

From Rallet N°1 to Chanel N°5 versus Mademoiselle Chanel N°1

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The story of *Chanel N°5* begins in Moscow in 1912 with perfumer Ernest Beaux's studies of the aldehyde used in Houbigant's *Quelques Fleurs*. It continues in La Bocca and Cannes, France, and then is almost derailed by competition from an unlikely source. Yet it lives on today as a tribute to the genius of a hard-headed couturier, Gabrielle "Coco" Chanel.

Not surprisingly, *Chanel N°5*—the legendary "most worn" perfume of all time—is surrounded by countless legends, including a mixing error by Beaux's assistant, who added pure aldehydes rather than the prescribed 10% solution. Another story goes that Mlle Chanel chose the fifth bottle from two rows of scents numbered 1 to 5 and 20 to 24 because five was her lucky number. And yet another legend has it that Beaux's inspiration for *Chanel N°5* came during military action beyond the Arctic Circle, when the midnight sun released an extremely fresh scent from the lakes.

What we know for sure is that the story of *Chanel N°5* began in Biarritz, France, which had become the meeting place for an unlikely mix of Russian nobility that had managed to escape the massacres following the collapse of Tzarist Russia. Biarritz was flourishing, as was the boutique which Chanel had opened there in September 1915—her second, after Deauville, France. While in 1915 it was the French high society that wanted to forget about the World War I, in 1920 it was the Russian nobility that wanted to forget the Bolshevik coup. It was an ideal occasion for Chanel to promote her fashion and to be seen with her friends, all dressed up "in Chanel." One of these friends, singer Mathe Davelli, claimed to have introduced Chanel to the Grand Duke Dimitri Pavlovitch, first cousin of Tzar Nicolas II. In the summer of 1920, Chanel began a love affair with Pavlovitch who was 11 years her junior. It lasted about a year. It is said that Pavlovitch introduced Chanel to Beaux on the beach at Cannes during a short trip to the Côte d'Azur, but here is where the story becomes murky.

Since her days with Etienne Balsan in Royallieu, near Compiègne, France, Chanel avoided pearls and lace to hide that she was a kept woman. At the time she spent her days riding horseback in the French countryside and is reported to have said that women perfume themselves only to hide bad smells. Perfumes, too, may have

suggested to her the status of a kept woman.¹ We may therefore infer that she did not use perfumes herself. Did she get a perfume as a present from Pavlovitch? Was it *Rallet N°1*, a perfume famous at the Russian Imperial Court, a perfume created in Moscow some seven years earlier by Beaux and launched in 1913 under the name *Bouquet de Catherine* by A. Rallet & Co. of Moscow?²

The Beginnings of Rallet and Beaux's Initiation to Perfumery

Alphonse Rallet (1819–1894), a Frenchman from Grenoble, had opened a soap and perfume factory at 47 Vyatskaya Street in Moscow early in the summer of 1843.² At the beginning, 40 workers were employed to produce perfumery water, eau de cologne, soap, lipstick and powder for the luxury market. Rallet prospered and in time became official purveyor to the courts of Imperial Russia, Romania, Montenegro, Persia and Serbia. In the 1880s, Rallet acquired lands in South Russia to produce aroma oils. By the end of the 19th century, Rallet was employing some 1,500 workers.³ By 1910, Rallet was producing around 675 individual items.⁴

In 1854, Rallet married Marie Farconet, daughter of the mayor of Grenoble. Two years later, Rallet returned to France, purchased and restored the Château Servien and became mayor of Biviers.⁵ In 1865, Rallet joined Emile Baudrant and Louis Vicat in forming Ciments Vicat, a leader in its field today.⁶ Rallet died in 1894, and in 1898, A. Rallet & Co. was sold to Chiris, the famous *Grassois* fragrance house founded by Antoine Chiris in 1768.⁷

Beaux was born December 8, 1881, in Moscow (**Photo 1**) in the village of Suschevo in Vedernikova's house, close to the Rallet factory on Vyatskaya Street. Beaux's perfumer father, Edouard, had been among the founding directors of Rallet. Upon completing his secondary education in 1898, Ernest Beaux joined Rallet as a lab assistant in its soap works.⁸ His older brother, Edouard Jr., was employed by Rallet in an administrative capacity and was serving on Rallet's board.⁸ Around 1900, Beaux took a two-year leave of absence from Rallet for his obligatory military service in France. Returning to Moscow in 1902, he was assigned to Rallet's perfumery division where he worked under A. Lemercier, Rallet's technical director, an original thinker who embraced new technology. Beaux quickly developed a fascination for both the new synthetic



