## CÁLCULO COEFICIENTE DE CONSOLIDACIÓN

<table>
<thead>
<tr>
<th>Muestra 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectura del dial a: 0,5 kg/cm²</td>
</tr>
<tr>
<td>0,10</td>
</tr>
<tr>
<td>0,50</td>
</tr>
<tr>
<td>0,71</td>
</tr>
<tr>
<td>1,00</td>
</tr>
<tr>
<td>1,41</td>
</tr>
<tr>
<td>2,00</td>
</tr>
<tr>
<td>2,83</td>
</tr>
<tr>
<td>3,87</td>
</tr>
<tr>
<td>5,48</td>
</tr>
<tr>
<td>7,75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Log (t)</th>
<th>t (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d₀₉₀ = 0,50 mm</td>
<td></td>
</tr>
<tr>
<td>t₉₀ = 4,60 minutos</td>
<td></td>
</tr>
</tbody>
</table>

| Lectura del dial a: 1,0 kg/cm² | Raíz (t) | Deformación (mm) |
| 0,10      | 0,741    |
| 0,50      | 0,752    |
| 0,71      | 0,764    |
| 1,00      | 0,779    |
| 1,41      | 0,80     |
| 2,00      | 0,828    |
| 2,83      | 0,866    |
| 3,87      | 0,91     |
| 5,48      | 0,966    |
| 7,75      | 1,017    |

<table>
<thead>
<tr>
<th>Log (t)</th>
<th>t (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d₀₉₀ = 0,97 mm</td>
<td></td>
</tr>
<tr>
<td>t₉₀ = 5,70 minutos</td>
<td></td>
</tr>
</tbody>
</table>

| Lectura del dial a: 2,0 kg/cm² | Raíz (t) | Deformación (mm) |
| 0,10      | 1,149    |
| 0,50      | 1,17     |
| 0,71      | 1,199    |
| 1,00      | 1,215    |
| 1,41      | 1,252    |
| 2,00      | 1,302    |
| 2,83      | 1,368    |
| 3,87      | 1,448    |
| 5,48      | 1,549    |
| 7,75      | 1,637    |

<table>
<thead>
<tr>
<th>Log (t)</th>
<th>t (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d₀₉₀ = 1,60 mm</td>
<td></td>
</tr>
<tr>
<td>t₉₀ = 6,60 minutos</td>
<td></td>
</tr>
</tbody>
</table>

| d₀₉₀ = 0,50 mm |
| t₉₀ = 4,60 minutos |
| Cv₀₉₀ = 7,4053 mm²/min |

| d₀₉₀ = 0,97 mm |
| t₉₀ = 5,70 minutos |
| Cv₀₉₀ = 5,9762 mm²/min |

| d₀₉₀ = 1,60 mm |
| t₉₀ = 6,60 minutos |
| Cv₀₉₀ = 5,1613 mm²/min |
### Lectura del dial a: 4,0 kg/cm²

<table>
<thead>
<tr>
<th>Raíz (t)</th>
<th>Deformación (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,10</td>
<td>1,835</td>
</tr>
<tr>
<td>0,50</td>
<td>1,864</td>
</tr>
<tr>
<td>0,71</td>
<td>1,88</td>
</tr>
<tr>
<td>1,00</td>
<td>1,931</td>
</tr>
<tr>
<td>1,41</td>
<td>1,987</td>
</tr>
<tr>
<td>2,00</td>
<td>2,067</td>
</tr>
<tr>
<td>2,83</td>
<td>2,176</td>
</tr>
<tr>
<td>3,87</td>
<td>2,31</td>
</tr>
<tr>
<td>5,48</td>
<td>2,487</td>
</tr>
<tr>
<td>7,75</td>
<td>2,647</td>
</tr>
<tr>
<td>10,95</td>
<td>2,74</td>
</tr>
</tbody>
</table>

