

Attars of India - A Unique Aroma

By J. N. Kapoor,
Jagat Aroma Oils Distillery, Kannauj, India

In the cultural development of civilizations a quality which lifts mankind above all others is that aesthetic sense of appreciation of the finer things in life. Nothing brings to life that sense of divine as beautifully and vividly as a pleasing perfume.

Perhaps that is what made Shri Munshi, a poet and former governor of U.P. remark, "If you want to visit a perfumery town, visit Kannauj. It is art — it is culture and it is a heritage." That is how the famous attars of Kannauj were perceived in the ages gone by, with its silks, jewelry and archaeological wonders as far back as 600-700 A.D. in the Gupta period. Kannauj is to India what Grasse is to France, but with a perfumery tradition far more ancient.

History

The history of Indian perfumes is inextricably linked to the history of Kannauj for it is here along with Jaunpur and Ghazipur that the industry took its root. Kannauj, however, took an increasingly leading role maintained to this day as the center for the manufacture of the entire range of Indian attars while the former two towns concentrated on the manufacture of floral attars from Chameli (*Jasminum Glandiflorum*) and Gulab (*Rosa Edward and Damascena*).

India has a perfumery tradition that dates back to over 5,000 years to the Indus valley civilization. In excavations at Harrappa and Mohenjodaro, a water distillation still and receiver have been recovered, which bears testimony to the

advances that had been made in distilling aromatic materials. The shape of the Deg (still) and Bhapka (receiver) are more or less the same even today.

References are available in ancient religious scriptures, sutras and vedas about the use of perfumes. The people of ancient India were familiar with perfumed waters, Kasturi (musk), Kesar (saffron), Chandan (sandalwood) and Kapoor (Camphor).

During the Gupta period in the 7th Century A.D., the use of perfumed cream bases, facial cosmetics, hair oils and eye shadows were common. There is mention of perfumery products in ancient Pali and Islamic texts also.

How Kannauj came to be a center of a perfumery is not fully known, but one can surmise that during the reign of Harsha Vardhan (606-647 A.D.), the most powerful ruler at that time, when Hindu art and culture were at their zenith, the perfumery industry took a firm footing.

Kannauj, situated on the banks of the Ganges, and with four other rivers in the neighborhood, has an area particularly suitable for the growth of flowers and Khus (vetiver). A tax on Khus was imposed during the reign of Harsha Vardhan and so continues the tradition to date of heavy taxing of perfumery materials by the government.

Some of the perfume manufacturers and traders were so powerful and influential that they were allowed to mint their own coins.

The Moghul emperors were great connoisseurs of exotic perfumes. Abu Fazl in Aini Akbari writes, "His

majesty (Emperor Akbar 1547-1605 A.D.) is exceedingly fond of perfumes and the court chamber is continuously scented with flowers and fumigated with preparations of Ambergris and Aloes in gold and silver censers."

Emperor Jahangir (1605-1625 A.D.) in Tojak Jahangiri referred to the distillation of rose water, his empress Noor Jahan had a habit of taking a bath in a tank filled with water and rose petals. On a cold morning in 1612 A.D., she noticed an oily substance floating on the water, which she ordered collected. For the first time true Ruh Gulab (otto of rose or rose oil) was smelled and its odor continues to enchant people the world over even today.

Manufacture of Attars

This is still carried out in copper stills called 'Degs' as was done centuries ago. These are all direct fire-heated stills and their capacities can range from 10 to 160 kilos of floral/herbal materials. The lid of the still called 'Sarpos' is also made of copper having openings for connections to one or two receivers.

After filling the plant material in the still with the requisite amount of water, the lid is sealed with a mixture of cotton and clay. As can be observed, this is a water-distillation process.

On warming the still, there is a considerable increase in pressure inside the still. To prevent the lid from blowing off, a leaf spring called the 'Kamani' is used on top of the lid.

One of the peculiar features of attar distillation is that no separate condenser is used. The receiver called the 'Bhapka' acts as a condenser also. The unique odor of attars is obtained by condensing vapors into the base material, mainly sandalwood oil. I must mention that Kannauj is the largest consumer of sandalwood oil in the world, consuming in excess of 30 tons per annum. Sometimes a liquid paraffin is used for the manufacture of cheaper attars and flavors.

The receiver built of copper is round in shape with a long neck. The still and the receiver are connected by a 'Chonga'. This is a hollow bamboo pipe wrapped with twine for insulation. The mouth of the receiver is sealed by wrapping coarse cloth around the bamboo pipe and pushing it inside the condenser. The receiver may contain up to 5-10 kilos of base material and is kept in a small water tank.

The still is heated from below by lighting a fire with the help of wood or cow dung. The temperature and speed of the distillation is controlled by regulating the fire. The distillation is managed by highly skilled/experienced workers also called the 'Dighaa'. He can, by experience, know when the correct quantity of vapors have condensed inside the receiver by feeling the round part of the receiver under water. The water in the tank is changed continuously to prevent the temperature rising too high.

Managing the still is a highly skilled job, as the operator must keep the boiling in the still at a level that matches the condensation in the receiver, in order to keep the pressure under control.