Photo 1: Ernest Beaux (Dec. 8, 1881–March 8, 1961), creator of *Bouquet de Napoléon* (1912), *Bouquet de Catherine* (1913), *Rallet N°1* (1914), *Rallet Le Gardénia* (1920), *Chanel N°5* (1921), *Cuir de Russie* (1924), *Gardénia* (1925), *Chanel N°22* (1922/1926), *Bois des Îles* (1926), *Soir de Paris* (1929) and *Kobako* (1936).

aroma materials and the new absolutes. Perfecting his perfumery skills under the guidance of his mentor, Beaux was promoted to senior perfumer and elected to the board of directors in 1907.⁸

Beaux's first major success took place in 1912 with *Buket Napoleona*, or *Le Bouquet de Napoléon* (**Photo 2**). The fragrance launch commemorated the centenary of the battle of Borodino, Napoleon's last victory in his Russian campaign. This bloodbath—80,000 soldiers dead, including 28,000 French—allowed Napoleon to capture Moscow, but also marked the turning point of the Napoleonic Wars. While we might ponder how Rallet was able to sell a perfume bearing the name Napoleon to Russian customers, the association of Napoleon with his sumptuous use of eau de cologne was apparently the marketing concept, and we may assume that it was a floral eau de cologne. The fragrance was also sold outside of Russia with a French label; so perhaps the appeal to foreign consumers might have played a decisive role in the choice of the name. Besides this, Beaux allegedly admired Napoleon.

The following year, 1913, marked the tercentenary of the rise of the Romanov dynasty, and for this occasion Beaux created *Le Bouquet de Catherine* (*Buket Ekaterina*), honoring Catherine the Great.⁹

The Birth of *Rallet N°1*

The timing of the *Bouquet de Catherine* launch was unfortunate. When, in 1914, war broke out with Germany, sentiment in Russia was fiercely anti-German.¹⁰ One target of this hatred was the Empress Alexandra, a German who, while fiercely patriotic to Russia, had long been disliked by peasants and nobles alike for her puritanical ways and appearance of cold detachment to her subjects. Regrettably for Rallet, Catherine the Great had also been German. Thus, rather than being a repeat of Beaux's *Le Bouquet de Napoléon* success, *Le Bouquet de Catherine* disappeared into the fog of war and revolution. Beaux made no mention of the fragrance in his 1946 biography.^{8a} Instead, a "new" perfume emerged, *Rallet N°1*, perhaps first launched as the eau de cologne version *Rallet O-De-Kolon N°1 Vesovoi*, which was "sold by weight" ("vesovoi"). The renaming of *Bouquet de Catherine* to *Rallet N°1* was reported by Michael Edwards, who received the information from Marcel Carles, who had heard it from his father, Jean Carles.⁹

The *Bouquet de Catherine* or *Rallet N°1* was intended as the female counterpart to the *Bouquet de Napoléon*. Beaux was inspired by the immediate success, in 1912, of *Quelques Fleurs* by Houbigant, in which perfumer Robert Bienaimé had for the first time used aldehyde C-12 MNA (2-methyl undecanal). In his study of *Quelques Fleurs*, Beaux experimented with these novel materials. One cannot exclude a mixing error by a lab assistant, nor, as gas chromatographs had not yet been invented, the possibility that Beaux initially did not have a clue about the usage level and simply dosed too high. It may be assumed, however, that Beaux discovered during these experiments that, by employing a complex of the novel aldehydes C-110 (undecanal), C-11 (undec-10-en-1-al)



Photo 2: The *Bouquet de Napoléon* (*Buket Napoleona*) flacon with the label magnified on the right, launched by A. Rallet & Co. of Moscow in 1912; flacon reproduced by courtesy of the Helen Farnsworth Collection.

and C-12 (dodecanal), he could overcome the fattiness of jasmine absolute and rose oil. Consequently, he increased the level of the aldehyde complex and the jasmine-rose accord incessantly. Beaux certainly followed a well-considered and systematic path in balancing aldehydic and floral complexes, and the floral heart built around jasmine, *rose de mai*, orris, ylang-ylang and lily of the valley was certainly inspired by *Quelques Fleurs*, although *Bouquet de Catherine* was far more daring and revolutionary.

Both the launch of *Bouquet de Catherine* and its rebirth as *Rallet N°1* proved far from spectacular. By the fall of 1914, Russian nobles were dusting off their military uniforms and reporting for duty. Party life was on hold. The war, it was said, would be over by Christmas, but it was not. Beaux too was swept up in the mobilization, and from 1914 until 1919 remained in military service.^{8a} Ordinarily this would prove of little interest, but in later years Beaux piques our curiosity by telling of being sent to lands above the Arctic Circle, to the land of the midnight sun, a land where the lakes and rivers had an incredible fresh note which he committed to memory.^{8a}

After Russia had made its separate peace with Germany in 1917, a multinational expeditionary force was sent to Murmansk (Port Romanov) and Archangel to prevent Allied military supplies stored there from falling into the hands of either the Germans or the Bolsheviks.¹¹ This force included about 1,500 French troops and, with his Russian background and French military service, it seems at least possible that Beaux was among them. One Russian source reports that Beaux served on the Kola Peninsula, near the Murmansk lakes.¹²

