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A method of creation and perfumery
By Jean Carles (Dec.1961)

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COLOGNES

Our present topic leads us quite naturally to discuss the formulation of colognes which, predominantly, consist of highly volatile top notes.

Indeed, conventional colognes are predominantly toilet goods that should have an odor lacking in tenacity, either because said odor should be just sufficient to add to the overall pleasant feeling of cleanliness, or because it should not detrimentally affect one's regular perfume. It is understood that modifiers and base notes may be added to cologne formulations, for the purpose of imparting more lasting properties to such compositions, but, nevertheless, such materials should always be used with moderation in colognes.

The main constituents used in the formulation of colognes are set forth in tabular form below, the table being only given for illustrative purposes and as an indication of the work that can be undertaken by any student in perfumery.

Raw Materials for Cologne Formulations

Top Notes	Modifiers	Base Notes
Bois de rose	Basil	Clary sage
Linalool	Petitgrain, ex Bergamot-tree	Ionones
Tangerine	*Petitgrain, fr. Paraguay*	Methyl ionones
Bitter Orange	*Petitgrain, ex Lemon-tree*	Orris concrete
Citron	Petitgrain, ex Tangerine tree	Sandalwood
Lemon	*Verbena*	Cinnamon
		Cassia
Lavenders	*Petitgrain bigarade*	Nerolin crystals
Bergamot	Tansy	Yara-Yara
Lavandin	*Petitgrain fr. Grasse*	Benzyl salicylate
Coriander	*Geraniums, African and Bourbon*	Resinoid No. 1 Benzoin
Sweet Orange	Hyssop	Resinoid No. 1 Balsam Tolu
Sweet fennel	Lemongrass	Resinoid No. 1 Balsam Peru
Bitter fennel	Cloves Bourbon	Bromstyrol
Citral	Pine	Methyl naphthyl ketone

Tarragon Lime Marjoram Linalyl acetate Terpinyl acetate Etc. etc.	Wild Thyme *Neroli bigarade petals* Isoeugenol Methyl cinnamate Ylang-Ylang Ethyl cinnamate Methyl iso eugenol Methyleugenol *Rosemary* Phixia (Hydroxycitronellal) Aldehydes C9, C10, C11, C12 Methylnonylacetaldehyde (Aldehyde C12 MNA) Bay Thyme Absolute Orange Flowers Phenylethyl alcohol Geranyl acetate Geraniol Citronellol Citronellal Cinnamyl acetate Etc. etc.	*Artificial Musks* Coumarin Vanillin Absolute Tonka Beans Vetiveryl acetate Vetiver (Java and bourbon) Acetivenol Absolute Cistus Labdanum (colorless) Olibanum Opoponax Argeol Indolene Hibiscolide Lactone MC15 Etc. etc.

In spite of the pleasant note of most constituents, it is difficult to create a "good" Cologne, that is, a cologne that will have sales appeal. Again - I beg to be forgiven, but cannot help repeating myself! - the personal touch of the perfumer creator will be determining. A perfumer's technical know-how and olfactory memory will serve to produce a well-balanced formulation. But the perfumer's fancy, his sense of humor sometimes, his desire to promote some flash of interest and amusement , and his deep rooted love for his art will lead him more safely than any so-called recipe to hit on an immediately popular formulation... popularity being the mark of a "good" Cologne.

Types of accord with 2, 3 and four products are given. They serve only as an indication, and as a basis for more elaborate studies. It goes without saying that top notes and modifiers may be included in the accords set forth and, thus, increase the already large scope possibilities offered in this field.

The last accord set forth leads us to a much more rapid method of research that makes it possible to dispense with the long tedious search for accords, which, in colognes, seem to be inexhaustible!

