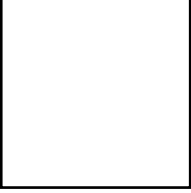



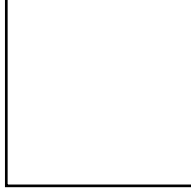
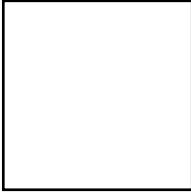






LAMPIRAN

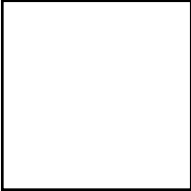





Tabel L 1.1 Kain Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kain Hasil Penyempurnaan Kain Keras |
|----------|---------------------------------------|--|
| Kanji | 0 |  |
| | 1 |  |
| | 3 |  |
| | 5 |  |
| | 7 |  |

Tabel L 1.1 Kain Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kain Hasil Penyempurnaan Kain Keras |
|----------|---------------------------------------|---|
| | 0 |  |
| | 1 |  |
| PVA | 3 |  |
| | 5 |  |
| | 7 |  |

Tabel L 1.1 Kain Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kain Hasil Penyempurnaan Kain Keras |
|----------------|---------------------------------------|--|
| Campuran (1:1) | 0 |  |
| | 1 |  |
| | 3 |  |
| | 5 |  |
| | 7 |  |
| Blanko | 0 |  |

Tabel L 1.2 Data Uji Ketebalan Kain Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Ketebalan (mm) | | | Rata-Rata |
|----------------|---------------------------------------|----------------|--------|--------|-----------|
| | | 1 | 2 | 3 | |
| Kanji | 0 | 0,0200 | 0,0205 | 0,0200 | 0,020 |
| | 1 | 0,0205 | 0,0200 | 0,0205 | 0,020 |
| | 3 | 0,0200 | 0,0220 | 0,0220 | 0,021 |
| | 5 | 0,0190 | 0,0190 | 0,0190 | 0,019 |
| | 7 | 0,0190 | 0,0190 | 0,0185 | 0,019 |
| PVA | 0 | 0,0190 | 0,0200 | 0,0215 | 0,020 |
| | 1 | 0,0200 | 0,0200 | 0,0205 | 0,020 |
| | 3 | 0,0220 | 0,0200 | 0,0210 | 0,021 |
| | 5 | 0,0200 | 0,0200 | 0,0200 | 0,020 |
| | 7 | 0,0200 | 0,0205 | 0,0200 | 0,020 |
| Campuran (1:1) | 0 | 0,0200 | 0,0210 | 0,0210 | 0,021 |
| | 1 | 0,0200 | 0,0210 | 0,0215 | 0,021 |
| | 3 | 0,0210 | 0,0210 | 0,0210 | 0,021 |
| | 5 | 0,0205 | 0,0205 | 0,0205 | 0,021 |
| | 7 | 0,0200 | 0,0215 | 0,0215 | 0,021 |
| Blanko | 0 | 0,0190 | 0,0180 | 0,0185 | 0,020 |

Tabel L 1.3 Data Gramasi Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Hasil Penimbangan (gr) | Gramasi (gr/m ²) |
|----------------|---------------------------------------|------------------------|------------------------------|
| Kanji | 0 | 1,130 | 113,00 |
| | 1 | 1,140 | 114,00 |
| | 3 | 1,180 | 118,00 |
| | 5 | 1,120 | 112,00 |
| | 7 | 1,120 | 112,00 |
| PVA | 0 | 1,090 | 109,00 |
| | 1 | 1,110 | 111,00 |
| | 3 | 1,120 | 112,00 |
| | 5 | 1,150 | 115,00 |
| | 7 | 1,170 | 117,00 |
| Campuran (1:1) | 0 | 1,140 | 114,00 |
| | 1 | 1,150 | 115,00 |
| | 3 | 1,170 | 117,00 |
| | 5 | 1,150 | 115,00 |
| | 7 | 1,190 | 119,00 |
| Blanko | 0 | 1,035 | 103,50 |

