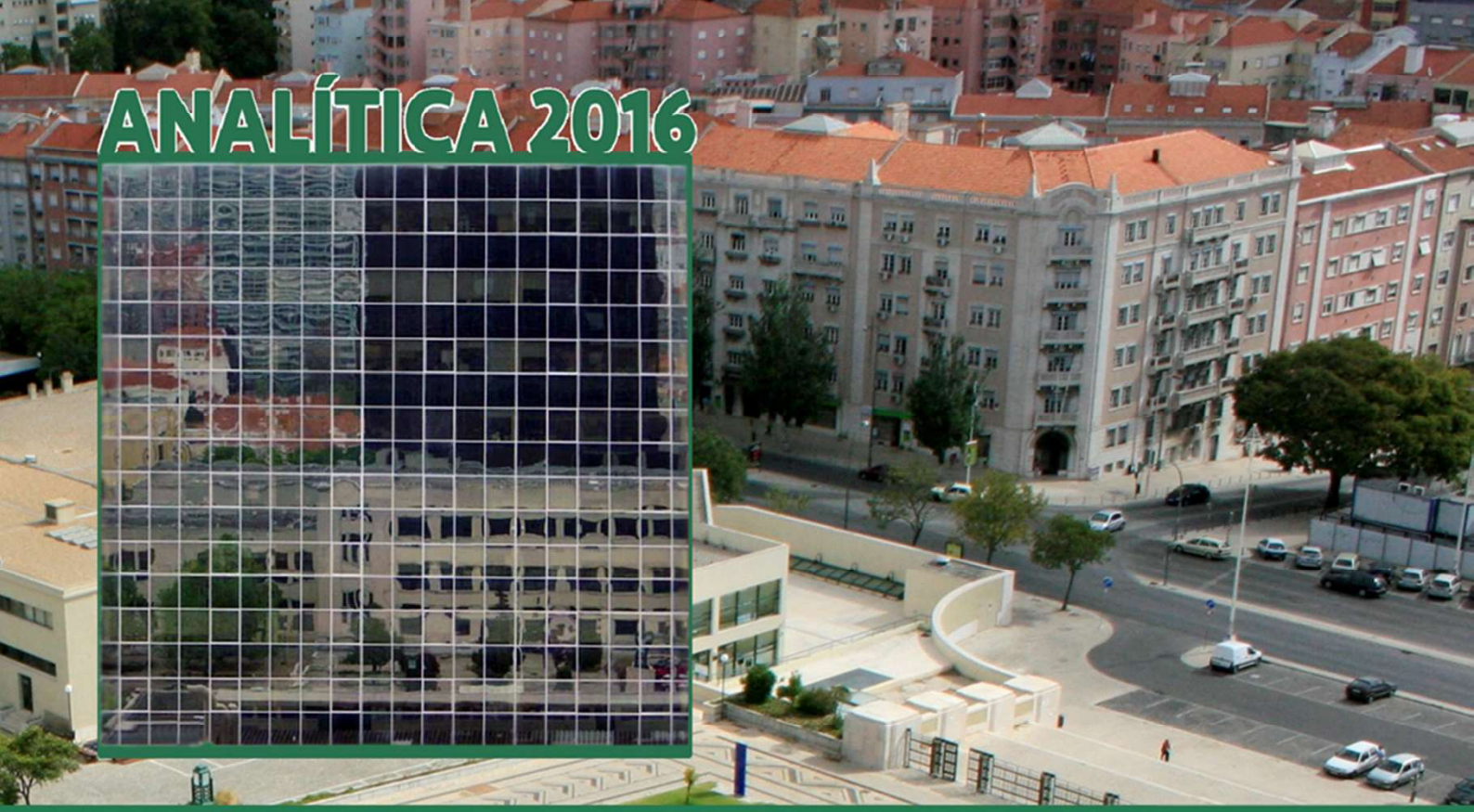

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NEW WET AND DRY ANALYTICAL METHODOLOGIES FOR COFFEE ANALYSIS

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Some recently developed wet and dry analytical methodologies will be presented, covering raw coffee characterization, roasted coffee blends assessment and the quantification of coffee compounds with direct/indirect organoleptic impact during both the roasting process and in the final product.

The developed wet analytical methodologies were based on low pressure flow systems featuring on-line sample preparation strategies. In this context, the exploitation of low pressure chromatographic flow systems [1,2] and the development of a novel automatic solid liquid extraction chamber [3] will be illustrated. The analytical strategies developed for the coffee compounds selected as case studies, besides being good alternatives to the existing methodologies, present as main advantage their general purpose potentiality to be used for other matrices.

The developed dry methodologies were based on near-infrared spectroscopy and chemometrics. The exploitation of these techniques is particularly attractive for coffee companies, due to their main virtues namely no sample preparation, low cost analysis, easy set-up and, easy handling. The case studies selected in this context were the quantification of green coffee beans defects within a coffee batch [4]; the in-line monitoring during the roasting process, of titratable acidity [5] and sucrose content [6] and; the authenticity evaluation of roasted coffee blends [7].

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