUR & FRAGRANCE PVT LTD

585, SYREBY, Marikolavalli Road Extn., Kanchipala, Madai (West),
Mumbai-400054, INDIA.

PH : 022-25011801/02/03/04/05/06/07

EMAIL : pushpafv@gmail.com & office.pushpafv@gmail.com

Distributor in India for -



Fragrance And Flavour Ingredients :

ALDAROME (Adams)

ALDEMONE (Precyclemone B)

ACETALDEHYDE

α -ACETYL PYRAZINE

α -METHYL PYRAZINE

α -METHYL- α -PENTENOIC ACID

FURFURYL THIOPROPIONATE

GRAPEFRUIT MERCAPTEN

CILANTRO ALDEHYDE (Trans- α -Dodecena)

CIS JASMONE

α -ISOPROPYL- γ -METHYL THIAZOLE

CIS-6-NONENAL

MELONYL (Melona)

DIMETHYL SULFIDE

p-MENTHA- β -THIOL- γ -ONE (THIOMENTHONE)

NUTMEG OIL

ORANGE TERPENES(D-LIMONENE)

ORANGE OIL $\frac{1}{5}$ FOLD, $\frac{1}{10}$ FOLD

PAMPLEROM (METHYL PAMPLEMOUSSE)

STYRAX RESINOID

TRANS- α -HEXENYL ACETATE

FURFURAL

FURFURYL ACETATE

FURFURYL MERCAPTAN

FURFURYL THIOACETATE

FURFURYL PENTANONE

α -ETHYL- γ -METHYL PYRAZINE

BALSAM TOLU/BALSAM PERU

LAEDANUM RESINOID

METHYL OAKMOSS (Everay)

α -METHYL BUTYRIC ACID

α , β , PENTANEDIONE

SULFUROL

TRANS- γ -DECENAL

TRANS- α -HEXENAL

TRANS- α -HEXENOL

PADMA

γ -PROPYLIDENE PHTHALIDE

TRANS- α -OCTENAL

Aromatic Chemicals and Essential Oils

An essence of purity



Aroma Chemicals and Essential Oils

Alpha/Beta Ionone	Ligustral	Eugenol
CIS-3-Hexenol	Nerol	Geranium Oil-E Brand
Cis-3-Hexenyl Acetate/Salicylate	Raspberry Ketone	Iso Eugenol
Citronellyl Acetate	Tetrahydrogeraniol (DMO)	Isoborneol
Citral	Tetrahydrolinalool	L Carvone
Citronellol	Anethole	Myrcene
Citronellal	Clove Leaf Oil Rectified 85%	Nutmeg Oil
Gamma Methyl Ionone	Camphor	Orange Oil
Geranyl Acetate	D-Limonene	Patchouli Oil 887
Hydroxy Citronellal	Dihydromyrcenol	Paracymene
Linalool	Eucalyptol 99.5%	Sabinene 75%
Linalyl Acetate	Eucalyptus Oils	Terpinene-4 OL – 98%

A Leading Importer & Distributor

UNITED MULTICHEM LLP

📍 A-103, Sector-58, Noida-201301, Distt. Gautam Budh Nagar (U.P.)

☎ +91-120-4133459 | 🌐 www.unitedmultichem.com | ✉ sales@unitedmultichem.com

#UnitedMultichem



Indesso



CEDAR WOOD OIL HIMALAYAN

**Himalayan
Essential Oils**

Products offered:

- Cedar Wood Oil Himalayan Crude
- Cedar Wood Oil Himalayan Rectified
- Cedar Wood Oil Himalayan Rich In Atlantone



Natural Biotech Products
Manufacturers of Natural Essential Oils And Natural Extracts



Sant Bhanu Enterprises



Harl Industries

Ph. : +91-1905245232, +91-1905245632 Fax : + 91 1905245132

Website : www.harlindia.com, www.himol.com Email : sales@himol.com, arob88ma@gmail.com

V.P.O.Baggi Distt. Mandi (Himachal Pradesh) INDIA Pin : 173027

B B K

SPECIALITIES

Manufacturers of

SAFRANAL 100%

BBK House, Plot No. C-341, TTC, Industrial Area,
Nr. Dhirubhai Ambani Knowledge City, MIDC- Pawne,
Navi Mumbai - 400 705.

Ph.: 07738899993, 09323143129, 09820066631

Email: kamalkesar100@gmail.com

Website: www.bbkspecialities.com



Musks & Fragrance

Indentors for : AROMATIC CHEMICALS & ESSENTIAL OILS

911/A, 'B' Wing, Kanakia Wall Street, Near Holy Family Church, Andheri Kurla Road,
Andheri (East), Mumbai - 400093.(India).
Tel. : +91-22-68151800(100 lines) E-Mail : indentor@muskfrag.com Web : www.muskfrag.com

INDENTORS FOR AROMATIC CHEMICALS & ESSENTIAL OILS

Kindly Contact us for your requirements of

KANATOL-200 (DEP)

KANATOL-201

KANATOL-8A (DOA)

Manufactured by our principal

KLJ PLASTICIZERS LTD.