Tabel L 1.4 Data Kekakuan Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Sebelum Pencucian Berulang

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Sisi Kain | | | | Jumlah Rata - Rata | \bar{x} Panjang Lengkung | Kekakuan Lentur (mg cm) | Bending Modulus (kg/cm ²) |
|----------|---------------------------------------|-----------|-----------|------|------|------|--------------------|----------------------------|-------------------------|---------------------------------------|
| | | | A | B | C | D | | | | |
| Kanji | 0 | 1 | 5,35 | 5,00 | 5,45 | 5,35 | 5,29 | 2,73 | 230,23 | 336,85 |
| | | 2 | 5,85 | 5,70 | 5,25 | 5,35 | 5,54 | | | |
| | | 3 | 5,55 | 5,85 | 5,35 | 5,50 | 5,56 | | | |
| | 1 | 1 | 5,55 | 6,00 | 5,80 | 6,00 | 5,84 | 2,96 | 296,40 | 423,09 |
| | | 2 | 5,70 | 6,15 | 6,00 | 6,25 | 6,03 | | | |
| | | 3 | 6,00 | 6,00 | 5,85 | 5,80 | 5,91 | | | |
| | 3 | 1 | 6,25 | 6,25 | 6,00 | 5,80 | 6,08 | 3,15 | 368,82 | 455,85 |
| | | 2 | 6,50 | 6,55 | 6,10 | 6,70 | 6,46 | | | |
| | | 3 | 6,60 | 6,40 | 6,30 | 6,15 | 6,36 | | | |
| | 5 | 1 | 4,20 | 4,35 | 4,55 | 4,05 | 4,29 | 2,18 | 116,57 | 203,94 |
| | | 2 | 4,45 | 4,35 | 4,50 | 4,05 | 4,34 | | | |
| | | 3 | 4,40 | 4,55 | 4,55 | 4,40 | 4,48 | | | |
| | 7 | 1 | 4,20 | 4,30 | 4,30 | 4,10 | 4,23 | 2,15 | 111,96 | 201,12 |
| | | 2 | 4,40 | 4,10 | 4,30 | 4,30 | 4,28 | | | |
| | | 3 | 4,35 | 4,50 | 4,45 | 4,40 | 4,43 | | | |
| PVA | 0 | 1 | 5,00 | 5,35 | 4,40 | 5,00 | 4,94 | 2,44 | 158,67 | 232,15 |
| | | 2 | 5,00 | 5,15 | 4,45 | 5,00 | 4,90 | | | |
| | | 3 | 4,95 | 4,90 | 4,40 | 5,00 | 4,81 | | | |
| | 1 | 1 | 5,40 | 5,65 | 5,00 | 5,00 | 5,26 | 2,60 | 195,05 | 285,44 |
| | | 2 | 5,45 | 5,35 | 5,00 | 5,05 | 5,21 | | | |
| | | 3 | 5,30 | 5,20 | 5,00 | 5,00 | 5,13 | | | |
| | 3 | 1 | 5,80 | 5,50 | 5,45 | 5,45 | 5,55 | 2,74 | 229,24 | 297,04 |
| | | 2 | 5,80 | 5,50 | 5,60 | 5,35 | 5,56 | | | |
| | | 3 | 5,40 | 5,50 | 5,10 | 5,20 | 5,30 | | | |
| | 5 | 1 | 5,20 | 5,30 | 5,00 | 5,00 | 5,13 | 2,41 | 160,64 | 240,96 |
| | | 2 | 4,80 | 4,90 | 4,80 | 4,60 | 4,78 | | | |
| | | 3 | 4,55 | 4,60 | 4,60 | 4,45 | 4,55 | | | |
| | 7 | 1 | 4,85 | 4,80 | 4,70 | 4,80 | 4,79 | 2,29 | 139,66 | 204,34 |
| | | 2 | 4,20 | 4,50 | 4,45 | 4,55 | 4,43 | | | |
| | | 3 | 4,60 | 4,45 | 4,45 | 4,50 | 4,50 | | | |
| Campuran | 0 | 1 | 5,20 | 5,10 | 5,00 | 5,10 | 5,10 | 2,55 | 189,96 | 258,24 |
| | | 2 | 5,05 | 5,10 | 5,00 | 5,20 | 5,09 | | | |
| | | 3 | 5,25 | 5,00 | 5,15 | 5,15 | 5,14 | | | |
| | 1 | 1 | 5,70 | 5,60 | 5,50 | 5,60 | 5,60 | 2,77 | 245,19 | 325,40 |
| | | 2 | 5,40 | 5,35 | 5,50 | 5,60 | 5,46 | | | |
| | | 3 | 5,45 | 5,60 | 5,40 | 5,85 | 5,58 | | | |
| | 3 | 1 | 6,20 | 6,60 | 6,25 | 6,35 | 6,35 | 3,11 | 352,79 | 457,13 |
| | | 2 | 6,25 | 6,00 | 6,30 | 6,00 | 6,14 | | | |
| | | 3 | 6,30 | 6,30 | 6,10 | 6,05 | 6,19 | | | |
| | 5 | 1 | 4,75 | 4,55 | 4,50 | 4,65 | 4,61 | 2,28 | 135,78 | 189,13 |
| | | 2 | 4,70 | 4,40 | 4,75 | 4,60 | 4,61 | | | |
| | | 3 | 4,55 | 4,20 | 4,75 | 4,25 | 4,44 | | | |

