Scientific Evidences of Aromatherapy

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Ministry of MSME
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Aromatherapy

- Cure with aroma.
- The art and science of using plant oil for treatment.
- Holistic therapy, taking into account of the mind, body and spirit of the person.
Modes of Action of Aromatherapy

- Pharmacological
- Physiological
- Psychological
Do have specific effect

But in combination they behave

Synergistically
Scientific Evidences of Aromatherapy

- Modern Science
- Indian Ayurvedic System of Medicine
1,8-Cineole

Inhalation

Increases cerebral blood flow in the cortex

Linalool & Linalyl Acetate

Mixed at 2%

Peanut oil

Applied Over

Human Skin

After 90 min

Detected in

Blood Plasma (20ng/ml)

Essential oil

Blood Brain Barrier
&
Detected in Brain Tissues of Mice

(Buchbaur, G. 1993, New results in aromatherapy research, 24th International Symposium on essential oils, Berlin, Technical University)
1,8-Cineole (Eucalyptol) Absorbed through Skin

Muscles

when an applicator was used the absorption rate increased 320%

Rosemary Oil
(1,8-cineole rich)

Activating, refreshing, remedy against exhaustion
(The locomotor activity of test animals increased significantly after inhalation of this oil)

(Kovar, K.A. et al. 1987. Blood levels of 1,8–cineole and locomotor activity of mice after inhalation and oral administration of rosemary oil, Planta Medica, 53: 315–8).
Scientific evidences of aromatherapy

**Jasmine oil**

*Effect similar to caffeine*

Proved by increased CNV after inhalation

**Lavender oil**

*Effect similar to tranquilizers (sedation)*

Proved by decreased CNV after inhalation

CNV: Contingent Negative Variation

Upward shift in brain waves recorded by electroencephalogram (EEG)

In perfumery, *The Psychology and Biology of Fragrance*, Toller and Dodd (Eds.) Chapmann & Hall, 107-120.)
Scientific evidences of aromatherapy

**Lavender & Sandalwood oil**

*Increases α-wave activity in EEG (showing mentally relaxed state or meditation)*

Tea Tree Oil

Effective against Methicillin Resistant Staphylococcus aureus bacteria

Sandalwood oil

Antiviral activity against Herpes simplex 1&2, by interfering to replicate it

Roman Chamomile

Anti-inflammatory & is comparable to Hydrocortisone

Anxiety and self-esteem experienced by Korean elderly women.

Effects of aromatherapy massage using lavender, chamomile, rosemary and lemon oil

- Each session of 20 minutes
- 3 weeks period, 3 times/week

Significantly lower anxiety & higher self-esteem

Effect of Orange, Geranium & Lavender in postpartum mothers

Postpartum Mothers at Tokyo

Sweet orange, lavender & Geranium

Orange made 90% of them comfortable

Established strong activity against many pathogenic fungal organisms

Cumaldenhyde (Cuminum cyminum),
1, 8-Cineole (Luvunga scandens),
Eugenol (Ocimum sanctum),
Caryophyllene

Established strong activity against many pathogenic fungal organisms

Scientific evidences of aromatherapy

Impact of Lavender fragrance on alertness, mood & math computation

Lavender Fragrance → EEG pattern, heart rate & math computation → Computation faster, more relaxed & improved mood

Inhalation of Ylang-Ylang, Lavender & Bergamot to reduce blood pressure

Blend of Lavender, Ylang-Ylang & Bergamot

Blood pressure, cortisol level & psychological stress reduced

52 Subjects once daily for 4 weeks

Scientific evidences of aromatherapy

Effect of Orange & Lavender on anxiety, alertness & calmness

200 Dental Patients (18 to 77 years age)

Exposed to Orange & Lavender Odour while waiting

Reduced anxiety

Ayurvedic evidences of aromatherapy

**Extracted Aromatic Materials in Ayurveda**

- **Distilled Extract (Arka)**
- **Aromatic Water (Parisrutodaka)**
- **Alcoholic Extract (Gandhsattva)**
## Natural Fragrant Material in Ayurvedic Literature

