

## 3 種 ELISA 法の米粉中の小麦グルテン分析の妥当性評価

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## Inter-laboratory evaluation of three ELISA Methods for gluten in rice flour

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## Abstract

Three kinds of ELISA kits for wheat protein were evaluated by a collaborative inter-laboratory trial conducted between ten participating Japanese laboratories to determine their effectiveness for quantifying wheat gluten levels in rice flour. Samples of rice flour were prepared with wheat gluten levels set at 0 g/g, 1.0 µg/g, 2.0 µg/g, 3.0 µg/g, and 5.0 µg/g. The samples underwent preliminary validation at three laboratories prior to the inter-laboratory evaluation. A replicate analysis of the samples was performed at each of the 10 laboratories. Each of the three ELISA kits showed sufficient RSD<sub>R</sub> values (6.8-18.0%) and demonstrated high recoveries (83-100%). The RSD<sub>T</sub> values for the results of all samples measured were less than 5.8. Results from this study suggest that all three ELISA kits can be applied as precise and reliable tools for the determination of wheat gluten levels in rice flour.

Keywords : 米粉、小麦グルテン、グルテンフリー、酵素免疫測定法、妥当性評価  
rice powder, wheat gluten, gluten-free, ELISA, Inter-laboratory evaluation

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