While Beaux was away at war, the French employees of Rallet & Co. had fled Moscow and reestablished the company at the main Chiris plant in La Bocca. The Rallet business in Russia was nationalized in 1917 and renamed *Soap and Perfume Works N°7*, and later *Svoboda*, which is Russian for “freedom.”¹⁴ The new government of Russia then ordered *Svoboda* to give its perfume manufacturing facilities to *Novaya Zarya* (“new dawn”), the nationalized name of Rallet’s major competitor, Brocard, which had been established in Moscow in 1861 by Frenchman Henri Brocard.³ Ernest Beaux rejoined Rallet at La Bocca in 1919.

At Chiris, Beaux’s counterpart was Joseph Robert, Chiris’ scientific director. Beaux’s new colleagues were an illustrious group:¹³

- Henri Robert (Joseph’s son), who was later with d’Orsay, Coty and, after 1954, with Chanel, creating *N°19* (1970) and *Cristalle* (1974)
- Henri Alméras, the perfumer behind most of Paul Poiré’s Parfums de Rosine, such as *Le Fruit Defendu* (1914), in which he used 0.3% aldehyde C-12 (dodecanal); later, he created *Moment Suprême* (1931) and *Joy* (1935) for Jean Patou
- Vincent Roubert, who will enter the scene in the context of *L’Aimant*

Production of *Rallet N°1* was continued in La Bocca, but to account for the difference in available raw materials, Beaux had to adapt the formula. The two series of

perfumes that Beaux showed Chanel in late summer 1921—the first numbered from 1 to 5, the second from 20 to 24—were all most likely adaptations and continuations of *Rallet N°1*.

Chanel N°5

We all know the legend that Chanel selected the *N°5* variation because the number five was her lucky number; being highly superstitious, she presented her new collections on the fifth day of the fifth month. But did she really select without smelling? Should we assume that, within each series, the bottles smelled pretty much the same to her? Chanel’s selection for a first perfume was in fact a continuation of Beaux’s work on *Rallet N°1*,⁶ and it appears that she had previous knowledge of the fragrance from Dimitri Pavlovitch.



Photo 3: Advertisement postcards of Rallet from the early 1920s for Beaux creations *Rallet Le Numéro 1* and *Rallet Le Gardénia*, the ideas behind which he later revisited in creating *Chanel N°5* (1922) and *Gardénia Chanel* (1925/1989/2007).

Edmond Roudnitska also claimed that Chiris offered *Rallet N°1* to Coco Chanel.¹⁴ In addition, Marcel Carles, the son of Jean Carles and one-time director of Roure’s perfumery school, reported that his father had confirmed to him that *Chanel N°5* was developed from *Rallet N°1*.⁹

Initially, it appears that only 100 flacons of *Chanel N°5* were produced, which Chanel graciously presented to her best customers as a Christmas gift in 1921. Chanel commissioned the Brosse glassworks to manufacture the flacon (**Photo 4**) in the image of a Charvet toiletry bottle belonging to a travel set owned by her lover and companion, Captain Arthur “Boy” Capel, who had died in a car accident December 22, 1919.¹ After several customers had asked for further supply, Chanel decided to officially launch *Chanel N°5* in 1922. However, this launch was far from spectacular as she was faced with supply problems.⁹

⁶At that time, Beaux also had been working on what was to become *Rallet Le Gardénia* (**Photo 3**). He found this floral theme inspiring, taking it up later in his work for the Wertheimer group—Ernest Wertheimer and his sons, Pierre and Paul, who became partners in House of Chanel’s perfume business in 1924—that led to the creation of *Gardénia Chanel* (1925), which was reformulated and relaunched in 1989 and recently re-released as part of the *Les Exclusifs de Chanel* series (2007).

At the time, Chanel was more focused on fashion, and it was the “little black dress,” shown in her 1924 collection, that secured for all time her fame as a designer.

The year 1924 also marked the turning point for Chanel's *N°5*. Theophilus Bader had heard of Chanel and her perfume through his lover, couturier Madeline Vionette.^{15a} Spotting an opportunity for his Galeries Lafayette and for Bourjois cosmetics, he introduced Chanel to his partner, Ernest Wertheimer.



Photo 4: Advertisement for *Chanel N°5* by Sem and the original 1922 flacon, which Gabrielle Chanel commissioned the Brosse glassworks to manufacture in the image of a Charvet toiletry bottle belonging to a travel set owned by her lover and companion, Captain Arthur “Boy” Capel, who had died in a car accident December 22, 1919.