Tabel L 1.4 Data Kekakuan Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Sebelum Pencucian Berulang (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Sisi Kain | | | | Jumlah Rata - Rata | \bar{x} Panjang Lengkung | Kekakuan Lentur (mg cm) | Bending Modulus (kg/cm ²) |
|----------|---------------------------------------|-----------|-----------|------|------|------|--------------------|----------------------------|-------------------------|---------------------------------------|
| | | | A | B | C | D | | | | |
| Campuran | 7 | 1 | 4,50 | 4,20 | 4,35 | 4,85 | 4,48 | 2,19 | 124,21 | 160,94 |
| | | 2 | 4,40 | 4,30 | 4,20 | 4,40 | 4,33 | | | |
| | | 3 | 4,15 | 4,30 | 4,25 | 4,55 | 4,31 | | | |
| Blanko | 0 | 1 | 2,55 | 2,4 | 2,5 | 2,35 | 2,45 | 1,21 | 18,26 | 34,61 |
| | | 2 | 2,4 | 2,4 | 2,5 | 2,5 | 2,45 | | | |
| | | 3 | 2,35 | 2,15 | 2,4 | 2,5 | 2,35 | | | |

Tabel L 1.5 Data Kekakuan Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Setelah Pencucian Berulang

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Sisi Kain | | | | Jumlah Rata - Rata | \bar{x} Panjang Lengkung | Kekakuan Lentur (mg cm) | Bending Modulus (kg/cm ²) | |
|----------|---------------------------------------|-----------|-----------|------|------|------|--------------------|----------------------------|-------------------------|---------------------------------------|-------|
| | | | A | B | C | D | | | | | |
| Kanji | 0 | 4 | 2,50 | 2,55 | 2,60 | 2,60 | 2,56 | 1,23 | 20,32 | 29,74 | |
| | | 5 | 2,70 | 2,55 | 2,60 | 2,50 | 2,59 | | | | |
| | | 6 | 2,45 | 2,35 | 2,55 | 1,50 | 2,21 | | | | |
| | 1 | 4 | 2,70 | 2,55 | 2,55 | 2,80 | 2,65 | 1,32 | 24,65 | 35,19 | |
| | | 5 | 2,60 | 2,65 | 2,55 | 2,65 | 2,61 | | | | |
| | | 6 | 2,70 | 2,55 | 2,65 | 2,65 | 2,64 | | | | |
| | 3 | 4 | 3,35 | 3,45 | 3,40 | 3,10 | 3,33 | 1,62 | 47,45 | 58,64 | |
| | | 5 | 3,10 | 3,35 | 3,20 | 3,05 | 3,18 | | | | |
| | | 6 | 3,20 | 3,10 | 3,60 | 3,05 | 3,24 | | | | |
| | 5 | 4 | 2,45 | 2,50 | 2,50 | 2,45 | 2,48 | 1,24 | 20,48 | 35,84 | |
| | | 5 | 2,45 | 2,45 | 2,45 | 2,50 | 2,46 | | | | |
| | | 6 | 2,50 | 2,35 | 2,70 | 2,50 | 2,51 | | | | |
| | 7 | 4 | 2,40 | 2,35 | 2,45 | 2,50 | 2,43 | 1,23 | 20,07 | 36,06 | |
| | | 5 | 2,50 | 2,40 | 2,55 | 2,50 | 2,49 | | | | |
| | | 6 | 2,50 | 2,35 | 2,50 | 2,60 | 2,49 | | | | |
| | PVA | 0 | 4 | 2,35 | 2,45 | 2,44 | 2,45 | 2,42 | 1,20 | 18,11 | 26,49 |
| | | | 5 | 2,35 | 2,40 | 2,35 | 2,35 | 2,36 | | | |
| | | | 6 | 2,45 | 2,40 | 2,30 | 2,40 | 2,39 | | | |
| 1 | | 4 | 2,55 | 2,45 | 2,45 | 2,30 | 2,44 | 1,21 | 18,99 | 27,79 | |
| | | 5 | 2,35 | 2,40 | 2,30 | 2,35 | 2,35 | | | | |
| | | 6 | 2,55 | 2,60 | 2,45 | 2,40 | 2,50 | | | | |
| 3 | | 4 | 2,65 | 2,50 | 2,55 | 2,70 | 2,60 | 1,30 | 23,73 | 30,75 | |
| | | 5 | 2,60 | 2,70 | 2,60 | 2,50 | 2,60 | | | | |
| | | 6 | 2,60 | 2,60 | 2,65 | 2,55 | 2,60 | | | | |
| 5 | | 4 | 2,45 | 2,40 | 2,50 | 2,50 | 2,46 | 1,23 | 20,06 | 30,08 | |
| | | 5 | 2,45 | 2,40 | 2,40 | 2,50 | 2,44 | | | | |

