

# Developing integrated saliva sampling into lateral flow test

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## INTRODUCTION

Olo Health is developing testosterone lateral flow test and it uses saliva samples. Goal was to integrate sample collecting into the cassette.

Sample strip material was tested and sample flow to sample well was improved by making surface less hydrophobic.

## MATERIALS & METHODS

### Sample strip

Polyvinyl alcohol membrane

- Compressed to reduce pull resistance
- Functionality tested

### Surface washing

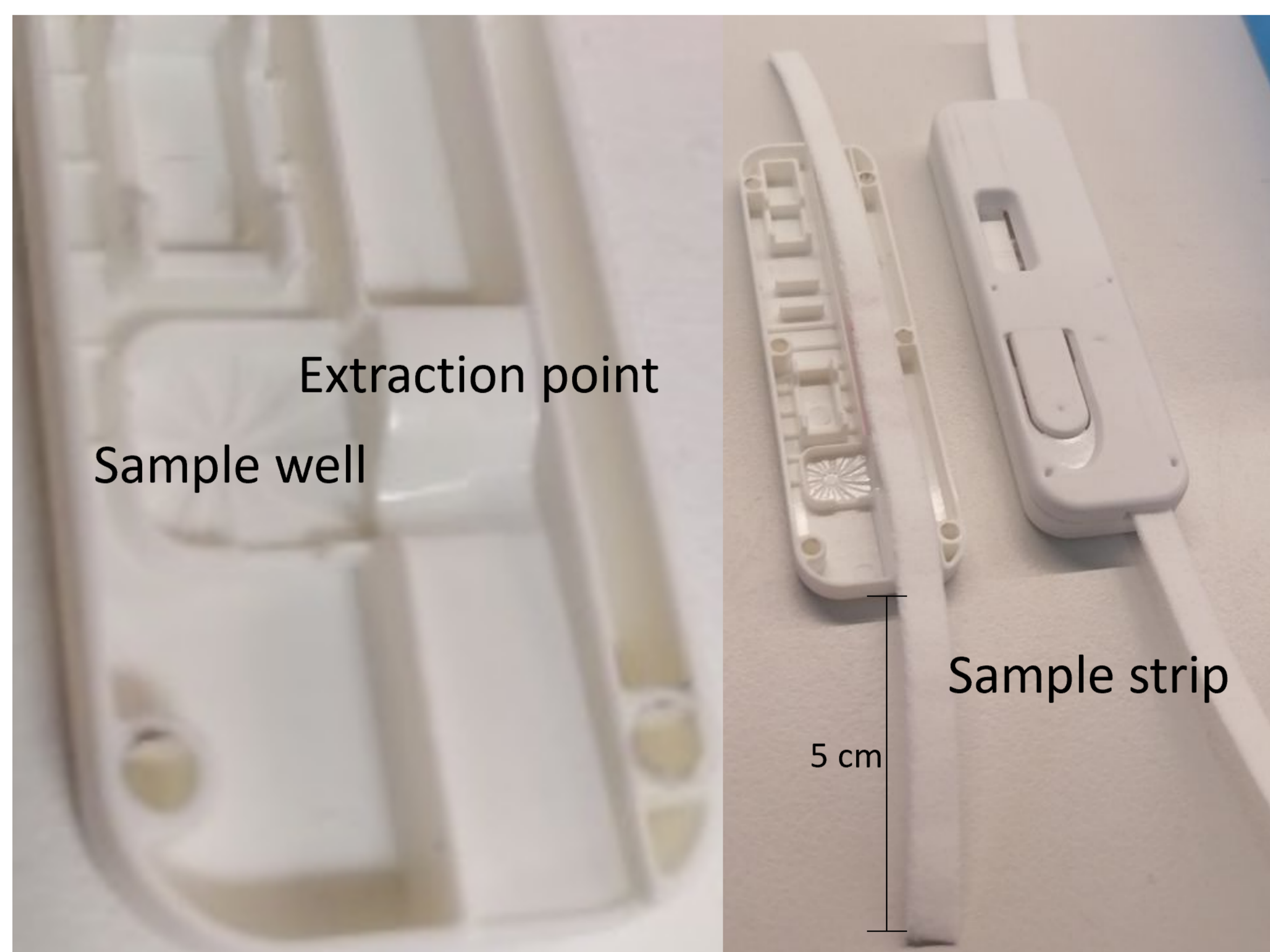
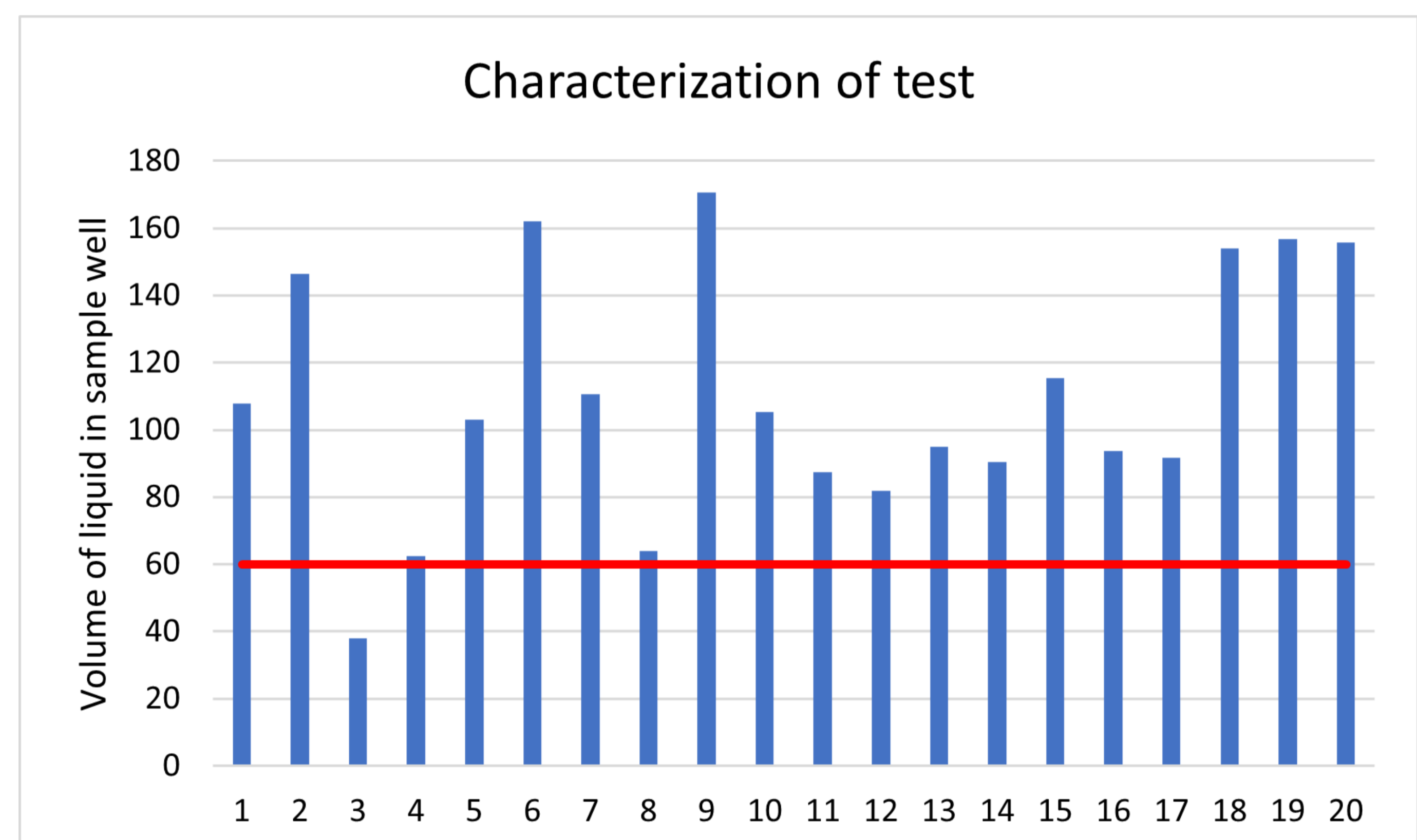
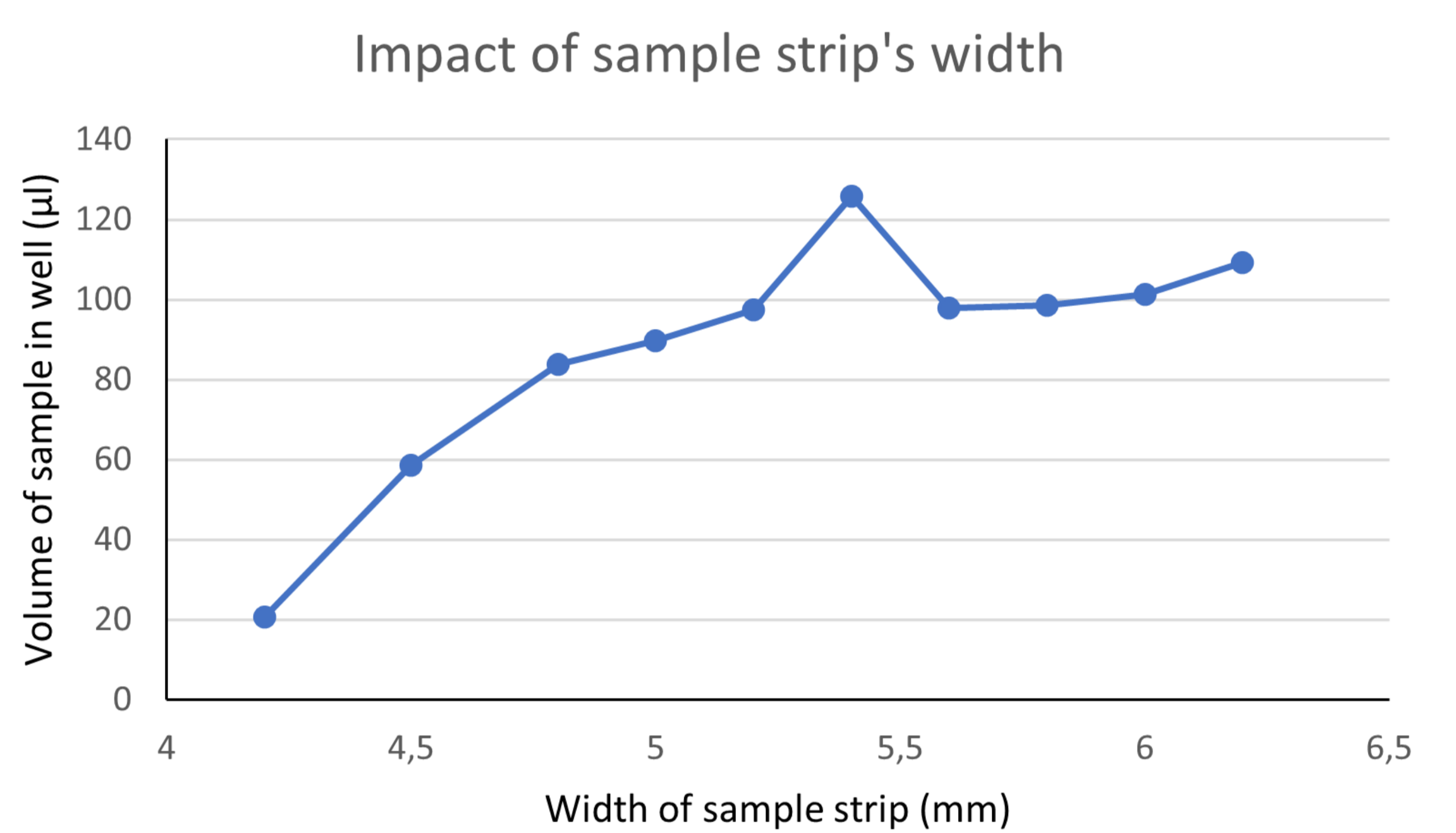
Detergent

- Reduces hydrophobicity
- Non-toxic to user

## RESULTS

Test strips length was tested by multiple different lengths and 5 cm piece that goes to mouth was good size. Longer were uncomfortable and smaller extracted less sample.

Surface washing with detergent made the liquid flow more consistent.



## CONCLUSION

Detergent washing procedure was effective and can be used to improve flow consistency with 95 % success rate is showing that. Effects of sample strip width was characterized and optimized. Next there will be new generation of cassette. Aim is to eliminate failure factors such as sample flowing overboard from sample well and effect of pressing the top part of the cassette on extraction point.