Responses to Sierra Rayne's Comments on “Optimization of Alkylresorcinols Extraction from Triticale Bran Using Response Surface Methodology [Agil et al. (2012), Food and Bioprocess Technology, 5(7), 2655–2664]”

Farah Hosseinian

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Dear editor,

Please see our responses as follows for the emailed comments:

1. FTIR gave us several lines since we had to run different samples with different concentrations to optimize in the range of relevant standards.
2. The software provided all lines in colour and were very narrow. Then, we selected the graphs of interests to be extracted from the instrument and applied them to PowerPoint, only the colour and thickness of the lines were changed. This is a very common way for any publication (e.g. presentation of GC or HPLC chromatograms) and does not mean that the data was manipulated. It was done simply to present the data more clearly for readers.

Factors that affected alkylresorcinols spectra between 3000 and 2900:

- Solvent, time of extraction, presence of moisture, purity of sample (e.g. we run alkylresorcinols (ARs) extracts) and nature of alkylresorcinol molecules.
- ARs have a long alkyl tail (e.g. from C13:0 to C27:0) that can create a shift of the FTIR spectra such that it is slightly below 3000. ARs are very unique compounds and are different from other compounds (e.g. phenolics) with only OH groups attached to the molecule or fatty acids containing carboxylic acid functional groups. Additionally, a small peak (shown in red by an arrow) is certainly indicative of an aromatic CH group in ARs and it is small due to the long alkyl chain tail in the ARs molecule (Fig. 6).

3. Our HPLC data was the main foundation of our results on alkylresorcinols for this publication; the results obtained by HPLC were accurate and reliable enough to stand alone in a publication without FTIR. Thus, FTIR was only included as complementary data not to be mistaken for as our principal results.
4. In the end, we are very pleased with and confident in our results. Please accept our apology if the line appeared discontinuous.

Fig. 6 FTIR spectra of **a** alkylresorcinol standard (C21:0) **b** and alkylresorcinols extracted with acetone from triticale bran

F. Hosseinian (✉)
Food Science and Nutrition, Department of Chemistry,
Carleton University, Ottawa, Canada
e-mail: farah_hosseinian@carleton.ca