Silvassa, India





FLAVOUR & ESSENCE RESOURCE

Manufacturers and Exporters of Aroma Chemicals

Apple Ether (Hexylaldehyde Dimethyl Acetal)

Aurantine Schiff base

Allyl Tiglate

Butyl Tiglate

Benzyl Tiglate

CIS-3- Hexyl Tiglate

Cooling Agent (Menthyl Acetate)

Cooling Agent (Menthyl Lactate)

Cinnamyl Cinnamate

Citronellyl Tiglate

Di Hydro Iso Jasmone

Ethyl Tiglate

Geranyl Tiglate

Iso Jasmone B-11

Keora Tiglate

Musk TR

Nerol Oxide

Orange Peel Ether

Mono Menthyl Succinate

Menthofuran

Pheno Muskon (Heptaldehyde Dimethyl Acetal)

Phenyl Ethyl Methyl Ether

Phenyl Ethyl Methyl Ether (Super)

Phenyl Ethyl Tiglate

Phenyl Acetaldehyde 50% in DEP & PEA

Phenyl Acetaldehyde 85% in DEP & PEA

Rose Tiglate

Rose Oxide (Inactive)

Rum Acetal (1-1 Diethoxy Cyclohexane)

Synthetic Amber

Tiglic Acid

2-3-5-6 Tetra Methyl Pyrazine

Virginia Tobacco Acetate

Viridine (Padma)

Vettymoss

100% Pure & Natural Extracts

Vetiver Resinoid

Sandal Resinoid

Patchouli Resinoid

Sandal Absolute

Golden Sandal PF

EXCLUSIVE INDENTING AGENT & DISTRIBUTOR OF

TEXAROME INC., USA FOR INDIA SARC & DUBAI

Amyris Oil	Cedrene	Cedarwood Oil Virginia
Amyris Alcohol	Cedrol Crystal Texas	Cedarwood Oil Texas (Rosin/Crude/ Redistilled)
Amyris Terpenes	Cedrenol Texas	Thujopsene
Alpha Cedrene	Cedarwood Oil Texas-Water Soluble	Vetiver Oil Haiti

BERJE INC. USA

Clary sage oil	Grapefruit Oil Terpenes	Lemon Oil Terpenes	Petit Grain Oil
Catnip oil	Guaiac Oil	Lime Oil Distilled	Rose Oil
Caraway oil	Guaiac Acetate	Lime Oil Terpenes	Rose Absolute
Dilweed oil	Guaiac Terpenes	Orange Oil	Tangerine Oil Terpenes
Grapefruit Oil White	Lemon Oil Argentina	Orange Oil Terpenes	Tangerine Oil Cravo
			Tangerine Oil Dancy

New Introduction : Rosemary Oil (Ex-Tunisia)

Correspondence Office :

Scent House, Station Road, Goregaon (W), Mumbai - 400 104.(India) Tel.: +91-22-2877 8305, 28722280

E-mail : flvessence@rediffmail.com / flavouressence@gmail.com

Cell No.: +91-9821046961 Website : www.flavourandessence.com

Works : Silvassa (Dadra & Nagar Haveli)



Roma Aromas

NUMBAI
SINCE 1987

B-6, Nirava Industrial Estate,
1st Floor, Boriva (E),
Mumbai 400015.

+91.22.24132121 ☎

+91.22.24162124 ☎

+91.9320206415 ☎

roma@viljagroup.com

www.viljagroup.com/roma

CHINESE PRODUCTS

- Aldehyde C-14
- Aldehyde C-18
- Allyl Caproate
- Allyl Heptoate
- Benzophenone 99.7%
- Celestolide
- Cinnamic Acid
- Diacetyl
- D.M.B.C.A
- D.M.B.C.B
- D.M.B.C.
- Furanone
- Ethyl 2 Methyl Butyrate
- Ethyl Butyrate
- Ethyl Maltol Fcc
- Ethyl Vanillin
- Ethyl Cinnamate
- Iso Bornyl Acetate
- Gamma Decalactone
- Galaxolide 50% & 100%
- Helional
- Maltol
- Maple Lactone
- Methyl Cinnamate
- Methyl Salicylate
- Musk Ambrette
- Musk Ketone
- Musk Xylol
- Raspberry Ketone
- Sulfurol Milky
- Terpeneol 4 OL
- Tonalide (China)
- Vanillin
- Watermelon Ketone

