

## Evaluation of Zein Extraction from Full Maize or Endosperm Using Different Solvents

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The zeins, maize storage proteins, have attracted great interest both in studies on the nutritional aspect as on the technological aspect. They constitute an important source of protein in the human diet, since they are about 80% protein corn. The aim of this study was to determine the protein content of samples containing zein extracted from whole corn grain or endosperm milled to verify the efficiency of protein extraction method. Zein extraction was realized with ethanol 70% or isopropanol 55% in defatted and non-degreased samples, according to the protocol described by Forato et al (2008) with modifications. The endosperm and whole grain obtained were ground using a hammer mill, sieved with a sieve of 2 mm mesh and stored at -80°C. After extraction, the samples were frozen and then lyophilised. The analysis for nitrogen determination was performed using the method described by Dumas (1831). Zein extracted from the defatted endosperm by 55% isopropanol was the highest protein content (75.25% of the extracted sample) and zein extracted from defatted milled grain by 55% isopropanol that had lower content (32.14%). These values are lower than expected and therefore changes in extraction methodology should be made to increase the yield of zein extraction.

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