When the desired quantity of vapors have condensed,

the Dighaa rubs a wet cloth around the body of the still for a temporary pause in distillation and the filled receiver is replaced by another receiver. If necessary, the second maybe replaced by a third receiver.

The receiver is then allowed to cool and may remain idle for one or two days depending on the pressure of work.

The mixture of oil and water is then separated either directly from the receiver through a hole at the bottom or pouring the whole mixture in an open trough. After the oil and water have separated into two layers, the water is removed from an opening in the bottom, and goes back to the still.

The base material remains in the receiver. If the desired concentration of the perfume has been reached, then this finished attar is poured into leather bottles for sedimentation and removal of moisture.

If further concentration of perfume is required, then the unfinished attar goes back to the receiver. The receiver is then attached to the still and this process may be repeated several times.

Leather bottles are used for storage because they work on the principle of "osmosis". Moisture evaporates through the leather membrane leaving behind a clear liquid. These bottles were formerly used for transit but only to a very small extent today.

Before going into the reasons for using such type of equipment, we must understand that a major portion of attar manufacture takes place in remote villages and jungles cut off from transportation, electricity and communications, where man depends on his ingenuity for survival. The equipment must be light, flexible, easy to repair and have a fair degree of efficiency. With the above in mind, the main reasons are as follows:

- Copper is the main structural material because it is malleable and easy to repair. No specialized welding equipment is required to repair worn out or damaged copper vessels.
- Copper is a good conductor of heat.
- The equipment is light, flexible and easily transportable.
- Bamboo pipes are used to connect the still and receiver because there is no fixed distance between the two and varies from location to location. The receiver maybe kept in a brick-lined water tank, a half-cut barrel, a pond or even a running stream. The bamboo pipe may have to be shortened. They are cheap and easily replaceable.
- The same equipment can be used for the manufacture of all types of attars. Before the advent of steam

(Above) A line of direct-fired "Degs" which are the type of still used in the production of attars. (Below) Each still feeds directly to the combined condenser/receiver. Highly skilled artisans control the fires that regulate the process.

distillation, essential oils of sandalwood, dillseed, mentha species and ajowan were also distilled from this type of equipment. Some may remember a product called 'Bhatti Sandal' available up to the late 40's. This was nothing but sandalwood oil distilled from Degs and Bhapkas.

• Finally, the value of copper appreciates over the years which more than offsets the cost of depreciation.

Types of Attars

Gulab ex Rosa Damascena or Rosa Edward

Kewra ex Pandanus Odaritismus

Motia ex Jasmimum Sambac

Gulhina ex Lawsonia Alba

Chameli ex Jasmimum Glandiforum

Mitti or Gill from the baked earth of Kannauj

Kadam ex Antochephalus Cadamba

Khus from the North Indian wild variety of Vetiver

Hina and its various forms viz: Shamama, Shamam-tul-Amber, Mus Amber and Musk Hina

While all the other attars are made from a single floral/plant material, Hina is a perfume compound in the true sense. A great many floral and herbal materials are used some of which are: oakmoss, sugandhi mantri, laurel berry, juniper berry, cypriol, Indian valerian, jatamanshi, hydichium Spicatum and the attars of Gulab, Kewra, Motia, Gulhina and Chameli. The superior qualities of Hina may contain saffron, ambergris, musk and agarwood oil. For coloring safflower is used. For the manufacture of good quality Hina, a single charge may take anything up to a month.

Though not attars, special mention must be made of three products which play an exceedingly important role in India.

• Floral waters of Gulab and Kewra - Unlike the rose water available in the West, which is a by-product of the rose oil industry, it is a primary product here. The manufacture takes place in the same way as attars except there is no base material in the receiver. The floral waters so obtained have a truer fragrance.

• Gulkand - Fresh petals of rose flowers along with twice the quantity of sugar are crushed together to produce Gulkand.

Uses

Flavors—The attars of Gulab and Kewra and their floral waters are used as flavors in Indian sweet meats and sherbets. Even Khus is used as a flavor in sherbets.

Fragrances—All the attars are used as perfumes by themselves. In India and the Middle East, attars are made as offerings to the gods. The use of attars as perfume is declining with the changing tastes and advent of western-type perfumes.

The main users of attars is the Pan masala and chewing tobacco (Zarda) industry. These two products, also unique to India, consume nearly 80% of all the attars manufac-

ured. A small portion is also consumed by the snuff, agarbatti and cosmetic industries.

Medicine—The ancient system of Indian medicine, Ayurveda, is largely based on the use of natural herbs and plant materials, many of which are aromatic also. This is the concept of aromatherapy, which has only now begun to take hold in the West.

Some of the medicinal uses of Indian attars are as follows:

• Gulab—The related products of rose water and Gulkand find use in Indian medicine. Good quality rose water is used in eye ailments and cosmetics. Gulkand is used as a laxative.

• Motia is still used to relieve earaches.

• Khus is useful in bleeding noses and bee stings. It gives a cooling sensation when rubbed on the body.

• Hina helps in keeping the body warm by rubbing a few drops.

• Sandalwood Oil is used as a mild antiseptic.

Reference

Address Correspondence to J. N. Kapoor, Jagat Aroma Oils Distillery, Kannauj 209 725, India
