

The tour group in front of the Argeville Laboratories. On the far left, Jean-Pierre Mayenc, the commercial director.

The Essential Oil Study Tour

By Stanley Allured, Publisher, Perfumer & Flavorist

An Essential Oil Study Tour travelled to the traditional center of the industry in the South of France to spend five days visiting six producers of natural fragrance and flavor materials. The 23 people on this tour saw wide range of both traditional and some of the most high-tech systems of production.

The general consensus of the group seemed to be that there is good reason to still consider the Grasse area as the heart and soul of natural fragrance and flavor materials. The long years of knowledge of natural materials and experience in a wide variety of processing methods is a resource that cannot be duplicated anywhere else in the world. This is an important reason why many natural materials that are no longer produced in the Grasse area still travel through these traditional Grasse companies for processing evaluation and quality control before they are used by the world's flavor and fragrance industry.

Biolandes

Biolandes was founded a few years ago originally for the purpose of manufacturing and selling equipment based on new technology for continuous solvent extraction. Later the company decided to go into the essential oil extraction business itself, and with a large investment from Chanel has developed a highly specialized business. The company produces large quantities of only a small number of essential oils; cypress, juniper and clary sage in the South of France and eucalyptus and cistus in the South of Spain. A plant for the continuous extraction of oakmoss and treemoss will be in production in a few months. An important resource of Biolandes has been a close relationship with the University of Bordeaux where fundamental research is concentrated.

The Biolandes sales, marketing and technical services are headquartered in Grasse, under the direction of Jean-

Jean-Noel Maisondeau (right)
describing Biolandes materials.

(Above) Spent roses coming out of the extractor at the Chanel plant. (Below) Rene Blanc of the Callion factory with with Dominique Goby of CAL/Pfizer explaining the factory operations. (Bottom) The CAL/Pfizer volume production unit for carbon dioxide extraction.

The rose fields near Grasse under contract to Chanel.

A supply of flowers at the Blanc plant of CAL ready for extraction.

The pilot plant for carbon dioxide extraction at CAL/Pfizer.

Noel Maisondieu, who has a family history of involvement in the essential oil business in Grasse. Since the major producing areas for Biolandes are in other areas of France and in Spain, a video tape gave the details of growing, gathering and processing by the Biolandes Continuous Extraction System.

We had a chance to study cistus oil, cypress oil, juniper branches oil, pine needle oil, and oakmoss concretes and absolutes.

Recently Chanel contracted with one of the major rose farmers in Pegomas, near Grasse, for his entire crop of roses. Chanel then built an extraction facility on the land, for which the Biolandes laboratory in Grasse provides technical and quality control services. The rose campaign was in full stride when we visited here. This was an excellent opportunity to see a rose extraction facility in full production of concrete.

Biolandes provided an excellent lunch to the tour at the restaurant next door to the laboratories.

CAL/Pfizer

When the tour group visited CAL/Pfizer (formerly known as Camilli, Albert & Laloue), we saw some of the most modern and sophisticated natural products processing systems, as well as some of the very traditional processes for which CAL has long been noted. At the Blanc factory in Callian the rose production was in full swing at this large production plant for natural materials. This plant is also a major producer of moss products and other naturals produced from materials grown in the South of France. Dominique Goby provided descriptions and explanation for the products and processes.

The group also visited the Grasse factory of CAL where the pilot plant and full production system for carbon dioxide extraction is producing a steadily increasing range of flavor and fragrance materials. At this time extracts by carbon dioxide (Pifco₂) are celery, galbanum, ginger, clove, hop and rosemary. These are often quite different from the usual concrete and absolute, and are particularly suitable for flavor use as they are entirely natural, and the process is completely non-toxic.

This is an extremely impressive investment in high tech equipment and instrumentation. The production process runs 24 hr. with only one person in attendance.

CAL with Prodarom, the association of essential oil producers in France, hosted a cocktail party for the tour in the Perfumery Museum of Grasse. This museum is in the heart of the old city of Grasse, and houses examples of the traditional equipment used to process essential oils and extracts. All of this equipment was donated by the essential oil houses, and shows how far the industry has progressed in recent years. The museum also has a very impressive display of bottles, packages and posters advertising both essential oils and finished perfumes.

The group was then treated to an elegant dinner at Le Bistro in Mougins, courtesy of CAL/Pfizer.

Dominique Goby (right) describing some of the old traditional essential oil production equipment at the Perfumery Museum in Grasse.

Pierre Vigne (center) president of PRODAROM, the Association of Essential Oil Producers of France, greeting tour members at the Perfumery Museum in Grasse, with Bernard Meyer-Warnod (left) president of CAL/Pfizer, and Dominique Goby, CAL/Pfizer.

(Below) The Perfumery Museum in Grasse beside the wall of The Old City.

Jean-Jacques Ardizio, president of Argeville, in an experimental area for clary sage.

The modern system of producing absolute from concrete at Argeville.

This is the Argeville dispensing area for preparing fragrance compounds. Each of the hoses is connected to a stainless tank under nitrogen pressure which provides the energy to operate the system.

Lunch at Argeville.

Argeville

The tour was privileged to visit the beautiful estate of Domaine d'Argeville. This area of more than 30 acres was originally developed as farm land planted to flowers supplying the industry in Grasse. As the industry changed in Grasse, the emphasis at Argeville has changed from growing flowers to processing essential oils and entering the fragrance business. Today, one-third of the company's total volume are raw materials, and two-thirds are fragrances.

