ANALYTICAL STRATEGIES FOR WINE ORIGIN AND AUTHENTICITY VERIFICATION

Ana Jeromel,[a] Ana-Marija Jagatić-Korenika,[b] Ivana Tomaz[b]

[a] Department of Viticulture and Enology, Faculty of Agriculture, University of Zagreb, Croatia
[b] Department of Viticulture and Enology, Faculty of Agriculture, University of Zagreb, Croatia
amajdak@agr.hr

Wine authentic analysis uses advanced chemical and sensory methods to verify a wine's label claims regarding origin, grape variety, and production process by analyzing its unique chemical fingerprint and known compounds. Key techniques include spectroscopic methods (like IR and UV-Vis) for fingerprinting, inductively coupled plasma mass spectrometry (ICP-MS) for mineral wine analysis, NMR spectroscopy for detailed chemical profiling, and chromatographic techniques to identify specific compounds. Sensory evaluations remain important, but chemical analyses, often combined with multivariate statistical methods, provide a more comprehensive and objective approach to detecting adulteration and counterfeiting. So, one of the main research activities is to improve already existing methods of authenticity monitoring as well as creating the new ones.

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