Tabel L 1.5 Data Kekakuan Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Setelah Pencucian Berulang (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Sisi Kain | | | | Jumlah Rata - Rata | \bar{x} Panjang Lengkung | Kekakuan Lentur (mg cm) | Bending Modulus (kg/cm ²) |
|----------|---------------------------------------|-----------|-----------|------|------|------|--------------------|----------------------------|-------------------------|---------------------------------------|
| | | | A | B | C | D | | | | |
| | 5 | 6 | 2,65 | 2,45 | 2,45 | 2,35 | 2,48 | 1,23 | 20,06 | 30,08 |
| | | 4 | 2,45 | 2,50 | 2,40 | 2,35 | 2,43 | | | |
| | 7 | 5 | 2,45 | 2,30 | 2,40 | 2,30 | 2,36 | 1,20 | 19,19 | 28,07 |
| | | 6 | 2,55 | 2,44 | 2,45 | 2,30 | 2,44 | | | |
| Campuran | 0 | 4 | 3,20 | 2,90 | 3,25 | 3,05 | 3,10 | 1,46 | 32,85 | 44,65 |
| | | 5 | 2,90 | 2,65 | 2,80 | 2,85 | 2,80 | | | |
| | | 6 | 2,90 | 2,70 | 3,10 | 2,80 | 2,88 | | | |
| | 1 | 4 | 2,90 | 3,00 | 3,10 | 3,50 | 3,13 | 1,52 | 36,98 | 49,08 |
| | | 5 | 3,00 | 2,7 | 3,05 | 2,85 | 2,90 | | | |
| | | 6 | 3,00 | 3,20 | 3,00 | 3,10 | 3,08 | | | |
| | 3 | 4 | 3,20 | 3,30 | 3,15 | 3,30 | 3,24 | 1,63 | 47,57 | 61,63 |
| | | 5 | 3,20 | 3,30 | 3,40 | 3,25 | 3,29 | | | |
| | | 6 | 3,50 | 3,20 | 3,10 | 3,20 | 3,25 | | | |
| | 5 | 4 | 3,10 | 3,10 | 3,00 | 3,50 | 3,18 | 1,57 | 41,53 | 57,85 |
| | | 5 | 3,15 | 3,00 | 3,05 | 3,00 | 3,05 | | | |
| | | 6 | 3,10 | 3,25 | 2,90 | 3,45 | 3,18 | | | |
| | 7 | 4 | 3,00 | 3,15 | 3,10 | 3,10 | 3,09 | 1,54 | 39,57 | 51,28 |
| | | 5 | 3,00 | 3,00 | 3,10 | 3,05 | 3,04 | | | |
| | | 6 | 3,20 | 3,10 | 3,00 | 3,20 | 3,13 | | | |
| | Blanko | 0 | 4 | 2,55 | 2,4 | 2,5 | 2,35 | 2,45 | 1,21 | 18,26 |
| 5 | | | 2,4 | 2,4 | 2,5 | 2,5 | 2,45 | | | |
| 6 | | | 2,35 | 2,15 | 2,4 | 2,5 | 2,35 | | | |

Tabel L 1.6 Data Kekuatan Tarik Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Sebelum Pencucian Berulang

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Kekuatan Tarik (kg) | Mulur (%) | Waktu Putus (detik) | Rata-Rata Kekuatan Tarik (kg) |
|----------|---------------------------------------|-----------|---------------------|-----------|---------------------|-------------------------------|
| Kanji | 0 | 1 | 14,055 | 18,00 | 2,7 | 15,70 |
| | | 2 | 16,473 | 16,40 | 2,5 | |
| | | 3 | 16,570 | 17,20 | 2,6 | |
| | 1 | 1 | 15,980 | 16,00 | 2,4 | 16,64 |
| | | 2 | 17,113 | 17,60 | 2,6 | |
| | | 3 | 16,816 | 16,40 | 2,5 | |
| | 3 | 1 | 19,105 | 18,40 | 2,8 | 19,32 |
| | | 2 | 17,309 | 18,00 | 2,8 | |
| | | 3 | 21,551 | 22,80 | 3,4 | |
| | 5 | 1 | 13,609 | 16,40 | 2,5 | 13,10 |
| | | 2 | 10,750 | 12,00 | 1,8 | |
| | | 3 | 14,941 | 16,40 | 2,5 | |