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Fragrant Material</th>
<th>Part used</th>
<th>Uses</th>
<th>Main Constituents</th>
<th>Ayurvedic Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Turmeric</td>
<td>Rhizome</td>
<td>Skin Care</td>
<td>ar-Turmerone Curcumin</td>
<td>Atharva Veda</td>
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<td>2.</td>
<td>Sandal Wood</td>
<td>Heart Wood</td>
<td>Skin disease Anointment</td>
<td>α -Santalol β –Santalol</td>
<td>Ramayana Sushruta Smhita</td>
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<td>3.</td>
<td>Cedar wood</td>
<td>Heart Wood</td>
<td>Antiseptic Diuretic</td>
<td>Cedrol α – Himacchalene β– Himacchalene</td>
<td>Charak Samhita</td>
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<td>4.</td>
<td>Jatamansi</td>
<td>Rhizome</td>
<td>Deodorant, Hair care</td>
<td>Jatamansone</td>
<td>Sushruta Samhita</td>
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<td>5.</td>
<td>Nutmeg</td>
<td>Fruit</td>
<td>Mouth Freshner</td>
<td>Pinene, Myriticin, Dipentene</td>
<td>Sushruta Samhita</td>
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<td>6.</td>
<td>Kadamba</td>
<td>Flower</td>
<td>Laxative</td>
<td></td>
<td>Bhavaprakash Nighantoo (4.34)</td>
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<td>7.</td>
<td>Kamala</td>
<td>Flower</td>
<td>Lactation</td>
<td></td>
<td>Kaiyadev Nighantoo (1.1445)</td>
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<td>8.</td>
<td>Saffron</td>
<td>Flower</td>
<td>Skin care</td>
<td>Safranal</td>
<td>Dhanvantari Nighantoo (3.13)</td>
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<td>9.</td>
<td>Keora</td>
<td>Flower</td>
<td>Foul Smell</td>
<td>Phenyl Ethyl Methyl Ether</td>
<td>Bhava Prakash Nighantoo (4.41)</td>
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<td></td>
<td></td>
<td></td>
<td>Aphrodisiac</td>
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<td>Shaligram Nighantoo (382)</td>
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<td>10.</td>
<td>Champaka</td>
<td>Flower</td>
<td>Wound</td>
<td>Benzyl Alcohol, Cineole, iso- Eugenol</td>
<td>Raj Nighantoo (10.241)</td>
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<td>11.</td>
<td>Malti</td>
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<td>Blood Disorder</td>
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<td>Astanga Sangraya (Su 12)</td>
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<td>Hazara</td>
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<td>Haemorrhphage</td>
<td>Tagetone, Linalool</td>
<td>Puspayurveda (24)</td>
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<td></td>
<td></td>
<td></td>
<td>Wound</td>
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<td>Disorder</td>
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<td>14.</td>
<td>Sultan Champa</td>
<td>Flower</td>
<td>Lactation</td>
<td></td>
<td>Dhanvantari Nighantoo (3.17)</td>
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<td>15.</td>
<td>Bilva</td>
<td>Flower</td>
<td>Thirst &amp; Vomiting</td>
<td>$\alpha$-Phellandrene, Citronell, Citral</td>
<td>Kaiyadeo Nighantoo (1.23)</td>
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<td>18.</td>
<td>Clove</td>
<td>Flower</td>
<td>Aphrodisiac, Mouth Freshener</td>
<td>Eugenol</td>
<td>Bhavaprakash Nighantoo (3.42) Vishnudharmotar Purana</td>
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<tr>
<td>19.</td>
<td>Vetiver</td>
<td>Roots</td>
<td>Skin Disease</td>
<td>Vetiverol, Vetoveryl Acetate</td>
<td>Ayurvediyam Navnitkam</td>
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<td>20.</td>
<td>Eucalyptus</td>
<td>Leaf</td>
<td>Pain, Antiseptic</td>
<td>1, 8-Cineole</td>
<td>Charak Samhita</td>
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<tr>
<td>21.</td>
<td>Nagarmotha</td>
<td>Rhizome</td>
<td>Hair care</td>
<td>Bi &amp; Tricyclic Sasquiterpene Ketone</td>
<td>Bhaisajya Ratnavali</td>
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<td>22.</td>
<td>Rose</td>
<td>Flower</td>
<td>Skin Care, Aphrodisiac</td>
<td>Rhodinol, Geraniol, Phenyl Ethyl Alcohol</td>
<td>Arka Prakash</td>
</tr>
</tbody>
</table>
Ayurveda + Aroma + Therapy

Ayuromatherapy: Aromatherapy from Ayurveda
Ayurvedic evidence of use of aroma

Unlimited use of no. of fragrant material

Self explanatory nature of name
Aromatherapy is in infancy.

Holistic approach for R & D in Aromatherapy where Scientist, Doctors & Industry need to work together.

Leading to have new life style filled with fragrance for all.
Thanks for patient hearing.