

## Topics:

- WERF Study Revisited
- Grease Separator Retention Losses
- A New FOG Test Method Evaluated

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Conclusions:

Detergent Flows Remove Retained Grease from Separators

Spectrophotometer Method = EPA 1664  
Accuracy

# Why Does This Happen?

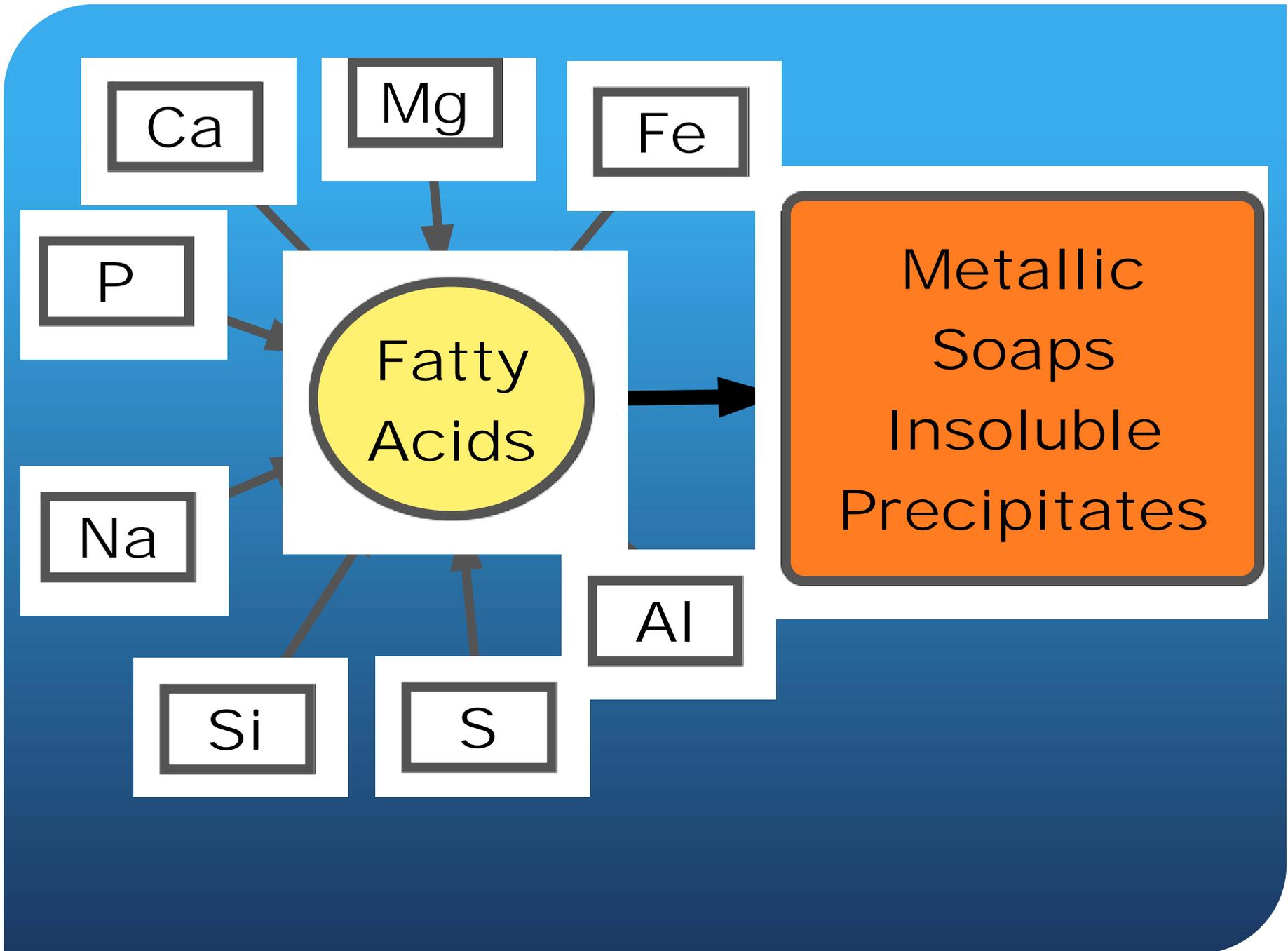


