**Response to Reviewers**

**Alterations that have been made in the first version of the Manuscript ID (554-3761-1) entitled " Application of solvent retention capacity tests coupled with multivariate data analysis for relationship estimation and predictive modeling of wheat milling streams rheological parameter "**

Authors of the Manuscript discussed the Referee's comments and suggestions and agreed to accept the most of them and to try to make the necessary changes in the text. The alterations are outlined below.

**Reviewer**

**Referee's comment 1 –** concerning language polishing. Authors accepted the suggestion, long sentences are rewritten into simplified forms.

**Referee's comment 2 –** concerning rewriting the title. Authors see referee’s point and accept to rewrite the manuscript title into the simpler form “*Application of solvent retention capacity tests for the prediction of rheological parameters of wheat flour mill streams*”.

**Referee's comment 3 –** concerning the description of wheat milling process in more detail. Authors accept comment and in manuscript add the description of wheat flour mill streams and steps from which they originate. Also, the authors present a simplified mill flow diagram and improve consistency in term usage.

**Referee's comment 4 –** concerning lines 310-211 and term usage consistency. All necessary alterations are made through the revised manuscript.

**Referee's comment 5 –** concerning the presentation of the rheological parameters. The authors tried to minimize space in the manuscript and make it more readable. Now authors believe that it is best to provide input data of all rheological and SRC measurements in a supplementary file. In which data is formatted in accordance with ICC recommendation.

**Referee's comment 6 -** concerning term on Line 56. Authors accept and opt to use term polymers.

**Referee's comment 7 –** concerning statement in line 59. The authors deleted statement as indeed it is an overstatement.

**Referee's comment 8 -** concerning Lines 216-217. The authors initiated a complete check of the results and concluded that one typing error in raw results produced ANOVA results with no statistical significance. The error was corrected and corrected results are presented in Figure 2. accompanied by a new discussion in the manuscript text.

**Referee's comment 9 -** concerning Lines 278-280 and 289-290. Authors accept comment and withdraw from making the hypothesis. Lines are rewritten in accordance with the presented results.

**Referee's comment 10 -** concerningLines 290-292. The authors realize confusion originated from unsuitable term placement, hence authors did the corresponding correction.

**Referee's comment 11 -** concerning Lines 306-309. From the present study, the Authors cannot elaborate in more detail this finding and choose to not to make hypotheses about causes of the observed relationships but provide further evidence in the form of similar study which reported a negative correlation between wheat flour mill streams. Lindgren, A., & Simsek, S. (2016). Evaluation of Hard Red Spring Wheat Mill Stream Fractions Using Solvent Retention Capacity Test. *Journal of Food Processing and Preservation*, 40(2), 131-139.

**Referee's comment 12 –** concerning on Partial Least Squares Regression. To test the model's ability to predict new data that was not used in estimating it, full leave-one-out cross-validation (LOOCV) was performed.

The procedure represents, a particular case of leave-p-out cross-validation with p = 1 used in our study. To reduce variability, multiple rounds of cross-validation ware performed using different leave-out samples.

Results are presented as average values of all rounds of cross-validation. With cross-validation, a statistic on the left-out sample the deviations of the model are presented as the prediction residual error sum of squares (PRESS) and Root Mean Squared Error of Prediction (RMSEP) and predicted response values are returned (r2pred).

The procedure was performed in an environment for statistical computing in accordance with the package "pls". For comparison with more familiar software solutions, this is the same validation procedure used by Design-Expert software in Response Surface Methodology.

In Figures 5. - 7. the standardize regression coefficients from PLS regression analysis were plotted. Standardize regression coefficients help to identify and rank the important X-variables in relationship with a given Y-variable and learn about PLSR model.

One should not strain to make PLSR like multiple linear regression and present direct equation from X’s to the Y’s using ynew = xnewβ despite its popularity. MLR achieves maximum correlation between X and Y, while PLSR maximize covariance between X and Y with addition of weights W to maintain orthogonal scores and reduce multicollinearity. Hence regression coefficient of PLSR in their’s standardize form cannot be used for direct prediction. From its nature as a latent, regression method, regression of latent, instead of the original variables, create difficulty in the model presentation. As such, presentation of all PLSR components is then not a straightforward exercise, and would require substantial space in manuscript and would not be easy to recalculate without computer aid. Hence, the authors believe it is better to provide input data of rheological and SRC measurement in a supplementary file. With the procedure described in the manuscript, one should be able to relatively easily recreate PLSR models and assess their behavior on their own.

**Referee's comment 13 –** concerning conclusions. The authors rewrote this section of the manuscript.

**Referee's comment 14 –** concerning references. Authors added more papers into discussion