Cologne Formulation: *Accords with Two Products*

7 3	Bergamot Lemon		9 1	Bergamot Lavender
7 3	Bergamot Neroli bigarade petals		6 4	Bergamot Petigrain fr. Grasse
9 1	Bergamot Wild Thyme		9 1	Bergamot Argeol

4 6	Lemon Bois de Rose		9 1	Sweet Orange Neroli bigarade petals
9 1	Neroli bigarade petals Verbena		4 7 6 3	Bergamot Verbena
5 9 5 1	Lemon Sweet Orange		Etc.	

Cologne Formulation: *Accords with Three Products*

6 3 3	Bergamot Sweet Orange Lavender		6 3 3	Lemon Sweet Orange Petitgrain fr. France
6 3 3	Lemon Lavender Sweet Orange		6 3 3	Lemon Tangerine Petitgrain fr. Grasse
6 3 3 3 6 3 3 3 6	Bergamot Lemon Sweet Orange		Etc.	

Cologne Formulation: *Accords with Four Products*

6 2 2 2	Lemon Lavender Bergamot Neroli bigarade petals		6 2 2 2	Lemon Petitgrain fr. Grasse Bergamot Bois de Rose
2 6 2 2	Petitgrain fr. Grasse Geranium African Bois de Rose Verbena		3 3 3 3	Bergamot Lavender Sweet Orange Geranium African
2 2 6 2	Bergamot Lemon Sweet Orange Tangerine		2 6 2 2	Bergamot Lemon Lavender Bois de Rose
2 6 2 2 2 2 6 2	Bergamot Lemon Sweet Orange Lavender		2 2 6 2 2 2 2 6	Bergamot Lemon Sweet Orange Bois de rose, etc.

Accords with five Products

6 2 2 2 2 2 2 6 2 2 2 2 2 2 6	Bergamot Lemon Sweet Orange Petitgrain Grasse Lavender	Etc.

My advice is to use the following procedure: on the basis of the listed accords, one will choose four standard raw materials selected from those printed in italics, in the table giving the main constituents of colognes. Formulations comprising the four products elected will be established. For example, as follows:
(a)

6 2 2 2	Bergamot
2 6 2 2	Lemon
2 2 6 2	Sweet Orange
2 2 2 6	Neroli bigarade petals or Petitgrain (Grasse)

It is understood that the above ratios of components are given only for illustrative purposes, and these may be modified as desired. These various combinations will form a number of valuable compositions that can be used as basis for good Cologne formulations.

To the above accord (a), formed from four products, will be added another conventional cologne component such as lavender, the formula (b) (see chart below) being thus obtained.

In this manner, one will obtain interesting accords constituting most satisfactory conventional type colognes that could be used as such.