ESSENTIAL OILS

- Armoise Oil (France)
- Armoise Oil (Morocco)
- Amyris Oil (Haiti)
- Bergamot (Italy)
- Cedarwood Oil Atlas (USA)
- Cedarwood Oil Texas (USA)
- Cedarwood Oil Virginia (USA)
- Chamomile Oil 100% (P & N)
- Coriander Seed Oil (Russian)
- Clove Oil (Indonesia)
- Elemi Oil (France)
- Eucalyptus Oil 60% (China)
- Eucalyptus Oil 80% (China)
- Guaiacwood Oil (Paraguay)
- Galbanum Oil (Iran)
- Geranium Oil (Egypt)
- Geranium Oil (China)
- Lavender Oil (Bulgarian)
- Lavender Abs (France)
- Lavandin Abs (France)
- Lemon Oil (Italy)
- Mandarin Red Oil (Italy)
- Mandarin Green Oil (Italy)
- Orange Oil (Brazil)
- Patchouli Oil Pure (Indonesia)
- Petitgreen Oil (Paraguay)
- Rosemary Oil (Tunisia)
- Rosemary Oil (Spanish)
- Vetivert Oil (Haiti)
- Ylang Ylang Pure Oil I, II, III
(Blolandes)

HARISH C. KHOSLA & CO. PVT. LTD

ZINAT MAHAL, LAL KUAN BAZAR,
DELHI-110 006

PHONES:
011-2321 4803 / 2321 3160

B.O.: 1534, S.P. Mukerjee Marg, Delhi - 110006.
Phone: 011 - 49096538

E-mail : sales@hckindia.com / accounts@hckindia.com
Website : www.hckindia.com

AGENTS & DISTRIBUTORS

GIVAUDAN (INDIA) PVT. LTD.

FOR

GIVAUDAN FRAGRANCES

&

GIVAUDAN FLAVOURS

Browse through the complete Catalogue of Books

Available Books on Fragrances, Flavors, Cosmetics & Toiletries, Essential Oils, Soaps and Detergents, BP, EP, USP, IP, Pharmaceutical & Herbal, Food science and Technology and related Chemical Technology Books **for your Professional Library. ORDER THEM ONLINE at**

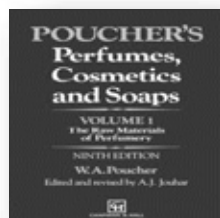


www.dattanibookagency.in



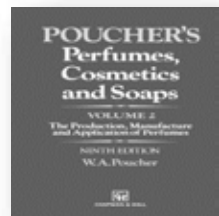
SCAN QR CODE

Best Seller Books now in INDIAN REPRINT , Readily Available :



Poucher's Perfumes, Cosmetics and Soaps Volume 1 : The Raw Materials of Perfumery

In this Volume I, the current edition attempts to provide data about raw materials in a more formalized way than before, so that not only the history of some compounds can be checked, but also so that useful reference information can be obtained. It is particularly relevant to do this, since it is not always easy to be certain of nomenclature. Moreover, as we move towards 'ingredient labelling' (a trend not welcomed by some), a high level of uniformity will be needed. Whether this will come from adoption of CTFA terminology, use of CAS numbers or some other system is not clear. Where possible, such data have been included so that readers may identify materials more readily. Where given, CAS numbers are located in the top right-hand corner of each entry.



Poucher's Perfumes, Cosmetics and Soaps, 9th Ed. Volume II The Production, Manufacture and Application of Perfumes

During the past decade there have been many changes in the perfumery industry which are not so much due to the discovery and application of new raw materials, but rather to the astronomic increase in the cost of labour required to produce them. This is reflected more particularly in the flower industry, where the cost of collecting the blossoms delivered to the factories has gone up year after year, so much so that most flowers with the possible exception of Mimosa, have reached a cost price which has compelled the perfumer to either reduce his purchases of absolutes and concretes, or alternatively to substitute them from a cheaper source, or even to discontinue their use. This development raises an important and almost insoluble problem for the perfumer, who is faced with the necessity of trying to keep unchanged the bouquet of his fragrances, and moreover, to ensure no loss of strength and diffusiveness. **Table of contents (13 chapters)** 1. Historical Sketch 2. The Production of Natural Perfumes 3. The Purchase and Use of Flower Absolutes 4. Odour Classification and Fixation 5. Monographs on Flower Perfumes 6. Miscellaneous Fancy Perfumes 7. Toilet Waters 8. Soap Perfumery 9. Tobacco Flavours 10. Floral Cachous 11. Incense and Fumigants 12. Sachels and Solid Perfumes 13. Fruit Flavours



