



IEH
Laboratories &
Consulting Group

February 14, 2020

Mr. Andy Liu
President
Decafino, Inc.
Mobile: (765) 586.0216
andy@decafino.com

Re: Caffeine Removal Pouches – Food Additive Assessment and Performance and Efficacy Study

Dear Mr. Liu:

The final report for the caffeine performance and efficiency study is attached. The Decafino product removes caffeine from both coffee and tea. The longer the product is in contact with the beverage, the more effective it is in removing caffeine. Considering that most usages will be with the dunking method improvements on getting more coffee in contact with the Decafino product faster will improve on the performance of the dunking method.

The previously supplied Food Additive Assessment report is attached as Appendix B.

If there are questions, please call upon us.

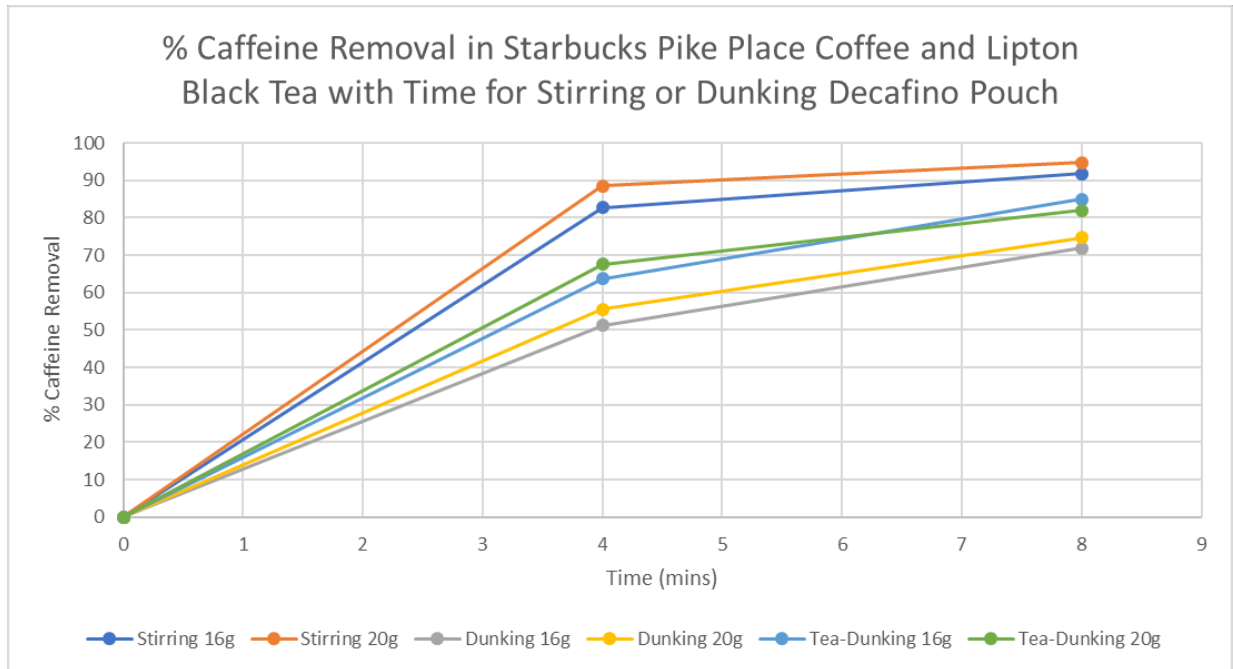
Thank you.

Sincerely,

John W. Larkin
VP, Food Process Engineering and Food Defense

Attachments

Figure 3.



6. CONCLUSIONS

- The maximum amount of caffeine removed was for the stirring method (8 minutes of contact time), where the Decafino product came in direct contact with more of the coffee in a shorter period of time.
- The stirring method removed more caffeine and was faster than the other two methods used.
- For the dunking method a higher amount of caffeine is likely to be removed if the pouch is agitated for a full 4 minutes. More agitation will reduce the boundary effect for binding of the caffeine and allow more coffee to come in contact with the Decafino product.
- Based on both the stirring and dunking methods, the 16g pouch was almost as effective as the 20g pouch. The cost of adding 4 additional grams of product does not appear to significantly improve the results of caffeine removal.