On April 4, 1924, Chanel entered into an agreement with Bader and Wertheimer whereby the new partners would undertake to promote “Chanel’s” perfume, and others to be introduced under her name. In return, she would receive a 10% interest in the business. Parfums Chanel would now take over the perfume business, introducing the signature cut-glass flacon that had been designed by Jean Helleu for the Wertheimer relaunch.¹⁶ In the same year, Beaux, who since 1922 had been representing his friend Eugene Charabot in Paris, became technical director for both Bourjois and Parfums Chanel. He would go on to create new masterpieces for the Wertheimer group including *Cuir de Russie* (1924), *Gardénia* (1925), *Bois des Îles* (1926) for Parfums Chanel, and *Soir de Paris* (1929) and *Kobako* for Bourjois (1936). *Chanel N°22*, first launched in 1922 (in limited quantity, and 1926 officially) and recently re-released as part of the *Les Exclusifs de Chanel* series (2007), also most likely originated from the *Rallet N°1* modifications developed between 1919 and 1921, and may indeed stem from the series numbered 20 to 24.

Rallet was acquired by Coty in 1926 and, inspired by the international success of *Chanel N°5*, Vincent Roubert reinterpreted the *Rallet N°1* concept, result-

ing in *L’Aimant* (French for “magnet”); the scent was launched in 1927 and relaunched in a modern bottle in 1995 (**Photo 5**). Yet *Rallet N°1* was still in production in the late 1940s (**Photo 6** and **Photo 7**), most likely unchanged, as Coty wanted to keep it as a luxury branch.¹⁷ In addition to *Rallet N°1* and *Rallet Gardenia* (**Photo 3**), Coty launched *Rallet Chypre* and *Rallet No. 3*, the latter probably close or identical to the pre-1917 *Rallet O-De-Kolon N°3 Vesovoi*. In typical Coty fashion, these fragrances were offered in five sizes, priced from \$3.50 to \$25.00 per bottle in the United States.



Photo 5: An advertisement for *L’Aimant* that appeared in *Vogue* in 1947, coupled with the bottle of the relaunch from 1995 on the right.

Analysis of *Rallet N°1* Perfume and Eau de Toilette

Rallet N°1 constitutes a very important milestone in the history of perfumery. To preserve this monument, it was decided to reconstitute the formula from samples taken from the original, sealed bottles depicted in **Photo 6** and **Photo 7**. Both the perfume and the eau de toilette of *Le N°1 de Rallet* were analyzed by GC-chromatography and GC-olfactometry, and as much as possible was left unchanged in the reconstitution. Some materials had, however, completely disappeared and were thus replaced. Others were substituted for toxicological reasons; for instance, in the eau de toilette, musk ambrette by musk ketone with additional traces of musk xylene. The reconstituted formula of the perfume (**Photo 6**) is given in **T-1**, and that of the eau de toilette (**Photo 7**) in **T-2**. The analyzed *Rallet N°1* perfume stems from the flacon series of 1926–1930; the analyzed eau de toilette is post-World War II, most likely from the 1950s. Though older than the eau de toilette, the *Rallet N°1* perfume was better preserved; as it was also more concentrated, we were able to detect a few additional trace constituents, such as civet, fir needle oil, and birch tar oil, which Beaux later used so skillfully in *Cuir de Russie*.

Typical for this period of time, many essential oils are present, so the formulas had to be balanced to match the qualities available today, and decomposition products had to be taken into account concerning the quantities.



Photo 6: The reconstituted *Le N°1 de Rallet* perfume from around 1926–1930, in front of a corresponding advertisement from *Harper's Bazaar*, April 1930, p 151.

Not surprisingly, more vanillin, coumarin and nitro musk (musk ambrette) were found in the perfume quality, and more agrumen oils such as orange, citrus and bergamot oil in the eau de toilette, diluted by about twice the amount of diethyl phthalate (DEP).

The perfume is also a touch rosier and less jasmine than the eau de toilette version, but overall both are quite close in tonality. The added synthetic reconstitutions of civet and castoreum rounded the perfume off, provided more lift, but also led to an old-fashioned greasy note. After maceration, we rebottled our reconstitution in an old empty Rallet *Vesovoi* flacon dating between 1913 and



Photo 7: The reconstituted *Le N°1 de Rallet* eau de toilette, which was most probably launched in the 1950s.

