

**Title** Impact of “ecological” post-harvest processing on coffee aroma: II. Roasted coffee  
**Author** Oscar Gonzalez-Rios, Mirna L. Suarez-Quiroz, Renaud Boulanger, Michel Barel, Bernard Guyot, Joseph-Pierre Guiraud and Sabine Schorr-Galindo  
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### **Abstract**

The purpose of this study was to determine how water and microbial stages in post-harvest processing affect the volatile content of coffee. Following our aroma analysis carried out on green coffees, we turned our attention to roasted coffees. Coffees produced by three variants of the wet method, and by an ecological process, were compared after roasting. Three degrees of roasting were applied to gain a clearer picture of the differences in roasted coffee aromas by means of a volatile compound analysis. Changes in the post-harvest process actually led to aroma differences in roasted coffees, and with light roasting it was possible to more effectively distinguish between the four treatments based on aroma criteria. Coffee produced by the traditional wet method, with microbial stages, had a better aroma quality than coffee produced by the ecological method, which was purely mechanical. Moreover, in the microbial method, mucilage removal under water gave coffees with more fruity, floral and caramel notes, whereas dry mucilage removal gave more neutral coffees. These results confirmed the importance of microbial mucilage removal under water and tallied with the results of our previous study on green coffee. This work provides coffee producers and roasters with an insight into the volatile composition of roasted coffee depending on the post-harvest process used and degree of roasting applied.