

**DEVELOPMENTS IN THE PREPARATION OF A BRAZILIAN REFERENCE
MATERIAL: *Perna perna* MUSSEL**

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Reference materials are important tools in the quality assurance of analytical results as they may be used in method validation, calibration of instruments and in the realization of the traceability of analytical results to stated references. This study aims to be a contribution to metrology in chemistry in Brazil and describes the preparation of a mussel reference material using the *Perna perna* species. This mussel species is abundant in most part of the Brazilian seashore and is currently being used in biomonitoring studies in our laboratory. It also has economical importance due to its growing cultivation in aquaculture farms for human consumption. In a previous communication, various aspects of the preparation of the mussel reference material such as sampling, sample pretreatments and freeze-drying were described. In the present paper further developments are presented, comprising grinding and sieving, homogenization and gamma ray sterilization. Physical and chemical characterization following internationally agreed recommendations are being performed, with emphasis on the assessment of the stability of the material, its homogeneity status and the layout for certified values assignment via an interlaboratorial measurement program. Preliminary results for the concentration of elements such as As, Br, Co, Cr, Fe, K, Na, Se and Zn determined by instrumental neutron activation analysis and Cd, Hg and Pb determined by atomic absorption spectrometry, are also presented with corresponding measurement uncertainties.