349-AA, Mangaldas Bldg. No.5, 1st Floor, Kitchen garden Lane,
MUMBAI – 400 002

Tel : 022 22035946 / 66360873 Fax : 022 66360873

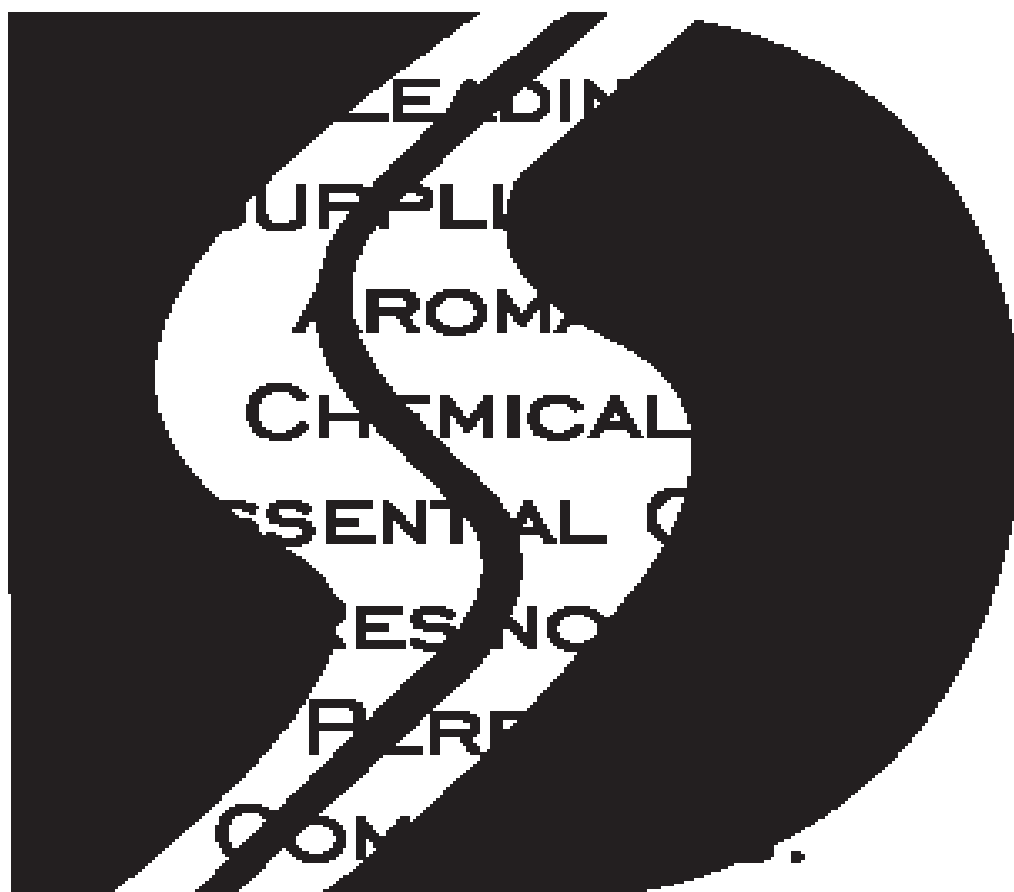
Email : dattanibookagency@gmail.com

Web Site : www.dattanibookagency.com

Online Store : www.dattanibookagency.in



DSS Aromas



At Best Competitive Rates

Mangaldas Bldg., No.. 3/B, 2nd Floor, Room No. 251,
Mangaldas Road, Mumbai - 400002

Ph : +91 22 22055599/11 • Fax +91 22 22055597
Mobile : +91 9321055599

E-mail : dssaromas@yahoo.com



GROUP OF COMPANIES



INDENTING AGENT & STOCKIST

Meridian Technics

Iso Amyl Acetate
Iso Amyl Alcohol
Iso Amyl Benzoate
Iso Amyl Butyrate
Iso Amyl Phenyl Acetate
Iso Amyl Propionate
Iso Amyl Salicylate
N - Ethyl Butyrate

Green Pine Industries

Alpha Pinene
Beta Pinene
Pine Oil Grade 20 /22 /30 /40/50/60 /70
Terpineol EP Grade
Terpineol PG Grade
Terpinolene 20

Flora Essential Oils Pvt Ltd

Eugenol
Iso Eugenol
Clove Oil Rectified 85%
Clove Oil Crude
Eucalyptus 60%
Eucalyptus 80%
Eucalyptol

Green Leaf Extractions P. LTD

Black pepper oil
Cardamom Oil
Citronella Oil
Coriander oil
Ginger Grass Oil
Ginger Oil
Lemongrass Oil
Nutmeg Oil
**And Many More Oils,
Oleo-resins & Extracts..**

Anahad Speciality Molecules, Mumbai.

Methyl Anthranilate
Di Methyl Anthranilate
WS3

Omkar Speciality

Coumarine
6 - Methyl Coumarine
Di Hydro Coumarine

For Further Inquiry Kindly contact on the Following Detail given Below
☎ +91.22.24132129 / +91.22.24132604 / +91.22.24162124 ✉ info@vijaygroup.com 🌐 www.vijaygroup.com



**WANXIANG INTERNATIONAL F & F P.
LTD CHINA**

AMBERGRIS KETONE (ISO E SUPER)

ANETHOLE 99%

BEZYL SALICYLATE

METHYL DIHYDRO JASMONATE (HEDIONE)

L CARVONE 99%

MILTITZ AROMATICS GMBH, GERMANY

2 METHYL UNDECANAL

ALDEHYDE C11 (UNDECYLENIC ALDEHYDE)

