

# 6-Methoxy-2,6-Dimethylheptanal

Use in fragrance compositions

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**6**-Methoxy-2,6-dimethylheptanal (**F-1**; CAS# 2439-41-2; methoxymelonal, methoxymelolal) is a colorless to pale yellow viscous liquid with a light floral odor, slightly fruity note with a watery citrus character.<sup>a</sup> It is fresh, herbaceous and slightly fruity with melon connotations.<sup>b</sup> Fresh, watermelonlike notes have been popular in perfumery for several years.

The material shows good tenacity of ~2 days on blotter and is moderately alkali-stable. This aldehyde may be used in floral and herbal compounds for functional and cosmetic perfumery. The recommendation for 6-methoxy-2,6-dimethylheptanal fragrance usage levels is up to 1% in the fragrance concentrate. The material is not for flavor use.

6-Methoxy-2,6-dimethylheptanal may be used to add a fresh florality to a variety of odor types. It combines especially well with green, citrus and floral bouquets, especially in shampoos and other toiletries.

6-Methoxy-2,6-dimethylheptanal can be prepared by oxidation of 7-methoxy-3,7-dimethyloctan-1,2-diol in the presence of copper chromite, for example, followed by basification with anhydrous potassium carbonate (**F-2**).<sup>1</sup>

6-Methoxy-2,6-dimethylheptanal (methoxymelonal) and 2,5-dimethyl-5-heptanal (melonal; **F-3**) are two aldehydes employed for this purpose and should be mentioned together.

Melonal is an extremely powerful and diffusive odorant with a green-citrusy, melonlike odor. Methoxymelonal is equally diffusive, but milder, and with a very beautiful, transparent watermelon character. A compounded perfumery composition having a muguet type odor was made up as follows in the next column:<sup>b,1</sup>

<sup>a</sup>Most of the information on organoleptic properties and uses are taken from: PMP 96, *Database of Perfumery Materials & Performance*, Boelens Aroma Chemicals Information Services, The Netherlands. Some organoleptic information and uses are cited from suppliers' specification sheets, *i.e.* O'Laughlin and Innospec.; methoxymelonal (Innospec); methoxymelolal (O'Laughlin).

<sup>b</sup>Hedione is a trademark of Firmenich; Citroflex is a trademark of Vertellus; Lyrall is a trademark of IFF.

Phenylacetaldehyde (10%)	15
<i>cis</i> -Hexenylacetate (10%)	10
Benzyl acetate	15
Styrax oil	20
Anisaldehyde	5
Methylisoeugenol	60
Benzyl salicylate	40
Hedione	20
Jasmine absolute	1
Phenyl ethyl alcohol	400
l-Citronellol	150
l-Citronellyl acetate	10
Citroflex	90
Lyrall	80
Indole	10
Husk RI	5
6-Decalactone	10
<b>6-Methoxy-2,6-dimethylheptanal</b>	<b>10</b>
6-Methoxy-2,6-dimethylheptanol	5
	1,000

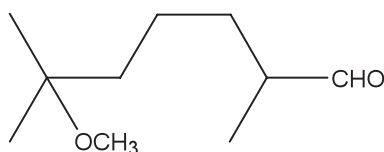
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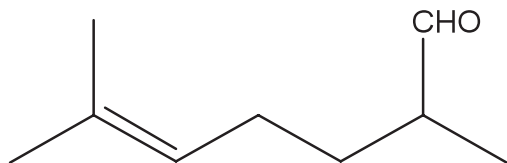
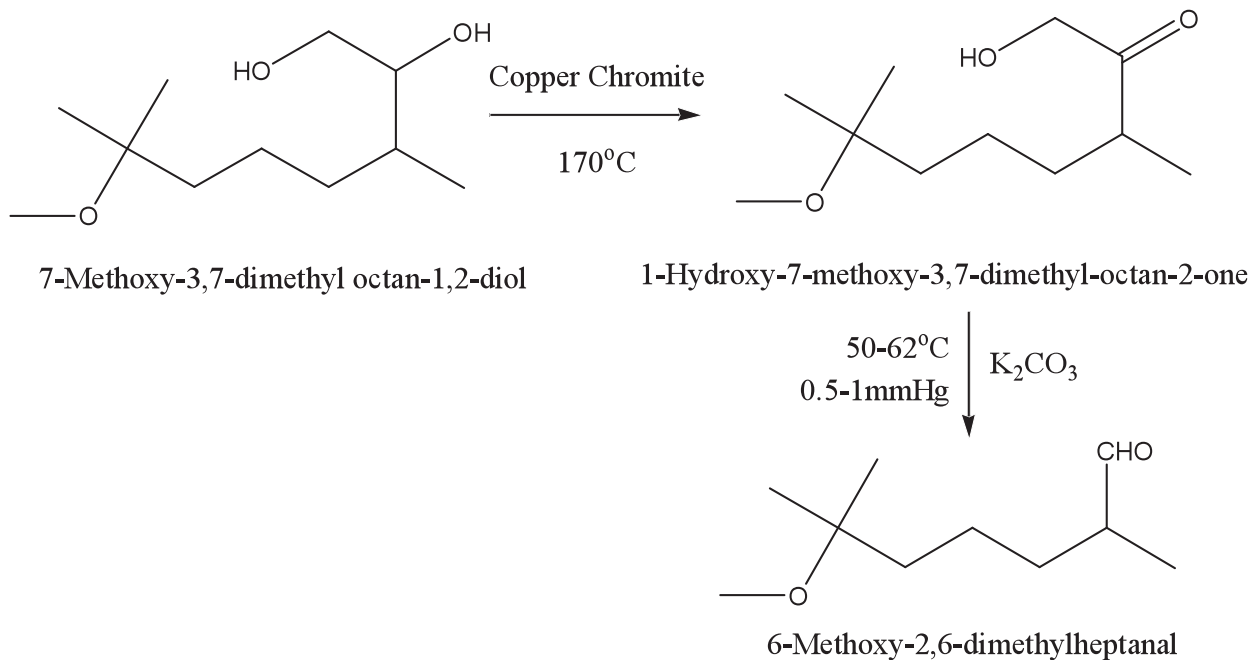
## Physical Data: 6-Methoxy-2,6-dimethylheptanal

Appearance:	Clear, colorless to pale-straw liquid
Molecular weight:	172.3
Molecular formula:	C <sub>10</sub> H <sub>20</sub> O <sub>2</sub>
Refractive index n <sub>20</sub> /D:	1.430 - 1.436
Specific gravity 25°C:	0.893 - 0.900
Acid value (mgKOH/g):	<1
Boiling point:	205°C
Flash point:	88°C
Log Ko/w:	2.32

6-Methoxy-2,6-dimethylheptanal;  
CAS# 62439-41-2

**F-1**





## References

- 1 HR Ansari and I Benjamin, *Perfumery compositions*. Bush Boake Allen Ltd, US4311617 (1982)

The second structure displayed in T-2 on page 25 of the July 2010 issue of *Perfumer & Flavorist* magazine should have been identified as methyl cyclooctanyl carbonate; in the same table, the IFF trade name should have read Liffarome; and, to clarify, while Henkel held the original trade name of Jasmacyclat, the line of ingredients now belongs to Kao.