Reconstitution of *Rallet N°1* perfume (Photo 6)

T-1

| Pos. | Ingredient name | Parts | Pos. | Ingredient name | Parts |
|------|----------------------------------|-------|------|-----------------------------|------------|
| 1 | Aldehyde C-11 (undec-10-en-1-al) | 0.20 | 26 | Isoraldeine 70 | 2.50 |
| 2 | Aldehyde C-110 (undecan-1-al) | 0.08 | 27 | Jasmine absolute | 2.00 |
| 3 | Aldehyde C-12 (dodecan-1-al) | 0.08 | 28 | Labdanum oleo-resin | 0.40 |
| 4 | Ambrarome absolute | 0.05 | 29 | Linalool | 2.80 |
| 5 | Benzoe Laos 50%/DPG | 1.50 | 30 | Linalyl acetate | 0.90 |
| 6 | Benzyl acetate | 2.40 | 31 | Methyl anthranilate | 0.30 |
| 7 | Benzyl alcohol | 1.30 | 32 | Musk ketone | 5.30 |
| 8 | Birch tar oil Russia | 0.08 | 33 | Myrrh resinoid | 0.07 |
| 9 | Castoreum synthetic | 0.02 | 34 | Neroli oil Tunisia | 0.05 |
| 10 | Cedarwood oil United States | 2.00 | 35 | Orange oil w/o bergaptene | 0.50 |
| 11 | Cinnamon oil Ceylon | 0.10 | 36 | Orris butter | 0.05 |
| 12 | Citronellol | 0.80 | 37 | 2-Phenylethanol | 5.10 |
| 13 | Civet synthetic | 0.01 | 38 | Rose de mai absolute France | 0.50 |
| 14 | Coumarin crystalline | 6.00 | 39 | Rose oil Bulgaria | 3.50 |
| 15 | Diethyl phthalate (DEP) | 26.56 | 40 | Rosewood oil | 3.50 |
| 16 | Evernyl | 0.10 | 41 | Sandalwood oil | 3.30 |
| 17 | Fir balsam Canada | 0.01 | 42 | Spearmint oil United States | 0.02 |
| 18 | Geraniol 980 | 2.70 | 43 | Styrax oil | 1.50 |
| 19 | Geranium oil Egypt | 0.80 | 44 | Terpineol | 0.30 |
| 20 | Geranyl acetate | 0.40 | 45 | Tolu balsam resinoid | 0.30 |
| 21 | <i>cis</i> -Hex-3-en-1-ol | 0.02 | 46 | Tree moss absolute | 0.20 |
| 22 | Hydroxycitronellal | 11.60 | 47 | Vanillin | 1.20 |
| 23 | β -Ionone | 0.20 | 48 | Vetiver oil Haiti | 0.50 |
| 24 | α -Irisone | 1.60 | 49 | Ylang-ylang oil Madagascar | 6.50 |
| 25 | α -Irone | 0.10 | | | 100 |

Reconstitution of *Rallet N°1* eau de toilette (Photo 7)

T-2

| Pos. | Ingredient name | Parts | Pos. | Ingredient name | Parts |
|------|----------------------------------|-------|------|-----------------------------|------------|
| 1 | Aldehyde C-11 (undec-10-en-1-al) | 0.12 | 22 | α -Irone | 0.10 |
| 2 | Aldehyde C-110 (undecan-1-al) | 0.10 | 23 | Isoraldeine 70 | 3.00 |
| 3 | Aldehyde C-12 (dodecan-1-al) | 0.02 | 24 | Jasmine absolute | 9.00 |
| 4 | Ambrarome absolute | 0.05 | 25 | Labdanum oleo-resin | 0.40 |
| 5 | Benzoe Laos 50%/DPG | 1.50 | 26 | Methyl anthranilate | 0.01 |
| 6 | Benzyl acetate | 0.80 | 27 | Musk ketone | 3.20 |
| 7 | Benzyl alcohol | 1.50 | 28 | Musk xylene | 0.05 |
| 8 | Bergamot oil Italy | 1.00 | 29 | Neroli oil Tunisia | 0.05 |
| 9 | Cedarwood oil United States | 0.50 | 30 | Orange oil w/o bergaptene | 8.00 |
| 10 | Cinnamon oil Ceylon | 0.10 | 31 | Orris butter | 0.05 |
| 11 | Citrus oil Italy | 3.00 | 32 | 2-Phenylethanol | 0.70 |
| 12 | Coumarin crystalline | 3.00 | 33 | Rose de mai absolute France | 0.50 |
| 13 | <i>p</i> -Cymene | 0.60 | 34 | Rose oil Bulgaria | 2.00 |
| 14 | Diethyl phthalate (DEP) | 41.96 | 35 | Rosewood oil | 2.80 |
| 15 | Evernyl | 0.05 | 36 | Sandalwood oil | 1.20 |
| 16 | Geraniol 980 | 0.50 | 37 | Spearmint oil United States | 0.02 |
| 17 | Geranium oil Egypt | 0.80 | 38 | Styrax oil | 1.50 |
| 18 | <i>cis</i> -Hex-3-en-1-ol | 0.02 | 39 | Tree moss absolute | 0.20 |
| 19 | Hydroxycitronellal | 2.70 | 40 | Vanillin | 0.60 |
| 20 | β -Ionone | 0.20 | 41 | Vetiver oil Haiti | 0.50 |
| 21 | α -Irisone | 1.10 | 42 | Ylang-ylang oil Madagascar | 6.50 |
| | | | | | 100 |