HYDROXYAMBRAN

**AROMA AROMATICS & FLAVOURS,
BADDI, INDIA**

2-METHOXY-4-VINYLPHENOL

3-MERCAPTOHEXANOL

4-METHYL-5-VINYLTIAZOLE

6-METHYLCOUMARIN

ANISYL ACETONE

CAT KETONE

CARYOPHYLLENE OXIDE

2-METHOXY-4-VINYLPHENOL

MENTHYL LACTATE

PROPENYL GUAETHOL

RESORCINOL DIMETHYL ETHER

THIOMENTHONE

TROPATHIANE

VERATRALDEHYDE

ZINGERONE

OTHER SPECIALITY PRODUCTS

2 METHYL BUTYRIC ACID

4 VINYLGUIACOL

ACETAL E (VEROTYL)

cis 6 NONENOL

cis 6 NONENAL

CELESTOLIDE

CITRONELLOL

GERANIOL 60

GERANIOL 98

iso BUTYRIC ACID

ISO VALERIC ACID

METHYL AMYL KETONE

n HEXANOL

n BUTYRIC ACID

PROPIONIC ACID

ROSE OXIDE 70:30 (INACTIVE)

ROSE OXIDE 90:10 (HIGH CIS)

SCLAREOL

SCLAREOLIDE

SULFURYL ACETATE

STRAWBERRYIFF

TETRA HYDRO GERANIOL (DMO)

TRANS-2-HEXENAL

TRANS-2-HEXENOL

CONTACT

14, Maskati Market, Kalupur, Ahmedabad – 380002.

Tel : +91 79 2217 3788 Telefax : +91 79 2216 5160.

web : www.arpnaramatics.com

e-mail : arpnaramatics@yahoo.co.in / info@arpnaramatics.com



**WANXIANG INTERNATIONAL F & F P.
LTD CHINA**

AMBERGRIS KETONE (ISO E SUPER)

ANETHOLE 99%

BEZYL SALICYLATE

METHYL DIHYDRO JASMONATE (HEDIONE)

L CARVONE 99%

MILTITZ AROMATICS GMBH, GERMANY

2 METHYL UNDECANAL

ALDEHYDE C11 (UNDECYLENIC ALDEHYDE)

HYDROXYAMBRAN

**AROMA AROMATICS & FLAVOURS,
BADDI, INDIA**

2-METHOXY-4-VINYLPHENOL

3-MERCAPTOHEXANOL

4-METHYL-5-VINYLTIAZOLE

6-METHYLCOUMARIN

ANISYL ACETONE

CAT KETONE

CARYOPHYLLENE OXIDE

2-METHOXY-4-VINYLPHENOL

MENTHYL LACTATE

PROPENYL GUAETHOL

RESORCINOL DIMETHYL ETHER

THIOMENTHONE

TROPATHIANE

VERATRALDEHYDE

ZINGERONE

OTHER SPECIALITY PRODUCTS

2 METHYL BUTYRIC ACID

4 VINYLGUIACOL

ACETAL E (VEROTYL)

cis 6 NONENOL

cis 6 NONENAL

CELESTOLIDE

CITRONELLOL

GERANIOL 60

GERANIOL 98

iso BUTYRIC ACID

ISO VALERIC ACID

METHYL AMYL KETONE

n HEXANOL

n BUTYRIC ACID

PROPIONIC ACID

ROSE OXIDE 70:30 (INACTIVE)

ROSE OXIDE 90:10 (HIGH CIS)

SCLAREOL

SCLAREOLIDE

SULFURYL ACETATE

STRAWBERRYIFF

TETRA HYDRO GERANIOL (DMO)

TRANS-2-HEXENAL

TRANS-2-HEXENOL

CONTACT

14, Maskati Market, Kalupur, Ahmedabad – 380002.

Tel : +91 79 2217 3788 Telefax : +91 79 2216 5160.