Tabel L 1.6 Data Kekuatan Tarik Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Sebelum Pencucian Berulang (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Kekuatan Tarik (kg) | Mulur (%) | Waktu Putus (detik) | Rata-Rata Kekuatan Tarik (kg) |
|----------|---------------------------------------|-----------|---------------------|-----------|---------------------|-------------------------------|
| | 7 | 1 | 12,238 | 14,00 | 2,1 | 11,07 |
| | | 2 | 9,715 | 16,00 | 2,4 | |
| | | 3 | 11,242 | 16,00 | 2,4 | |
| PVA | 0 | 1 | 15,289 | 14,00 | 2,1 | 16,46 |
| | | 2 | 15,238 | 15,20 | 2,3 | |
| | | 3 | 18,840 | 16,40 | 2,5 | |
| | 1 | 1 | 17,953 | 19,20 | 2,9 | 18,82 |
| | | 2 | 19,531 | 18,00 | 2,7 | |
| | | 3 | 18,967 | 18,40 | 2,9 | |
| | 3 | 1 | 20,270 | 18,00 | 2,7 | 20,71 |
| | | 2 | 20,961 | 20,72 | 3,1 | |
| | | 3 | 20,910 | 19,60 | 2,8 | |
| | 5 | 1 | 15,090 | 15,60 | 2,3 | 14,63 |
| | | 2 | 12,773 | 13,60 | 2,0 | |
| | | 3 | 16,027 | 15,60 | 2,3 | |
| | 7 | 1 | 12,574 | 13,14 | 2,0 | 11,47 |
| | | 2 | 11,293 | 12,00 | 1,8 | |
| | | 3 | 10,555 | 11,20 | 1,7 | |
| Campuran | 0 | 1 | 18,742 | 21,20 | 3,2 | 19,20 |
| | | 2 | 18,891 | 25,13 | 3,8 | |
| | | 3 | 19,958 | 25,60 | 3,8 | |
| | 1 | 1 | 21,305 | 20,40 | 3,1 | 20,55 |
| | | 2 | 20,121 | 20,40 | 3,1 | |
| | | 3 | 20,219 | 19,20 | 2,9 | |
| | 3 | 1 | 22,590 | 22,00 | 3,3 | 22,26 |
| | | 2 | 21,305 | 20,40 | 3,1 | |
| | | 3 | 22,883 | 23,20 | 3,5 | |
| | 5 | 1 | 15,191 | 16,80 | 2,5 | 13,99 |
| | | 2 | 13,117 | 16,00 | 2,4 | |
| | | 3 | 13,660 | 16,80 | 2,5 | |
| | 7 | 1 | 13,316 | 15,60 | 2,3 | 13,58 |
| | | 2 | 14,398 | 24,80 | 3,7 | |
| | | 3 | 13,020 | 16,80 | 2,5 | |
| Blanko | 0 | 1 | 21,156 | 18 | 2,7 | 20,02 |
| | | 2 | 19,875 | 18,33 | 2,7 | |
| | | 3 | 19,035 | 17,6 | 2,6 | |

Tabel L 1.7 Data Kekuatan Tarik Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Setelah Pencucian Berulang