Reconstitution of *Mademoiselle Chanel N°1* (Photo 9)

T-3

| Pos. | Ingredient Name | Parts |
|------|-------------------------------|-------|
| 1 | Benzoe Laos 50%/DPG | 2.000 |
| 2 | Benzyl acetate | 0.700 |
| 3 | Benzyl alcohol | 1.900 |
| 4 | Bergamot oil Italy | 0.800 |
| 5 | Caryophyllenol | 1.000 |
| 6 | Castoreum synthetic | 1.500 |
| 7 | Cinnamon oil Ceylon | 0.100 |
| 8 | Citronellyl acetate | 0.200 |
| 9 | Citrus oil Italy | 1.200 |
| 10 | Citrus terpenes | 0.300 |
| 11 | Civet synthetic | 0.005 |
| 12 | Coumarin crystalline | 2.900 |
| 13 | <i>p</i> -Cresyl methyl ether | 0.200 |
| 14 | Cuminaldehyde | 0.005 |
| 15 | <i>p</i> -Cymene | 0.100 |
| 16 | Diethyl phthalate (DEP) | 8.395 |
| 17 | Dipropylene glycol (DPG) | 0.495 |
| 18 | Ethyl salicylate | 0.130 |
| 19 | Geraniol 980 | 0.500 |
| 20 | Geranium oil Egypt | 1.800 |
| 21 | Geranyl acetate | 0.350 |
| 22 | Guaiyl acetate | 0.300 |
| 23 | Heliotropine crystalline | 1.800 |
| 24 | Hydroxycitronellal | 8.000 |

| Pos. | Ingredient Name | Parts |
|------|---------------------------------------|------------|
| 25 | Hydroxycitronellal methylanthranilate | 5.000 |
| 26 | β -Ionone | 0.100 |
| 27 | α -Irisone | 0.230 |
| 28 | Isoraldeine 95 | 2.000 |
| 29 | Jasmine absolute | 5.000 |
| 30 | Lavender oil France | 0.200 |
| 31 | Methyl benzoate | 0.150 |
| 32 | <i>n</i> -Methyl ionone (IFF) | 25.000 |
| 33 | Musk ketone | 4.300 |
| 34 | Musk xylene | 0.200 |
| 35 | Neroli oil Tunisia | 0.100 |
| 36 | 2-Phenylethanol | 1.400 |
| 37 | Phytol | 0.400 |
| 38 | Rose de mai absolute France | 1.000 |
| 39 | Sandalwood oil | 5.200 |
| 40 | Spearmint oil United States | 0.020 |
| 41 | Star anise oil China | 0.020 |
| 42 | Styrax oil | 1.800 |
| 43 | Terpenyl acetate | 0.600 |
| 44 | Terpineol | 1.500 |
| 45 | Vanillin | 0.100 |
| 46 | Vetiver oil Haiti | 2.300 |
| 47 | Vetiveryl acetate | 7.000 |
| 48 | Ylang-ylang oil Madagascar | 1.700 |
| | | 100 |

1917 (**Photo 8**). These flacons, which bear the coat of arms of the Romanovs on the front, a symbolic flower on each side and the perfume label on the back, were sold by weight to refill private toilet water flasks or the original perfume bottles. In fact, *Rallet N°1* may have been first launched in such a flacon as the eau de cologne version *Rallet O-De-Kolon N°1*.

Albeit not identical to today's *Chanel N°5*, the overall concept of *Rallet N°1* is indeed very close: three aldehydes in a relation of about 2:1:1 at some 0.3%, neroli and agrumen oils plus some 6% of ylang-ylang in the aldehydic top note; jasmine absolute, *rose de mai*, orris and lily of the valley in the floral heart (although the balance in *Chanel N°5* is slightly different); and sandalwood, vetiver, styrax, vanillin and nitro musk in the drydown. *Rallet N°1* can indeed be seen as Beaux's predecessor to *Chanel N°5*.

Neither Coty's *Rallet N°1* nor *L'Aimant* was ever a threat to the success of *Chanel N°5*. Yet rather than being delighted by its success, Chanel felt she had been taken advantage of by the Société des Parfums Chanel. In her opinion, the profits the Wertheimers returned to her for her 10% share were not at all adequate for the use of her name and "her" perfumes—now that she was famous. Throughout the 1930s, Chanel harassed the Wertheimers. Then, when the Wertheimers decamped for New York on the eve of World War II, Chanel saw her opportunity.

But the Wertheimer brothers had done their planning well. The materials needed to produce *Chanel N°5* had

been moved to New York and, when hostilities broke out, *Chanel N°5* made its appearance in the greatest of all mass markets—the US Military Post Exchange.^{15b} The Wertheimers were getting rich and, for the moment, Coco could do nothing. But at the end of WWII, Chanel's guns were turned on the Wertheimers. Chanel launched her own perfumes under the name *Mademoiselle Chanel*, marked with the address of her couturier shop: 31, Rue Cambon, Paris.