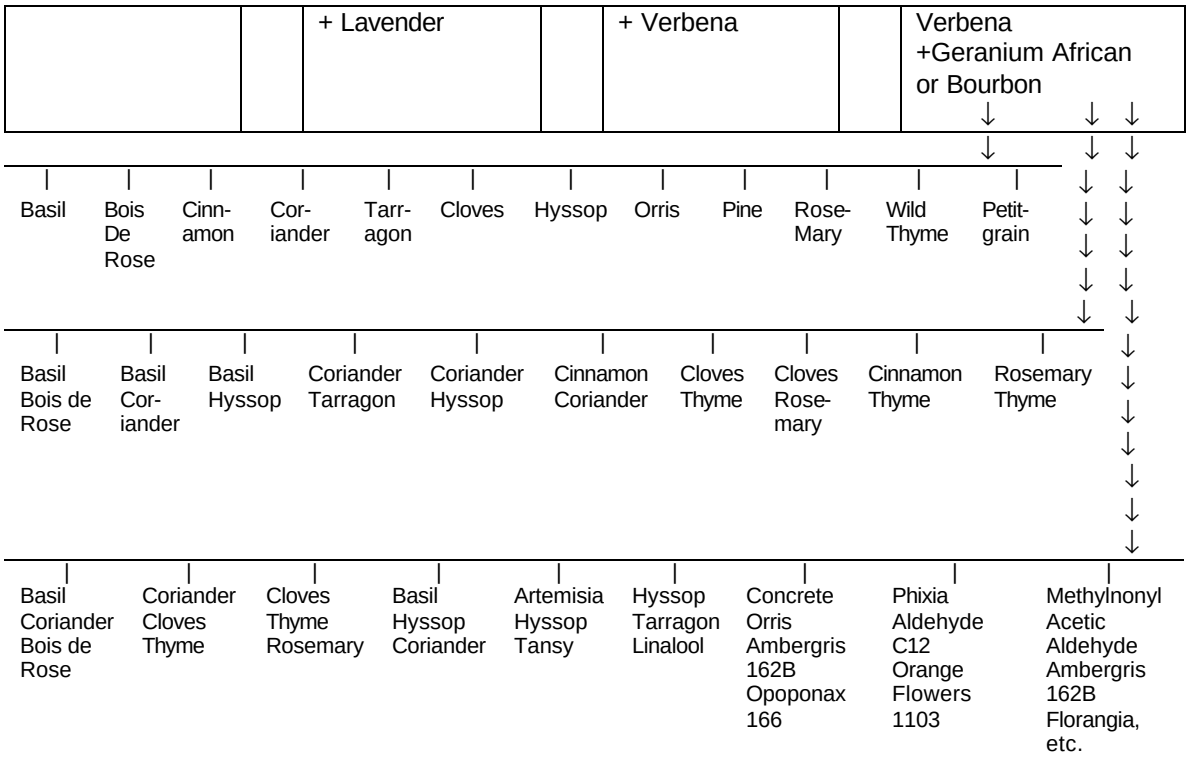
After a given accord is selected, with suitable ratios of components, any additional constituents such as verbena may be used, resulting in a new formulation (c).

As previously stated, suitable ratios between constituents will be selected for the formulation of the latter accord, and a seventh conventional cologne component such as geranium African or Bourbon, for example, will be added. On the basis of this new formulation (d) one will obtain novel combinations by using varied ratios between components. A number of valuable compositions will result from each of the (a), (b), (c) and (d) formulations, although no strict rule is involved in the method outlined above. If desired, small amounts of artificial musks such as musk ketone, musk ambrette, hibiscolide, Lactone MC15 and the like will be added to the compositions.

In addition to conventional type colognes, there are also fancy type so-called Imperial, Russian, Royal, Amber colognes that are merely conventional colognes modified with additional components such as those listed below.

For a better understanding of the method used, a general scheme is given to show how, starting from formulation (d.), many modifications of one and the same formula can be obtained.

(a) Bergamot Lemon Sweet Orange Neroli bigarade or Petitgrain fr. Grasse	→	(b) Bergamot Lemon Sweet Orange Neroli bigarade or Petitgrain fr. Grasse	→	(c) Bergamot Lemon Sweet Orange Neroli bigarade or Petitgrain fr. Grasse	→	(d) Bergamot Lemon Sweet Orange Neroli bigarade or Petitgrain fr. Grasse


+ Lavender
+ Verbena
Verbena
+Geranium African
or Bourbon
Basil
Bois De Rose
Cinn-amon
Cor-iander
Tarr-agon
Cloves
Hyssop
Orris
Pine
Rose-Mary
Wild Thyme
Petit-grain
Basil Bois de Rose
Basil Cor-iander
Basil Hyssop
Coriander Tarragon
Coriander Hyssop
Cinnamon Coriander
Cloves Thyme
Cloves Rose-mary
Cinnamon Thyme
Rosemary Thyme
Basil Coriander Bois de Rose
Coriander Cloves Thyme
Cloves Thyme Rosemary
Basil Hyssop Coriander
Artemisia Hyssop Tansy
Hyssop Tarragon Linalool
Concrete Orris Ambergris 162B Opoponax 166
Phixia Aldehyde C12 Orange Flowers 1103
Methylnonyl Acetic Aldehyde Ambergris 162B Florangia, etc.