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Kekuatan Tarik (kg) | Mulur (%) | Waktu Putus (detik) | Rata-Rata Kekuatan Tarik (kg) |
|----------|---------------------------------------|-----------|---------------------|-----------|---------------------|-------------------------------|
| Kanji | 0 | 4 | 13,859 | 26,00 | 3,9 | 13,56 |
| | | 5 | 13,266 | 25,60 | 3,8 | |
| | | 6 | 13,541 | 26,80 | 4,0 | |
| | 1 | 4 | 15,043 | 20,00 | 3,0 | 14,32 |
| | | 5 | 14,152 | 20,00 | 3,0 | |
| | | 6 | 13,758 | 22,40 | 3,4 | |
| | 3 | 4 | 18,840 | 23,60 | 3,5 | 19,17 |
| | | 5 | 17,113 | 22,40 | 3,4 | |
| | | 6 | 21,551 | 23,20 | 3,5 | |
| | 5 | 4 | 12,723 | 15,60 | 2,3 | 12,90 |
| | | 5 | 12,574 | 16,40 | 2,5 | |
| | | 6 | 13,410 | 19,20 | 2,9 | |
| | 7 | 4 | 10,750 | 14,80 | 2,2 | 9,81 |
| | | 5 | 11,344 | 17,20 | 2,6 | |
| | | 6 | 7,348 | 13,52 | 2,0 | |
| PVA | 0 | 4 | 13,405 | 27,20 | 4,1 | 13,26 |
| | | 5 | 15,090 | 20,40 | 3,1 | |
| | | 6 | 11,293 | 18,40 | 2,8 | |
| | 1 | 4 | 14,745 | 16,00 | 2,4 | 16,04 |
| | | 5 | 15,633 | 20,40 | 3,1 | |
| | | 6 | 17,754 | 24,00 | 3,6 | |
| | 3 | 4 | 17,309 | 20,00 | 3,0 | 18,04 |
| | | 5 | 18,891 | 21,20 | 3,2 | |
| | | 6 | 17,933 | 20,40 | 3,1 | |
| | 5 | 4 | 12,677 | 17,52 | 2,6 | 12,58 |
| | | 5 | 12,527 | 17,60 | 2,6 | |
| | | 6 | 12,844 | 17,60 | 2,6 | |
| | 7 | 4 | 10,801 | 15,54 | 2,3 | 9,90 |
| | | 5 | 7,691 | 14,00 | 2,1 | |
| | | 6 | 11,195 | 15,60 | 2,3 | |
| Campuran | 0 | 4 | 13,455 | 16,00 | 2,4 | 15,35 |
| | | 5 | 15,090 | 20,40 | 3,1 | |
| | | 6 | 17,504 | 24,00 | 3,6 | |
| | 1 | 4 | 17,508 | 22,80 | 3,4 | 17,57 |
| | | 5 | 16,227 | 21,15 | 3,2 | |
| | | 6 | 18,975 | 21,60 | 4,7 | |
| | 3 | 4 | 17,743 | 23,60 | 3,5 | 18,21 |
| | | 5 | 17,852 | 41,60 | 6,2 | |
| | | 6 | 19,035 | 20,00 | 3,0 | |
| | 5 | 4 | 14,793 | 14,00 | 2,1 | 14,30 |
| | | 5 | 14,754 | 18,80 | 2,8 | |
| | | 6 | 13,356 | 18,80 | 2,8 | |