Selling these perfumes in her shop was prohibited by judicial action for counterfeiting, but nothing prevented her from giving them away to her friends in New York at Saks Fifth Avenue and in Texas at Neiman Marcus. In 1946, she launched *Mademoiselle Chanel N°1*, the bottle of which is depicted in **Photo 9**. Chanel insisted that her lawyer give the new perfume to his wife. The critique came back: "It is super N°5!" Ernest Beaux is said to have confirmed this impression.^{15b}

Luckily, we acquired an almost full flacon of *Mademoiselle Chanel N°1*, and—before all traces irretrievably decomposed—analyzed and reconstituted it. The formula of *Mademoiselle Chanel N°1* is given in **T-3**. The formula turned out to be quite close in concept to *Rallet N°1*, though more modern in composition, typical of the 1940s. In addition to hydroxycitronellal, the Schiff base of hydroxycitronellal and methyl anthranilate was employed in large amounts, yielding the fragrance's dark color. We also found large quantities of jasmine and *rose de mai*



Photo 8: A historic Rallet “Vesovoi” flacon (from the Russian “sold by weight”) intended to refill private toilet water flasks or the original perfume bottles. It was refilled by us with the reconstituted *Rallet N°1* fragrance. The front bears the coat of arms of the Romanovs, signaling the status of purveyor of the Russian Imperial court, while a symbolic flower is embossed on each side; the label of the respective perfume was stuck on the flat back. The inscription “Tvo A. Ralle i Ko Moskva” translates as “Made by A. Rallet & Co., Moscow,” which in this case is not true, of course.

absolutes that accompany the lily-of-the-valley theme in the floral heart, but the aldehyde complex is missing completely. However, bergamot, citrus, neroli and ylang-ylang are present in the top note of *Mademoiselle Chanel N°1*, and sandalwood, vetiver, styrax, vanillin and nitro musks—in this case musk ketone accompanies musk ambrette—in the foundation, just as they are in *Rallet N°1* and *Chanel N°5*. Much to our surprise, however, the formula contains a 25% overdose of α -*n*-methyl ionone with its typical fruity-woody orris tonality and floral facets, replacing, or in fact overcompensating for, the expensive orris butter. As a result, *Mademoiselle Chanel N°1* becomes somewhat of a violet-orris modification of the *Chanel N°5* theme, just as it is known today from the *Angel Jardins d’Etoilles* series (Thierry Mugler Parfums, 2006). In fact, with its radiant violet-orris accord, *Violette Angel* (2006) is to *Angel* (1992) what *Mademoiselle Chanel N°1* (1946) is to *Chanel N°5* (1921), excepting the aldehydic top.

In the 1930s, different fragrance companies studied cyclization methods of pseudoionones and offered enriched qualities of ionones and methyl ionones. All four



Photo 9: The analyzed and reconstituted fragrance of *Mademoiselle Chanel N°1*, launched independently by Coco Chanel under the address of her flagship store at 31, *Rue Cambon, Paris*.

isomers, α -*n*-, β -*n*-, α -*iso*- and β -*iso*-methyl ionone, were commercially available from around 1935 on— α -*n*-methyl ionone in over 90% purity as Raldehyde A (Givaudan) or Iraldehyde Alpha rein (Haarmann & Reimer). Thus, α -*n*-methyl ionone constituted a novel material in the 1940s, just as the aldehydes did in the 1910s. Paul Jellinek described specific uses for each one of these isomers, but today the far more intense α -*iso*-methyl ionone varieties are produced almost exclusively.¹⁸ In our reconstitution we employed IFF’s *n*-methyl ionone grade, which was the closest material commercially available, though it is now also discontinued.

Who was the perfumer behind *Mademoiselle Chanel N°1* (Photo 9), which was said to have been manufactured in Zurich, Switzerland?^{15b} Despite his praise of the fragrance, which made it appear as if someone else had compounded it, it rather looks like Beaux himself was its creator. The scent somehow bears his signature: the conceptual similarity to the *Rallet N°1* theme, the use of an overdose of a novel material, and the fact that this novel material was α -*n*-methyl ionone, which was available only from Haarmann & Reimer or Givaudan. In addition, Beaux was a good friend of Leon Givaudan, and ionone isomers such as Cetone Alpha fascinated the perfumer.^{8a} We will probably never know for sure what Beaux did between 1940 and 1945, but who other than Beaux could Chanel have selected to challenge “her” *N°5*? Certainly the “*N°1*” in the perfume’s name could have been inspired by Beaux’s original creation for Rallet.