web : www.arpanaromatics.com

e-mail : arpanaromatics@yahoo.co.in / info@arpanaromatics.com



QUALITY AROMA INGREDIENTS FROM CHINA

ACETON	GAMMA DECALACTONE
ALLYL CAPROATE	GAMMA DODECALACTONE
ALLYL CYCLO HEXYL PROPIONATE	GAMMA HEPTALACTONE
ALLYL HAFTOATE	GAMMA HEXALACTONE
ALPHA PINENE 95%	GAMMA NONALACTONE (C-18)
AMBIROCENIDE PURE	GAMMA OCTALACTONE
ANDRENE	GAMMA UNDECALACTONE [C-14]
BENZOPHENONE	HEXONAL
BETA PINENE	ISO BOHNYL ACETATE
BUTYL BUTYRYL LACTATE	ISO CYCLO CITRAL
CASHEMERAN	LINALDOL
CEDRYL CRYSTALS	LINALDOL GLIDE
CEDRYL ACETATE CRYSTALS	LINALYL ACETATE
CEDRYL ACETATE LIQUID	N.I.C.K. 80% (Methyl Cedryl Ketone)
CEDRYL METHYL ETHER	MALTON
CINNAMIC ACID	MBANZANATE
CITRAL	MBAPLE LACTONE
CUMINIC ALDEHYDE	METHIONAL
CYCLO HEXYL SALICYLATE	METHYL CINNAMATE
D.N.I.C.	METHYL PHENYL ACETATE
D.N.I.C.A.	MILK LACTONE
D.N.I.C.B.	MUSCOSANDROL (EMANOL)
DELTA DAMASCONE	MUSK - T
DI HYDRO IONONE BETA	MUSK AMBRETTE
DI HYDRO TERPENOL	MUSK KETONE
DI HYDRO TERPINYL ACETATE	MUSK XYLOL
DI METHYL PHENYL ETHYL CAMBINOL (DMPEC)	MUSK C - 14
DI METOL	MYRAC ALDEHYDE (MYRAC)
DI PHENYL METHANE	MYCENE 80
DIACETYL	NOFYL ACETATE
ETHYL 2 METHYL BUTYRATE	PADMA
ETHYL BUTYRATE	PHENYL HEXANOL
ETHYL MALTOL	PYRANOL
ETHYL PHENYL ACETATE	RASPBERRY KETONE
ETHYL VANILIN	ROSAVA
EUCALYPTOL PURE (99%)	SANDELOR
FENCHYL ACETATE	SANDENOL (DC28)
FENCHYL ALCOHOL (FENCHOL)	L. SACDANOL
FIBUCTONE	SULFUROL
FURANONE (FURAMEOL)	TERPENEN-4-OL
GALAXOLIDE 50% DEP	TETRAHYDRO LINALDOL
GALAXOLIDE 50% IPM	TRIPAL (HVERTAL, LIGUSTRAL)
ETHYL CINNAMATE	TONALIDE
GALAXOLIDE PURE	WHISKY LACTONE

CONTACT

14, Maskati Market, Kalapur, Ahmedabad – 380002.

Tel. : +91 79 2217 3788 Telefax : +91 79 2216 5160.

web : www.arpnaramatics.com

e-mail : arpnaramatics@yahoo.co.in / info@arpnaramatics.com



**P T VAN AROMA
INDONESIA**

EUGENOL

ISO EUGENOL

GURJAN BALSAM OIL DARK

METHYL ISO EUGENOL

GURJAN BALSAM OIL DARK

PATCHOULI OIL

**TEXAROME INC
USA**

AMYRIS OIL

CEDARWOOD OIL TEXAS

CEDARWOOD OIL VIRGINIA

VETIVER OIL

**PURE & NATURAL
ESSENTIAL OILS**

ANGELICA SEED OIL

LAVENDIN ABRILLIS OIL

ARMOISE OIL

LAVENDIN ABSOLUTE

BALSAM PERU

LAVENDIN GROSSO OIL

BERGAMOT OIL

LEMON OIL

BUCHU LEAF OIL

MANDARIN OIL RED

CARAWAY OIL

MANDARIN OIL GREEN

CHAMOMILE OIL BLUE / ROMAN

NUTMEG OIL

CLARY SAGE OIL

OAKMOSS ABSOLUTE

CLOVE LEAF OIL

ONION OIL

CORIANDER SEED OIL

ORANGE OIL

D LIMONENE

ORANGE OIL BITTER

ELEMI OIL

PATCHOULI OIL

GALBANUM OIL

PATCHOULI OIL IRON FREE

GARLIC OIL

PETT GRAM OIL

GERANIUM OIL

ROSEMARY OIL

GURJUN BALSAM OIL DARK / LIGHT

SAGE OIL

GUAIACWOOD OIL

STYRAX OIL

LAVENDER ABSOLUTE

YLANG OIL EXTRA

LAVENDER OIL

YLANG OIL III

CONTACT

14, Maskati Market, Kalupur, Ahmedabad – 380002.

Tel. : +91 79 2217 3788 Telefax : +91 79 2216 5160.