### Lectura del dial a: 8,0 kg/cm²

<table>
<thead>
<tr>
<th>Raíz (t)</th>
<th>Deformación (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,10</td>
<td>2,904</td>
</tr>
<tr>
<td>0,50</td>
<td>2,233</td>
</tr>
<tr>
<td>0,71</td>
<td>2,269</td>
</tr>
<tr>
<td>1,00</td>
<td>2,315</td>
</tr>
<tr>
<td>1,41</td>
<td>2,386</td>
</tr>
<tr>
<td>2,00</td>
<td>2,491</td>
</tr>
<tr>
<td>2,83</td>
<td>2,639</td>
</tr>
<tr>
<td>3,87</td>
<td>2,822</td>
</tr>
<tr>
<td>5,48</td>
<td>3,071</td>
</tr>
<tr>
<td>7,75</td>
<td>3,299</td>
</tr>
</tbody>
</table>

### Lectura del dial a: 16,0 kg/cm²

<table>
<thead>
<tr>
<th>Raíz (t)</th>
<th>Deformación (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,10</td>
<td>4,154</td>
</tr>
<tr>
<td>0,50</td>
<td>4,187</td>
</tr>
<tr>
<td>0,71</td>
<td>4,229</td>
</tr>
<tr>
<td>1,00</td>
<td>4,293</td>
</tr>
<tr>
<td>1,41</td>
<td>4,386</td>
</tr>
<tr>
<td>2,00</td>
<td>4,517</td>
</tr>
<tr>
<td>2,83</td>
<td>4,703</td>
</tr>
<tr>
<td>3,87</td>
<td>4,93</td>
</tr>
<tr>
<td>5,48</td>
<td>5,218</td>
</tr>
<tr>
<td>7,75</td>
<td>5,436</td>
</tr>
</tbody>
</table>

### Cálculo Coeficiente de Consolidación

- **$d_{90}$**: 2,61 mm
- **$t_{90}$**: 7,00 minutos

### Cálculo Coeficiente de Consolidación

- **$Cv_{90}$**: 4,8663 mm²/min

### Deformación VS $\sqrt{\text{Tiempo}}$ para 4,0 kg/cm²

### Deformación VS $\sqrt{\text{Tiempo}}$ para 8,0 kg/cm²

### Deformación VS $\sqrt{\text{Tiempo}}$ para 16,0 kg/cm²

### Cálculo Coeficiente de Consolidación

- **$Cv_{90}$**: 4,9875 mm²/min

<table>
<thead>
<tr>
<th>Log (t)</th>
<th>$t$ (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,84</td>
<td>mm</td>
</tr>
<tr>
<td>6,83</td>
<td>minutos</td>
</tr>
<tr>
<td>5,34</td>
<td>mm</td>
</tr>
<tr>
<td>6,63</td>
<td>minutos</td>
</tr>
</tbody>
</table>
Lectura del dial a: 32,0 kg/cm²

<table>
<thead>
<tr>
<th>Raíz (t)</th>
<th>Deformación (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,10</td>
<td>5,709</td>
</tr>
<tr>
<td>0,50</td>
<td>5,75</td>
</tr>
<tr>
<td>0,71</td>
<td>5,789</td>
</tr>
<tr>
<td>1,00</td>
<td>5,851</td>
</tr>
<tr>
<td>1,41</td>
<td>5,94</td>
</tr>
<tr>
<td>2,00</td>
<td>6,066</td>
</tr>
<tr>
<td>2,83</td>
<td>6,243</td>
</tr>
<tr>
<td>3,87</td>
<td>6,454</td>
</tr>
<tr>
<td>5,48</td>
<td>6,708</td>
</tr>
<tr>
<td>7,75</td>
<td>6,886</td>
</tr>
</tbody>
</table>

Deformación VS √TIEMPO para 32,0 kg/cm²

<table>
<thead>
<tr>
<th>Log (t)</th>
<th>t (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d₉₀</td>
<td>6,77 mm</td>
</tr>
<tr>
<td>b₉₀</td>
<td>6,15 minutos</td>
</tr>
</tbody>
</table>

CÁLCULO COEFICIENTE DE CONSOLIDACIÓN

| Cv₉₀   | 5,5389 mm²/min |