

Application Data

MPDiol® Glycol

Fragrance Enhancement Effect

Solvents Tested

- MPDiol glycol *
- Dipropylene glycol
- Diethyl phthalate

* MPDiol lo™ was used in this study.

Fragrances Tested

- Citrus
- Lily of the Valley
- Rose
- Jasmine
- Musk

The fragrance enhancement test was conducted at ISIPCA, a renowned French cosmetic and perfumery school, by selecting 10 volunteers trained in sensory testing. The volunteers were asked to evaluate each fragrance composition and rank the fragrance intensity by assigning a value of 1-5 where:

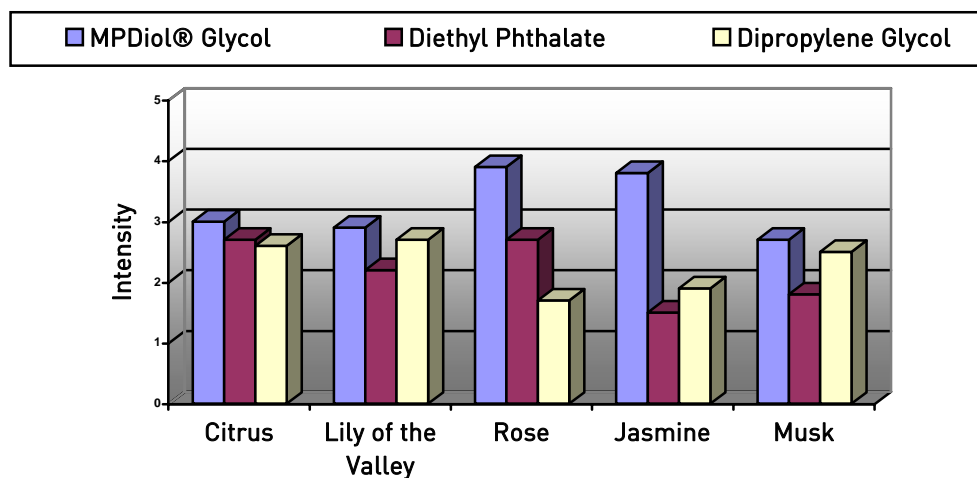
Rank 1: the lowest intensity

Rank 5: the highest intensity

The fragrance compositions were prepared at a level of 10% fragrance with each solvent listed. The evaluations were performed in duplicate.

The results were collected and analyzed according to the Friedman test by summing the total of the intensity rank assigned to each composition by the volunteers for each composition.

The average of the intensity rank assigned to each solvent by the volunteers (for the 2 repetitions) are reported in the graph.



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MPDiol glycol develops the fragrance intensity with a better efficiency compared to classical solvents used in perfumery such as diethyl phthalate (DEP) and dipropylene glycol (DPG). Overall MPDiol glycol shows better performance than DEP and DPG in carrying the heart of the fragrance. When comparing scents like Jasmine and Rose, MPDiol glycol has a strong fragrance enhancement effect on the nose of the heart.

