Engineering Kraft Fibers

Profiling Acid Groups and Carbonyl Groups in Commercial Pulps
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Results - Acid Group Content

Differing mill pulps company A, etc.
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Results - Acid Group Content

![Bar Chart](chart.png)
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Results - Acid Group Content
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Carbonyl Content in Kraft Pulps
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Background - Carbonyl Groups
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Results - Oxycellulose Content

![Graph showing oxycellulose content for Kraft-A and Kraft-B fibers]
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Results - Oxycellulose Content
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Results - Oxycellulose Role of Heating

<table>
<thead>
<tr>
<th>Pulp</th>
<th>[Acid]</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK</td>
<td>0.049</td>
</tr>
<tr>
<td>1h 50C</td>
<td>0.048</td>
</tr>
<tr>
<td>1h 100C</td>
<td>0.045</td>
</tr>
<tr>
<td>1h 150 C</td>
<td>0.027</td>
</tr>
</tbody>
</table>

meq/gr od pulp
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Conclusions - Acid/Carbonyl Studies

• [Acid group] typically ranged 0.018 - 0.032 meq/g of pulp
  – Opportunity to product differentiate pulps

• Cu # had greater variation 0.05 - 0.50
  – Opportunity to improve pulp properties.