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# *(Z)*-3-Methyl-5-phenyl-2-pentenoic Acid

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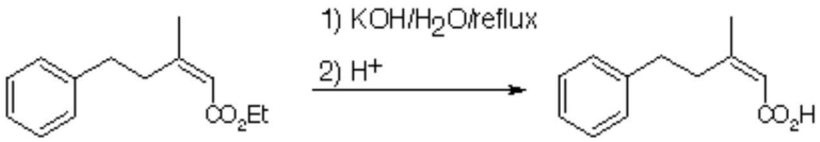


The general part of the experimental section [1] has been presented elsewhere. Ethyl *(Z)*-3-methyl-5-phenyl-2-pentenoate (0.10 g, 0.5 mmol) was refluxed with potassium hydroxide (0.07 g, 1.25 mmol) in a mixture of water (8 ml) and methanol (1 ml) for 3 hours, cooled and washed with ether (10 ml). The aqueous phase was acidified with concentrated hydrochloric acid to below pH 1. The mixture was extracted with ether (3x10 ml). The combined ether extracts were dried ($Na_2SO_4$), filtered and evaporated under reduced pressure. (*Z*)-3-Methyl-5-phenyl-2-pentenoic acid (0.0497 g, 57%) was obtained as a viscous pale yellow oil that crystallized on standing at room temperature overnight.

M.p. 51-3°

UV (ethanol) 303 (250) nm.

IR ($CDCl_3$) 3300-2800(bs, OH), 3103, 2941, 1692 (s, C=O), 1639, 1290, 1260 $cm^{-1}$.

$^1$H-NMR (90 MHz, $CDCl_3$) 1.88 (3H, d, *J* 1.3 Hz, $CH_3$), 2.55-2.98 (4H, m, 2x$CH_2$), 5.65 (1H, m, =CH), 6.92-7.35 (5H, m, ArH), 9.28 (1H, bs, COOH).

EI-MS 190($M^+$, 7%), 144(9), 131(8), 91(100).

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## References and Notes

1. Moloney, M.G.; Pinhey, J.T.; Stoermer, M.J. "Vinyl Cation Formation by Decomposition of Vinyl-lead Triacetates. The reactions of Vinylmercury and Vinyltin Compounds with Lead Tetraacetate." *J. Chem. Soc. Perkin Trans. 1* **1990**, *10*, 2645.

*Sample Availability*: No sample available.