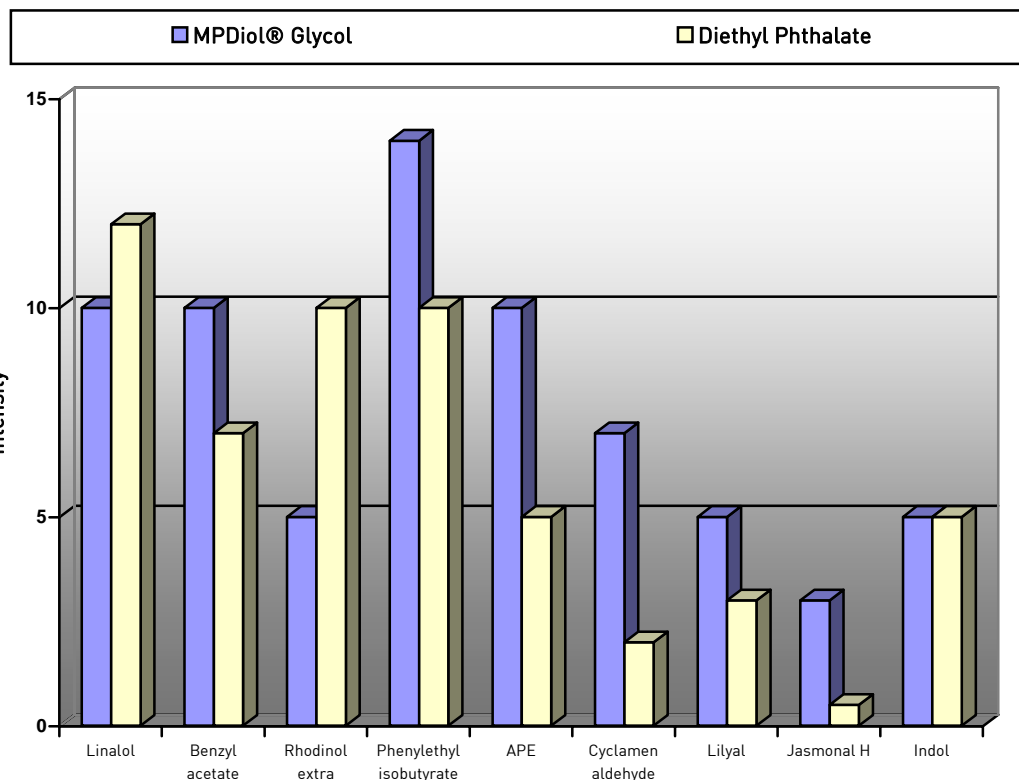
Additional analyses were conducted on pure compositions and the compositions diluted at 10%. Headspace technology was conducted by micro extraction in solid phase and the analysis realized by CPG/SM. The vapor phase above the diluted samples was analyzed to determine the composition and values reported as a "factor" as follows:

The % of the peak of each compound in the vapor phase of the diluted composition is divided by the real % of the compound in the liquid.

Results obtained for Lily of the Valley and Rose are reported in the following graphs:

In comparison to DEP, the presence of MPDiol Glycol increases more than 50% of the peaks in the composition (6 peaks out of 9 increases). MPDiol glycol enhanced the following peaks: benzyl acetate, phenylethyl isobutyrate, APE, cyclamen aldehyde, lilyal and jasmonal H.

Lily of the Valley

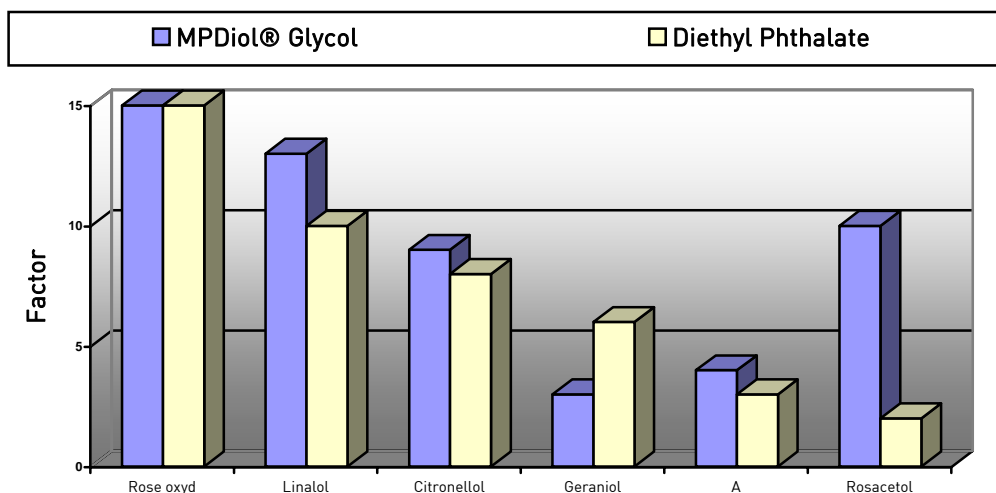


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In the case of Rose, MPDiol glycol again increases more than half of the peaks in the composition (4 out of 6). MPDiol glycol enhanced the following peaks: Linalol, Citronellol, Hydroxycitronellal/APE, and Rosacetol.



A = Hydroxycitronellal / APE

Generally speaking, MPDiol glycol has a middle holding back time which favors the floral and fresh notes of the heart. Both, the sensorial and the technical results presented above demonstrate the benefits of MPDiol glycol regarding its use in fragrance compositions.

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