Tabel L 1.7 Data Kekuatan Tarik Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran Setelah Pencucian Berulang (lanjutan)

| Nama Zat | Variasi Konsentrasi Asam Sitrat (g/L) | Kode Kain | Kekuatan Tarik (kg) | Mulur (%) | Waktu Putus (detik) | Rata-Rata Kekuatan Tarik (kg) |
|----------|---------------------------------------|-----------|---------------------|-----------|---------------------|-------------------------------|
| Campuran | 7 | 4 | 14,301 | 19,20 | 2,9 | 13,81 |
| | | 5 | 14,449 | 18,80 | 2,8 | |
| | | 6 | 12,676 | 18,40 | 2,8 | |
| | 0 | 4 | 21,156 | 18 | 2,7 | 20,02 |
| | | 5 | 19,875 | 18,33 | 2,7 | |
| | | 6 | 19,035 | 17,6 | 2,6 | |

Tabel L 1.8 Data Penambahan Berat Kain Hasil Penyempurnaan Kain Keras Pada Kain Kapas Menggunakan Kanji Tapioka, PVA dan Campuran

| Nama Zat | Keterangan | Konsentrasi (g/L) | | | | |
|----------|----------------------|-------------------|------|------|------|------|
| | | 0 | 1 | 3 | 5 | 7 |
| Kanji | Berat Sebelum | 8,96 | 9,06 | 9,11 | 8,71 | 8,99 |
| PVA | Penganjian (gr) | 8,86 | 8,88 | 8,89 | 8,83 | 8,99 |
| Campuran | | 9,04 | 8,92 | 8,71 | 9,09 | 9,09 |
| Kanji | Berat Sesudah | 9,57 | 9,40 | 9,77 | 9,22 | 9,41 |
| PVA | Penganjian (gr) | 9,07 | 9,20 | 9,37 | 9,11 | 9,25 |
| Campuran | | 9,18 | 9,11 | 9,31 | 9,30 | 9,27 |
| Kanji | Penambahan Berat (%) | 3,46 | 3,75 | 7,24 | 5,86 | 4,67 |
| PVA | | 2,37 | 3,60 | 5,40 | 3,17 | 2,89 |
| Campuran | | 1,55 | 2,13 | 6,89 | 2,31 | 1,98 |