web : www.arpanaromatics.com

e-mail : arpanaromatics@yahoo.co.in / info@arpanaromatics.com



ADVERTISER'S INDEX

S No	Advertisers	Page No.	TEL NO.	E-MAIL ID
1	ANTHEA AROMATIC PVT. LTD.		022-39145000	info@anthea-aromatics.com
2	AROMA AROMATICS & FLAVOURS	72	01795-244431	rohit@gogia.com
3	ARPAN AROMATICS	42	079-22173788	arpanaromatics@yahoo.co.in
4	ARPAN AROMATICS	43	079-22173788	arpanaromatics@yahoo.co.in
5	ARPAN AROMATICS	122	079-22173788	arpanaromatics@yahoo.co.in
6	ARPAN AROMATICS	123	079-22173788	arpanaromatics@yahoo.co.in
7	ARPAN AROMATICS	124	079-22173788	arpanaromatics@yahoo.co.in
8	ARPAN AROMATICS	125	079-22173788	arpanaromatics@yahoo.co.in
9	ASSOCIATE ALLIED CHEMICALS	COVER IIA	022-24198810	aacipl@aacipl.com
10	ATTARI SALES CORPORATION	128	022-2341 0110	humatari@vsnl.com
11	BALAJI TRADING COMPANY	76	022-23432526	thakker_group@outlook.com
12	BBK SPECIALITIES	114	91-7738899993	kamalkesar100@gmail.com
13	BONTOUX NATURALS PVT. LTD.	12	022-28892104	bontoux.india@bontoux.com
14	BMV FRAGRANCES PVT. LTD.	2	91-8800397839	bmv@bmvfragrances.com
15	D. G. GORE	69	022-22080909	dgore@dggore.com
16	DATTANI BOOK AGENCY	119	022-22035946	dattanibookagency@gmail.com
17	DIP SOFTWARE SOLUTIONS	56	91-9830034635	hsbindra@dipssindia.com
18	DSS AROMAS	120	022-22055599	dssaromas@yahoo.com
19	EMBEE CORPORATION	96	022-23432526	thakker_group@outlook.com
20	FINE FRAGRANCE PVT. LTD.	77	022-22023834	sales@finefrag.com
21	FINE FRAGRANCE PVT. LTD.	78	022-22023834	sales@finefrag.com
22	FINE FRAGRANCE PVT. LTD.	79	022-22023834	sales@finefrag.com
23	FINE FRAGRANCE PVT. LTD.	80	022-22023834	sales@finefrag.com
24	FLAVOUR & ESSENCE RESOURCE	116	022-28778305	fivessence@rediffmail.com
25	GIRISH ENTERPRISES	38	022-22013385	info@girishenterprise.in
26	GIRISH ENTERPRISES	39	022-22013385	info@girishenterprise.in
27	GIVAUDAN (I) PVT. LTD.	41	022-66625749	
28	GEM AROMATICS PVT. LTD	14	022-25185231	yparekh@gemaromatics.in
29	GEM AROMATICS PVT. LTD.	15	022-25185231	yparekh@gemaromatics.in
30	HARISH C. KHOSLA & CO. PVT. LTD.	118	011-23214803	sales@hckindia.com
31	HEMANI AROMATICS	44	022-27782698	info@hemaniaromatics.com
32	HIMALAYA TERPENES PVT. LTD.	13	022-24056704	info@himalayaterpene.com
33	INDENTA CHEMICALS (I) P. LTD.	48	022-26849600	indenta@indenta.com
34	KALPASUTRA CHEMICALS PVT. LTD.	56(a)	022-21642085	sales@kalpasutra.com
35	KAMAL AROCHEM	37	022-26845485	kamalarochem@hotmail.com
36	KARNATAKA AROMAS	21	080-43468800	aromas@karnatakaaromas.com
37	KARNATAKA AROMAS	22	080-43468800	aromas@karnatakaaromas.com
38	KARNATAKA AROMAS	23	080-43468800	aromas@karnatakaaromas.com
39	LEO CHEMO PLAST PVT. LTD.	9	022-40279000	hitesh@leochemo.com
40	MUSKS AND FRAGRANCE	17	022-68151800	indentor@muskfrag.com