While flowers are still grown on the land, especially roses, the grounds appear more as a park with trees and lawns complimenting the manufacturing facilities.

Argeville produces a traditional range of oils and absolutes for perfumery. However, a major investment in developing some unique materials through biotechnology has proved to be very successful. A most interesting and important new material is "Bioprade Vetiver," now in commercial production with 100% of its annual production already under contract. Two other products are in the final stages of evaluation and commercialization, one of them a very interesting animal note. The research for this interesting biotechnology work has been done in conjunction with the University of Marseilles.

The company's process for converting concrete to absolute is entirely automatic and very efficient. Absolutes of rose, jasmine, mimosa, violet leaves, civet, castoreum and beeswax are produced.

The method of compounding fragrances is unique. About 100 materials are under constant nitrogen pressure in holding tanks on the lower floor. The pressure lifts the materials to the dispensing area on the upper floor where a circular ring of nozzles makes it very convenient and efficient to compound fragrances from these tanks without pumps.

After the tour of facilities and a review of Argeville materials, an elegant luncheon was arranged on the lawn among the flowers and trees of Argeville.

Quest

An interesting visit was made to the large industrial

David MacKay Neuman and Jean-Claude Brun leading the smelling session for Quest materials.

complex of Quest International in Grasse. Here the tour saw large-scale production of a tremendous number of fragrance and flavor materials. The production range went from small quantities of very expensive specialties up to huge quantities of staple items, such as oakmoss.

An extensive smelling session was directed by David G. McKay Neuman, marketing manager of fragrance materials, and Jean-Claude Brun, process development manager. Emphasis was placed on a line of "benzene-free" absolutes that have been extracted by a mixture of solvents other than benzene. Thus resulting products have benzene levels less than one-tenth of the level in usual extracts. These extracts often have a slightly different odor profile, but are of equal quality and are considered to be more acceptable in certain applications.

After a tour of the plant, a very nice lunch was provided to the tour members.

Clos d'Aguzon

A long bus trip from Grasse brought the tour group into the lavender and lavandin country, an elevation of some 4,000 feet. Here we met the Bontoux family that has been associated with lavender production through four generations. Over 100 years ago, the family participated in the harvest, distillation and marketing of the local production of lavender and spike lavender in the Haute-Provence area.

Somewhere in the 1920s, the spontaneous hybridization of lavender and spike lavender produced the first plants of lavandin. The vigor and productivity of these hybrids gradually took over the major part of production from lavender.

Over this same time, open-fire distillation was aban-

Clos d'Aguzon with the family residence on the far right and the added buildings that now make up this center of lavrette and lavandin production.

At Clos d'Aguzon, Remy Bontoux, Robert Bontoux, Stanley Allured of *Perfumer & Flavorist*, Rene Bontoux, Pierrette Bontoux and Dominique Bontoux.

In 1940 the lavender industry was involved in harvesting from wild plants by hand, as in this picture of Mr. Bontoux (center).

Lunch at Clos d'Aguzon.

doned in favor of steam distillation. The first steam-distillation unit was developed by Félix Eysseric in cooperation with the Bontoux family in the mid 1920s. These Eysseric machines, although somewhat modified and modernized, still represent nearly all of the production of lavender and lavandin.

Clos d'Aguzon was established in 1982 and is still primarily involved in lavender and lavandin. However, about twenty additional oils are traded including clary sage, cyprus, eucalyptus, marjoram, rosemary and thyme.

H. Reynaud

The tour group arrived late in the day at H. Reynaud and was greeted by Bruno Leland, president of the company. Through a video tape and discussion, the range of the company's production was described.

Here in Montbrun, the traditional center of manufacturing for H. Reynaud, the emphasis is on lavender and lavandin, but with the majority of trading in a wide variety of other oils, concretes and absolutes. New research facilities and a new flavor manufacturing unit have been built at another site.

After leaving Montbrun, we travelled to the small city of Montelimar and stayed at the elegant small hotel, Le Parc Chabaud, where a typical dinner was provided by H. Reynaud and hosted by Bruno Leland.

Laboratories Monique Remy

The drive from Montelimar to the high country, where the wild narcissus and jonquil grow, is a long slow trip. The road crosses the mountains rather than following the valleys.

Although the travel is slow and difficult, the reward is the absolutely beautiful high country. It was as though a master landscape gardener had designed massive rock gardens. For dozens of miles as far as the eye can see wild flowers, including narcissus and jonquiles, covered the valleys and hillsides.

Toward the end of May and early June in this country itinerant workers gather the jonquils and narcissus, and here Laboratories Monique Remy built an extraction facility to produce concrete from the freshly picked flowers.

Laboratories Monique Remy specializes principally in the production of absolutes from concretes that are imported from Egypt, India, Africa, Turkey and other countries of the world.

The people participating in the Essential Oil Study Tour to the South of France this year were different in two respects from previous tours that we have organized. The tour group was more international with members of the group coming from Mexico, New Zealand, England, Ireland, India and Malaysia.

Bruno Leland, president of H. Reynaud

Monique Remy, Joseph Meissonnier and Marguerite Wytenhove at the Narcissus Extraction Plant in the high plateau of central France.

Lunch at a small mountain resort, courtesy of Monique Remy.