

THE CONFORMATIONAL PANORAMA OF MANDELIC ACID

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The conformational landscape of mandelic acid (phenyl glycolic acid), the simplest alpha-hydroxy acid containing an aromatic substituent, has been unveiled by laser ablation coupled with broadband Fourier transform microwave spectroscopy LA-CP-FTMW. The four identified conformers provide the first global structural picture of this molecule traditionally used in cosmetics and dermatology as well as in the synthesis of pharmaceuticals. Rotational transitions of singly substituted ^{13}C isotopic species of the most stable conformer in its natural abundances were also detected, providing insight on its geometry.