Topics:
• WERF Study Revisited
• Grease Separator Retention Losses
• A New FOG Test Method Evaluated
Conclusions:
Detergent Flows Remove Retained Grease from Separators

Spectrophotometer Method = EPA 1664
Accuracy
Why Does This Happen?
WERF Study 2008

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Metallic Soaps
Insoluble Precipitates

Fatty Acids

Ca  Mg  Fe
P  Na  Al
Si  S
Activity

Lipids (fats & v. oils) → Activity → Hydrolysis → Fatty Acids

Detergents
Fast Assessment FOG Test
## Accuracy Assessment

<table>
<thead>
<tr>
<th>Known Standard (ppm)</th>
<th>Wilks Analyzer (ppm)</th>
<th>Difference to Known</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.8125</td>
<td>3.8</td>
<td>51%</td>
</tr>
<tr>
<td>15.625</td>
<td>8.5</td>
<td>46%</td>
</tr>
<tr>
<td>31.25</td>
<td>30.8</td>
<td>1%</td>
</tr>
<tr>
<td>62.5</td>
<td>57.6</td>
<td>8%</td>
</tr>
<tr>
<td>125</td>
<td>120.3</td>
<td>4%</td>
</tr>
<tr>
<td>250</td>
<td>242.6</td>
<td>3%</td>
</tr>
<tr>
<td>500</td>
<td>475.5</td>
<td>5%</td>
</tr>
<tr>
<td>750</td>
<td>739.3</td>
<td>1%</td>
</tr>
<tr>
<td>1000</td>
<td>1022.2</td>
<td>-2%</td>
</tr>
<tr>
<td>1500</td>
<td>1510.2</td>
<td>-1%</td>
</tr>
<tr>
<td>2000</td>
<td>1953.1</td>
<td>2%</td>
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</table>
Emulsion Retention Loss Test
Effluent Sampling Methodology
Conclusions:
Detergent Flows Remove Retained Grease from Separators Via Emulsification

Spectrophotometer Method Accuracy
=/> EPA 1664 Gravimetric Method
For Report Info and Links:
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