

Journey to the Turkish Rose Fields 2008



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Dr. Wendy Maddocks
www.doctorwendy.net



ISTANBUL TO ISPARTA ✈️



Turkish Rose Oil Facts

- Origins of *Rosa damascena* Mill date from Neolithic period
- Roses are native to this area and were taken by the Ottoman's to Bulgaria some 300 years ago.
- Legend has it that the rose is born from drops of Mohammed's sweat
- There are many references to the cultivation and use of roses throughout the middle ages throughout Persia, Middle East and Central Asia ^(a)
- The Bulgarian *Rosa damascena* is from the same original rootstock as the Turkish and does not exhibit any genetic diversity however other locations (Iran, Morocco and Andalusia) show other genetic variations ^(b)

Rose oil production around Isparta

- R. Damascena is a naturally occurring hybrid from *Rosa gallica* and *Rosa phoenica*.
- Some texts state *R. Gallica* + *R. Moschata* (musk rose)
- Named after the city Damascus
- The rose is picked from here before fully opened



Rose Oil Production-Facts and Figures

- Dawn-10.30 am time when roses harvested
- 10-15 kg amount each picker harvests per day
- \$5 (NZ) approx per kg each picker paid
- 3-6 weeks picking time (mid may-early June)
- 66 Acres in total around Isparta
- 1-5 hectares size of average farm
- 3500 kg petals =1 kg Otto
- 0.025% yield for Otto
- 0.25% yield for concrete
- 0.1% yield for absolute
- 7500 tonnes rose petals harvested annually
 - 1200 kg rose oil (4200 tonnes petals)
 - 3000 kg concrete
 - 1500 kg absolute (approx)
 - 100 tonnes rose water (most used in mosques)



The field we
picked (7.30 am!)





At the distillery...



The fresh petals from that day are laid out to dry for 24 hours for solvent extraction of the absolute (2 floors high)



Solvent Extraction



Flowers +
Solvent
(hexane)



Concrete
+alcohol



=absolute
(wax
residue
left over)

Then hopper for the petals to begin
absolute production with a vat full of
hexane



These vats contain alcohol to wash concrete to extract absolute



The spent petals after solvent extraction



Produces concrete → absolute +wax

Rose Otto Production

- Fresh flower petals added directly to vats for hydro distillation



The vat is filled and sealed



One floor below and the process begins and last 60 mins (approx) until oil appears



1 of 32 stills in operation in the entire plant

Rose Otto production technical detail

- Vaporised water plus oil exit the still into a condenser
- Oil is collected at this stage-very concentrated and makes up about 20% of final product
- Cohobation occurs where water is redistilled to get water sol. Fractions (e.g. Phenyl ethyl alcohol)
- The product from cohobation (80%) is added to the 20% to make Rose OTTO - remaining water is the hydrosol

A close-up photograph of a person's feet standing in a dense field of pink rose petals. The person is wearing dark blue or black nail polish on all toes. A silver ring with a clear stone is visible on the ring finger of the left foot. The background is a soft-focus field of many pink rose petals, some showing yellow centers. The overall lighting is soft and natural.

Rose Otto

- Is solid at room temperature
- Is usually dark or olive green in colour
- Will form crystals when cool
- Can also be clearish when crystallised
- Needs to age at least a year

Rose absolute, Otto and rose water concentrate



My precious goods



A close-up photograph of a person's feet resting in a thick bed of pink rose petals. The person is wearing blue nail polish and a silver ring on the left ring finger. The petals are soft and delicate, with some showing yellow centers. The overall scene is romantic and sensory.

In the rest of the year...

- Oak moss and beeswax absolute produced
- Oregano, peppermint oil distilled

Thanks for your attention



References

- (a) Touw, M (1982). Roses in the Middle Ages, *Economic Botany*, 36 (1), 71-83
- (b) Babael, A. et al (2007). Microsatellite analysis of Damask rose (*Rosa damascena* Mill.) accessions from various regions in Iran reveals multiple genotypes, *Plant Biology*, 7:12, 1471-2229
- For tour details go to www.aroma-tours.com

A post script

- I am involved in organising a trip to Southern India in July 2009 for approx 15-18 days
- Focus is on health and wellbeing with 6 days of Ayurvedic treatments included plus
- Visits to tea plantation, rubber plantations, essential oil distillation, carpets, silks, sightseeing.....
- All inclusive trip (flights, 4-5 star accommodation, meals, treatments....)

Some photos to finish with-
Enjoy!

Turkey- a land of colour,
laughter, passion and history...

Scented broom at Anzac Cove at Gallipoli...



Graveside Helichrysum at Gallipoli



Wild poppies at Troy



Opium poppies...



Colourful Carpets...





**Yes they even do flying
carpets!**



Ceramics and pottery...



View from the air...





The spices...



The clothing...



The people...



The Architecture...







The History...





Natural Wonders...





Thank you!