# WERF Study 2008

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Ca

Mg

Fe

P

Fatty  
Acids

Na

Al

Si

S

Metallic  
Soaps  
Insoluble  
Precipitates

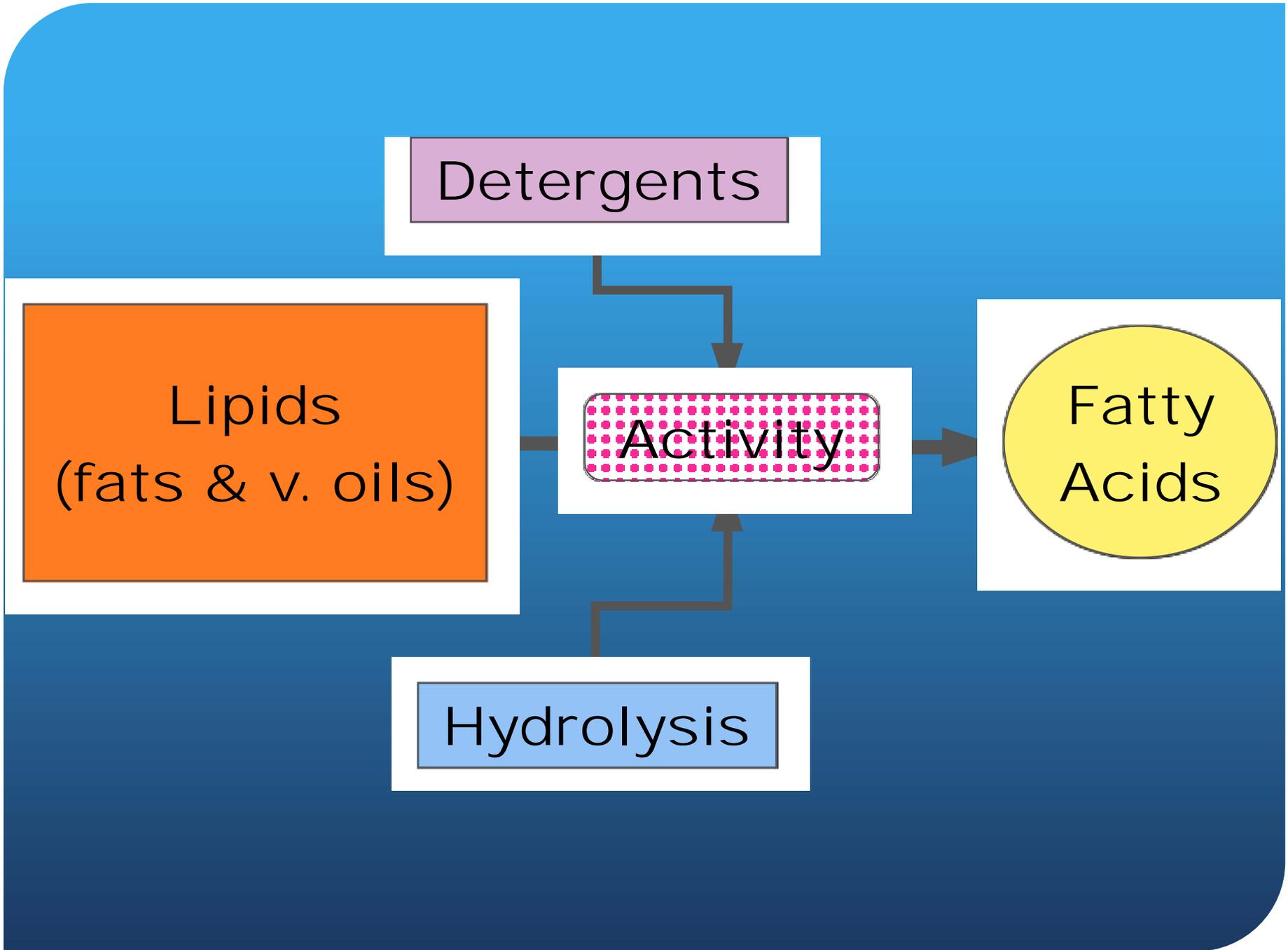
Detergents

Lipids  
(fats & v. oils)

Activity

Fatty  
Acids

Hydrolysis



# Fast Assessment FOG Test

below.



