A Brief History of Perfume

by Luca Turin

Given the gnomes-of-Grasse picture propagated by the fragrance industry—smiling women carrying baskets of roses on their heads, worried-looking guys in lab coats staring at copper stills—anyone would be forgiven for thinking that perfumery is all about wringing fragrant oils out of live flowers. Not so: with some exceptions, all the fragrances in this guide are, to put it mildly, semi-synthetic; some of their components are extracted from natural sources, while most are made by chemists. The two exceptions are perfumes that boast explicitly of being made only with natural materials and perfumes made solely with synthetics, a fact the firms keep quiet when the stuff is supposed to be "fine" fragrance. The proportion of man-made to natural varies: by weight, synthetics usually make up more than 90 percent of fragrance; by cost, the proportion is lower because naturals are expensive. A typical synthetic may cost $50 per kilogram, a typical natural at least $500 per kilo, with many naturals reaching ten or a hundred times that.

Natural materials are obtained in various ways, all of which to a greater or lesser extent damage or otherwise alter the composition of the fragrant oil. The cheapest techniques (steam distillation, hot hexane, etc.) are brutal. Delicate extraction techniques, such as supercritical CO_2, which uses high-pressure gas, and especially hydrofluorocarbon (HFC) extraction, developed by the British engineer Peter Wilde, give stunning results and leave the components largely undamaged. Whatever the method, the yield is always low, from less than 0.1 percent by weight to 1 percent at best. Collecting a ton of flowers is an awful lot of work, and floral extracts are correspondingly expensive. Extracts from dry goods such as spices are usually cheaper. (Note that the essential oil