

Detection of aromatic compounds in tequila through the use of surface plasmon resonance

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Abstract

For an expert nose, the aroma of a beverage is a fingerprint that can be used to certify its authenticity, distinguish between distillation processes, or even identify the raw material used to fabricate it. In this work, we propose a simple, automatic, and repeatable optical method, which can be used as a first and quick test to authenticate tequila samples. This method is based on the measurement of beam intensity changes, using the surface plasmon resonance technique, operating at a fixed angle. We observed that each tequila, depending on the alcohol content and aging process, produces a specific change in measured intensity level.