ADVERTISER'S INDEX

S No	Advertisers	Page No.	TEL NO.	E-MAIL ID
41	MUSKS AND FRAGRANCE	40	022-68151800	indentor@muskfrag.com
42	MUSKS AND FRAGRANCE	97	022-68151800	indentor@muskfrag.com
43	MUSKS AND FRAGRANCE	115	022-68151800	indentor@muskfrag.com
44	NATURAL BIOTECH PRODUCTS	113	91-1905245232	eoils@himoil.com
45	NIRMITI LABS PVT. LTD.	55	022-24050960	nirmitilab@gmail.com
46	NISHANT AROMAS	102	022-28806611	info@nishantaromas.com
47	NISHANT AROMAS	103	022-28806611	info@nishantaromas.com
48	NOREX FLAVOURS PVT. LTD.	4	0592 4273095	sales@norex.in
49	ORGANICA AROMATICS PVT. LTD.	95	080-27735252	info@organicaaroma.com
50	PHARM AROMATIC CHEMICALS	20	022-23432526	thakker_group@yahoo.com
51	PLANT LIPIDS PVT. LTD.	6	0484-2844500	info@plantlipids.com
52	PUSHPA FLAVOURS & FRAGRANCES P LTD.	108	91-8380081933	pushpaflav@gmail.com
53	PUSHPA FLAVOURS & FRAGRANCES P LTD.	109	91-8380081933	pushpaflav@gmail.com
54	PUSHPA FLAVOURS & FRAGRANCES P LTD.	110	91-8380081933	pushpaflav@gmail.com
55	PUSHPA FLAVOURS & FRAGRANCES P LTD.	111	91-8380081933	pushpaflav@gmail.com
56	RAKESH PRODUCTS	16	0512-2563930	info@rakeshin.com
57	RAKESH SANDAL INDUSTRIES	COVER IV	0512-2563930	info@rakeshsandal.com
58	ROMA AROMAS	18	022-24132120	roma@vijjaygroup.com
59	ROMA AROMAS	19	022-24132123	roma@vijjaygroup.com
60	ROMA AROMAS	117	022-24132123	roma@vijjaygroup.com
61	RUPINS	11	91-8655512311	rupinchem@rediffmail.com
62	S. H. KELKAR & COMPANY LTD	46	022-21677777	www.keva.co.in
63	S. H. KELKAR & COMPANY LTD.	47	022-21677777	www.keva.co.in
64	SACHEEROME PVT. LTD.	5	011-47311111	info@sacheerom.com
65	SACHEEROME PVT. LTD.	70	011-47311111	info@sacheerom.com
66	SATYAM ENTERPRISES	10	022-23432526	thakkar_group@outlook.com
67	SEVANTILAL & SONS	COVER III	022-22061218	sevantilalsons@vsnl.net
68	SIVA EXPORT CORPORATION	8	011-22148207	s.v@somextracts.com
69	SONAROME PVT. LTD.	7	91-9916663126	sonarome@sonarome.com
70	SONAROME PVT. LTD	24	91-9916663126	sonarome@sonarome.com
71	SONAROME PVT. LTD.	45	91-9916663126	sonarome@sonarome.com
72	SOOFI ENTERPRISES	73	022-22043044	sales@soofi.in
73	SOOFI TRADERS	74	022-22043044	sales@soofi.in
74	SOOFI TRADERS	75	022-22043044	sales@soofi.in
75	TRETT INDIA	40(a)	91-9986667710	nikhil.subramanian@treatt.com
76	ULTRA INTERNATIONAL LTD.	COVER II	011-41517010	ultra@ultraintl.com
77	UNITED MULTICHEM PVT. LTD.	112	0120-4192736	sales@unitedmultichem.com
78	VIJAY GROUP	104	022-24132120	vtco@vijjaygroup.com
79	VIJAY TRADING CO.	121	022-24132120	vtco@vijjaygroup.com

ATTARI SALES CORPORATION

MANUFACTURERS OF PERFUMERY COMPOUNDS



3, Commercial Chambers,
Yusuf Meheralli Road,
(Masjid Bunder Road)
Bombay - 400 003.

E-mail: humatari@gmail.com
kaznna3@gmail.com

Phone: 2341 0110 / 2343 5297
Fax: 022 23465217

The Fafai Journal Advertisement Rates

Space	For single insertion ₹	For One Year Contract for Four Insertions ₹
Back Cover (4 Colours): Members	12000/-	44000/-
Front Inside Cover (4 Colours)	7000/-	26000/-
Back Inside Cover (4 Colours)	6500/-	24000/-
Colour Page (4 Colours)	4000/-	14400/-
Full Page : Members	1650/-	6000/-
Full Page : Non-Members	2250/-	8000/-
Half Page : Members	1100/-	4000/-
Half Page : Non-Members	1350/-	4800/-
Quarter Page : Members	800/-	3000/-
Quarter Page : Non-Members	900/-	3400/-

Mechanical data : Full page : 24 x 18 cms

Half page : 12 x 18 cms



SEVANTILAL & SONS

Products offered:

Alphaline 70
Beta Ionone
Dehydro- linalool
Dihydro – linalool
Ethyllinalool
Ethyllinalyl Acetate
Geranyl Acetone
Isophytol
Isonaline 70
Linalool
Linalyl Acetate
Methyl – heptenone
Nerolidol
Tetrahydro Linalool
Tetrahydrolinalyl Acetate



Aroma Ingredients from:



Authorised Importer - Distributor
SEVANTILAL & SONS

905, Marathon Icon, Marathon Nextgen Complex,
Ganpatrao Kadam Marg , Lower Parel (West),
Mumbai – 400013. Tel – 24977100/7101, 66342925/2926
Fax – 00-91-22-24977103 Email – info@sevantilalandsons.com

Natural Essential Oils Aromatherapy Oils & Carrier Oils

Serving The World Since 1972

**U.S. FDA. WHO-GMP. ISO 9001, HACCP
KOSHER HALAL & ORGANIC CERTIFIED**

Natural

**Essential Oils
Carrier Oils
Herbal Extracts
Perfumery Compounds
Aromatherapy Oils
Oleoresins etc.**



RAKESH
SANDAL INDUSTRIES

STAR EXPORT HOUSE RECOGNIZED BY GOVT. OF INDIA

Office : 25, Azad Nagar, Kanpur, (U.P.) India.
Ph. :- 91-512-2563930-36

E-mail : info@rakeshin.com
Web :- rakeshin.com

Our Groups:



Our Membership:

