Suction Tube Cleaning and Cleaning Verification Study

3M Singapore with Singapore Hospital

Instruments and method of testing procedure

- Choose thirty (30) used suction tube instruments
- Test with cleaning process 1 and process 2
- Cleaning process 1:
  - Manual cleaning 2-5 minutes then process with wash disinfecter
- Cleaning process 2:
  - Manual cleaning till there are no debris on brush
  - Cleaning with ultrasonic cleaner, 10 minutes
  - Cleaning with wash-disinfector.
- All process with 3M Enzymatic cleaner
- Do the ATP test before and after for each instrument and record RLU reading
- Clean-Trace ATP are done by inserting swabs into lumen of hollow suction tubes

ATP result: Suction Tube before cleaning

ATP Result Suction Tube for cleaning process 2

ATP Result Suction Tube for cleaning process 2

Suction Tube result After cleaning

Paired T-Test and CI:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>StDev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning Process 1</td>
<td>30</td>
<td>74</td>
<td>93</td>
<td>32</td>
</tr>
<tr>
<td>Cleaning Process 2</td>
<td>30</td>
<td>2319</td>
<td>2100</td>
<td>542</td>
</tr>
<tr>
<td>Difference</td>
<td>30</td>
<td>-2258</td>
<td>2077</td>
<td>536</td>
</tr>
</tbody>
</table>

95% CI for mean difference: (-3408, -1107)
T-Test of mean difference = 0 (vs not = 0): T-Value = -4.21 P-Value = 0.001

Cleaning Process 2 Improved the cleaning efficacy!!!

Summaries

- ATP test is more objective and sensitive method than visual inspection. ATP tests measure the levels of organic soil and microbial contamination on the cleaned device.
- Suction Tube Cleaning Process is better with
  - Manual cleaning till there are no debris on brush
  - Cleaning with ultrasonic cleaner, 10 minutes
  - Cleaning with wash-disinfector.
- Education and staff competency is important