# Accuracy Assessment

Known Standard (ppm)	Wilks Analyzer (ppm)	Difference to Known
7.8125	3.8	51%
15.625	8.5	46%
31.25	30.8	1%
62.5	57.6	8%
125	120.3	4%
250	242.6	3%
500	475.5	5%
750	739.3	1%
1000	1022.2	-2%
1500	1510.2	-1%
2000	1953.1	2%

## Known Concentrations vs Wilks Analysis

Chart Area

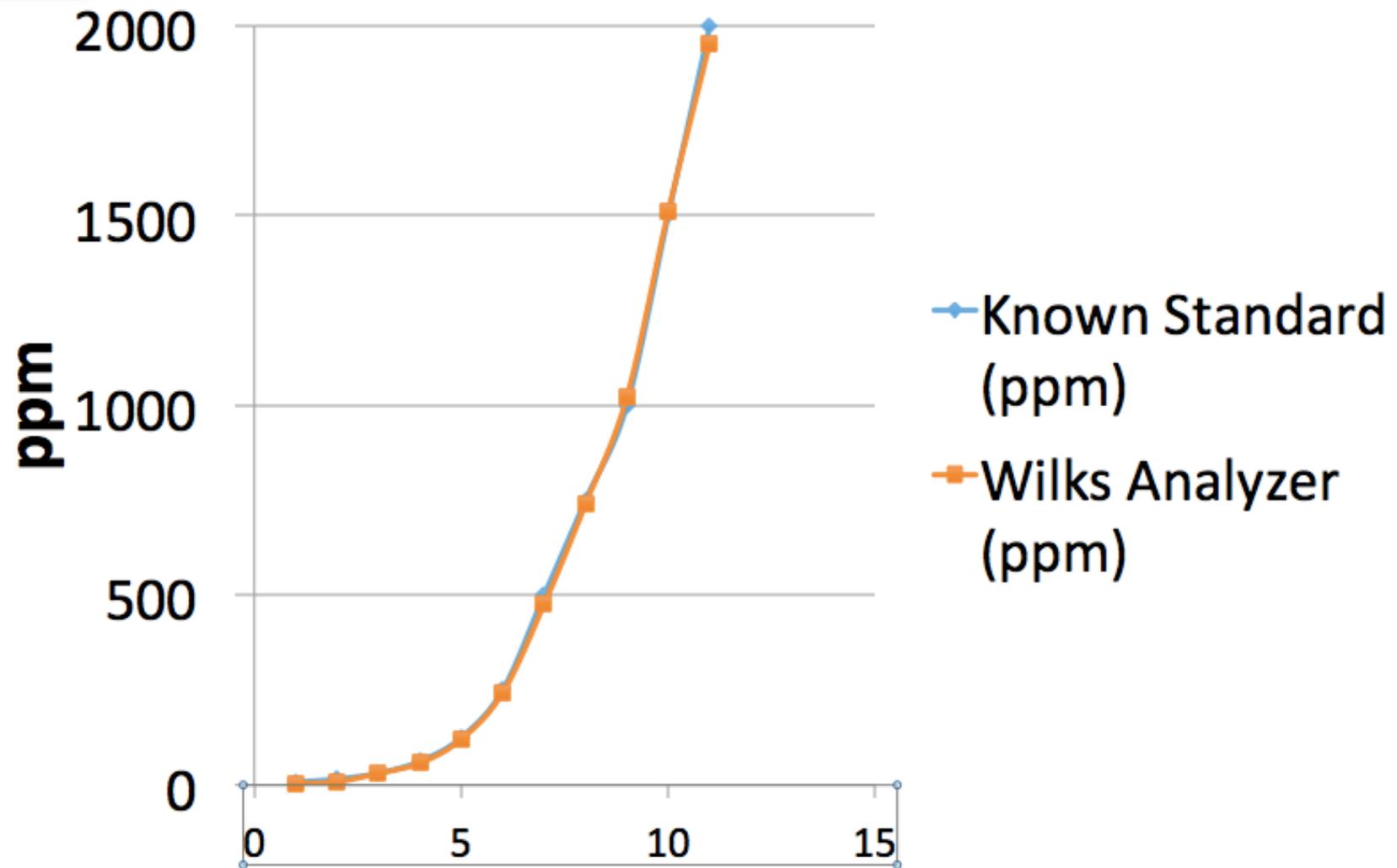
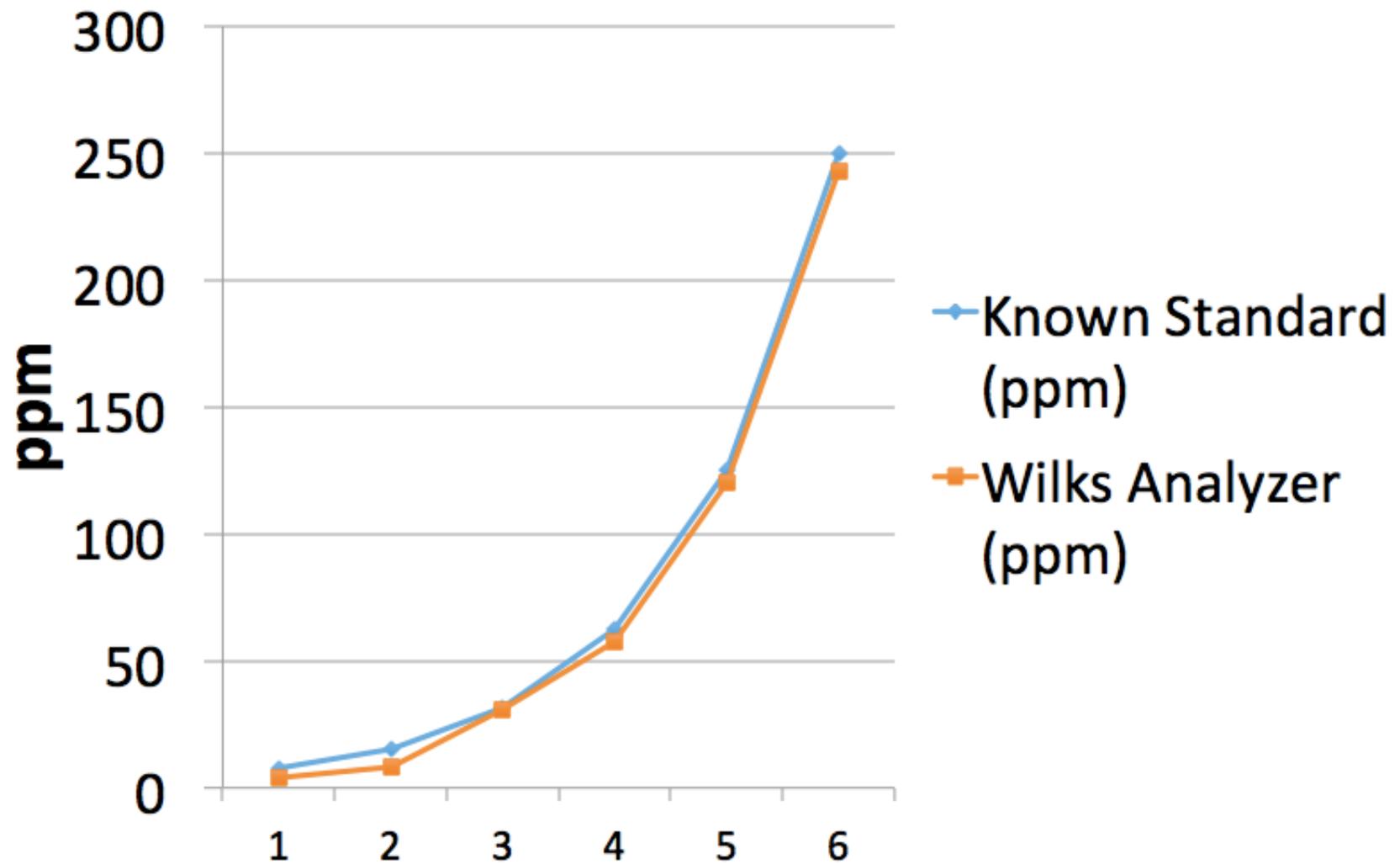