In any case, Chanel's tactic worked. In truth, all she wanted was more money from the Wertheimers. She had no capability of marketing *Mademoiselle Chanel N°1* in a serious way. But she could have caused confusion among *N°5* customers. With a sharply rising sales curve for this perfume, Pierre Wertheimer wished to eliminate any risk. Flying to Europe and meeting with Chanel's lawyer in 1947, Wertheimer renegotiated the 1924 agreement, and Chanel received an additional 2%. Chanel and Wertheimer made peace. When Chanel wanted to resurrect her couture house, Wertheimer even backed her financially. Chanel's comeback collection, shown in Paris on February 5, 1954, was a fiasco. Pierre had to buy the couture business as well to prevent its insolvency. Then, in New York in 1955, Chanel's collection became such a huge success that even the ill-reputed costumes from the previous year sold out.^{1,19}

In 1954, Henri Robert, who had known Beaux since their days together at La Bocca, replaced him as Chanel's chief perfumer. However, Beaux (who, incidentally, had used his connections to obtain work for Russian emigrants since the 1920s) remained involved in Chanel Perfumes until the end of 1960 when he was discharged at age 79.²⁰ Deeply disappointed, he died only a few months later, on March 8, 1961, in his Paris apartment. His funeral was held in the south of France in the parish of Notre Dame de Graz de Passy.²¹ It is said that the church was carpeted with roses.¹⁹ Pierre Wertheimer died five years later, on

April 24, 1965, at the age of 77. Chanel continued inexorably after her spectacular comeback and brought out new collections every year until 1971, when, on January 10, she died in her suite in the Ritz in Paris at the age of 88. Her *N°5*, however, still proves immortal, a true legend as best illustrated by the famous quote of Marilyn Monroe (**Photo 10**) in answer to the question of what she wears at night: "Five drops of *N°5*."

General Remark

Each author—Philip Kraft, Christine Ledard, and Philip Goutell—has evaluated all information sources carefully and investigated the topic most thoroughly, but can make no representation, express or implied, with regard to the accuracy of the information contained in this account, and therefore does not accept any legal responsibility or liability for any errors or omissions that may inadvertently have occurred.

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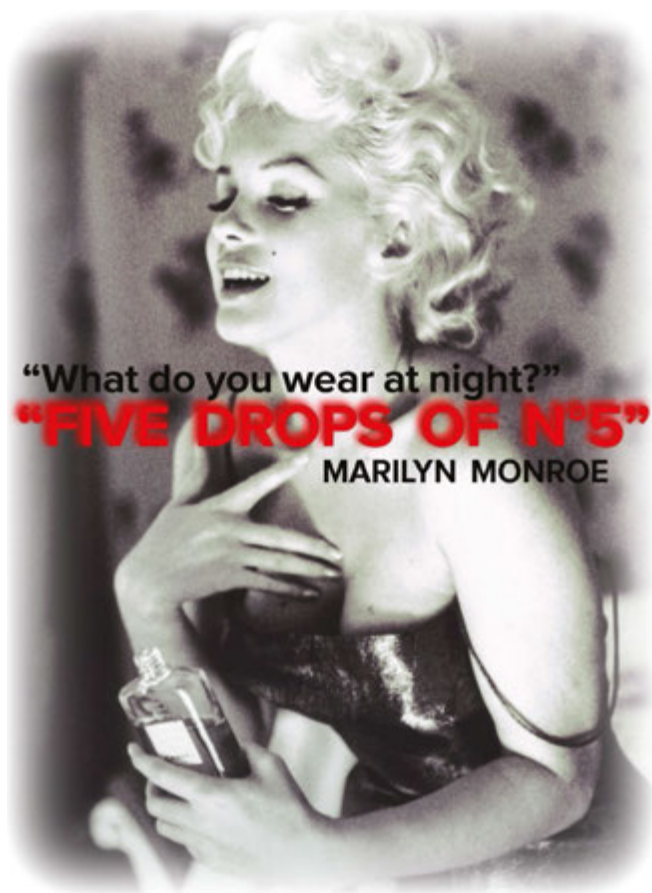


Photo 10: Marilyn Monroe, personifying the legend of *Chanel N°5* with her famous quote, “Five drops of *N°5*,” in answer to the question of what she wears at night; Marilyn Monroe, 1955; © Ed. Feingersh/Archive Michael Ochs, Venice.

of it. In addition, we thank Helen Farnsworth for photos of other Rallet flasks from the early 20th century and Rallet advertisement specimens from that period. We also thank Jacques Membrez, Givaudan Vernier, for specifications of historic α -*n*-methyl ionone qualities; Fabian Kuhn, Givaudan Dübendorf, for additional GC/MS spectra; Samuel Derrer, Tony McStea and Markus Gautschi for proofreading the manuscript; and last but not least Steph Senior, Givaudan Ashford, for her enthusiasm and support of this project.

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