Chart Area

## Known Concentration vs Wilks Analysis



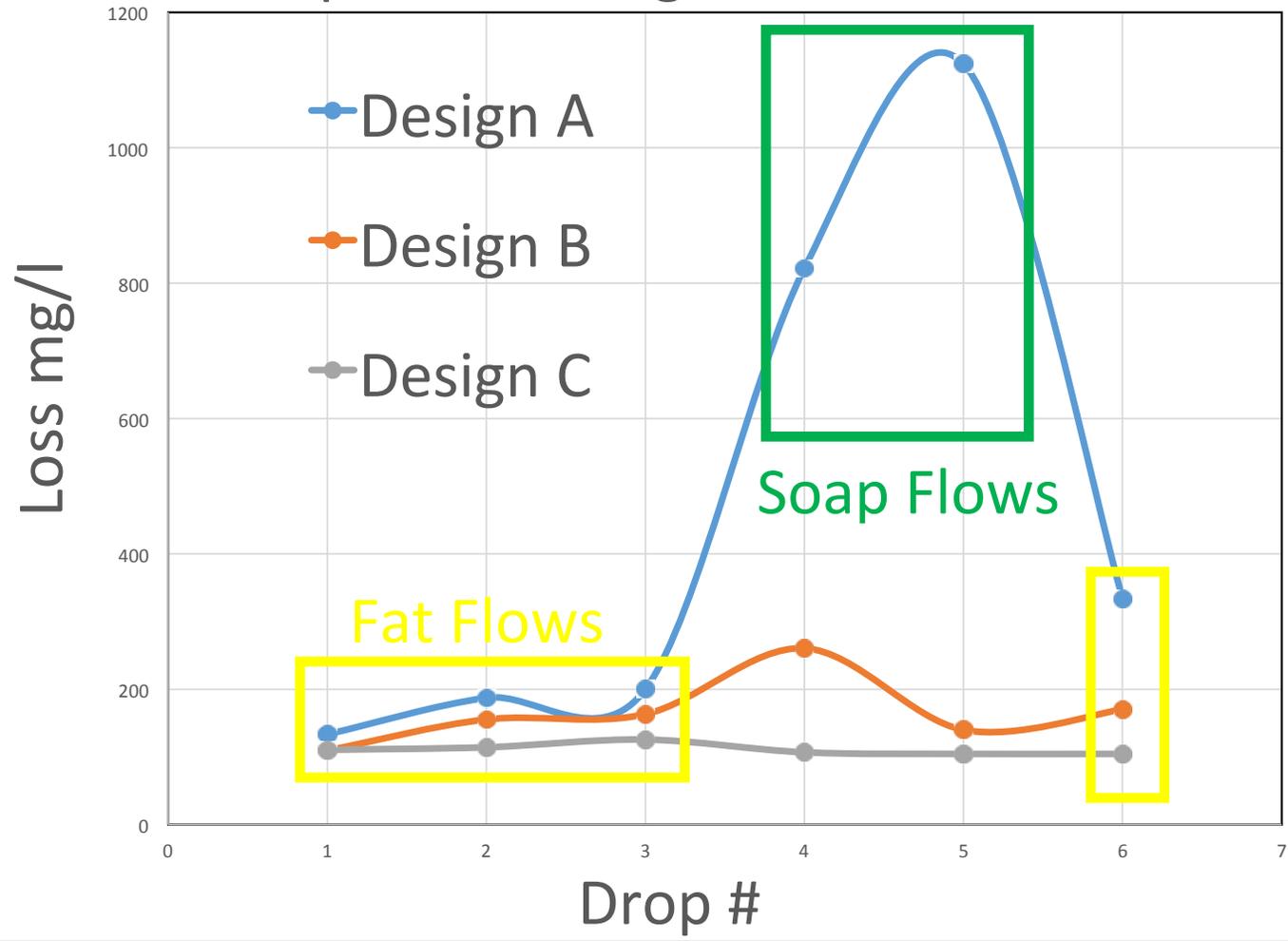
# Emulsion Retention Loss Test



# Effluent Sampling Methodology



## Separator Design vs Emulsion Losses



## Conclusions:

Detergent Flows Remove Retained Grease from Separators Via Emulsification

Spectrophotometer Method Accuracy  
= / > EPA 1664 Gravimetric Method

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